Appendices B through K for
Final Dredged Material Management Plan and
Final Programmatic Environmental Impact Statement

Long Island Sound
Connecticut, New York and Rhode Island

US ARMY CORPS
OF ENGINEERS
New England District

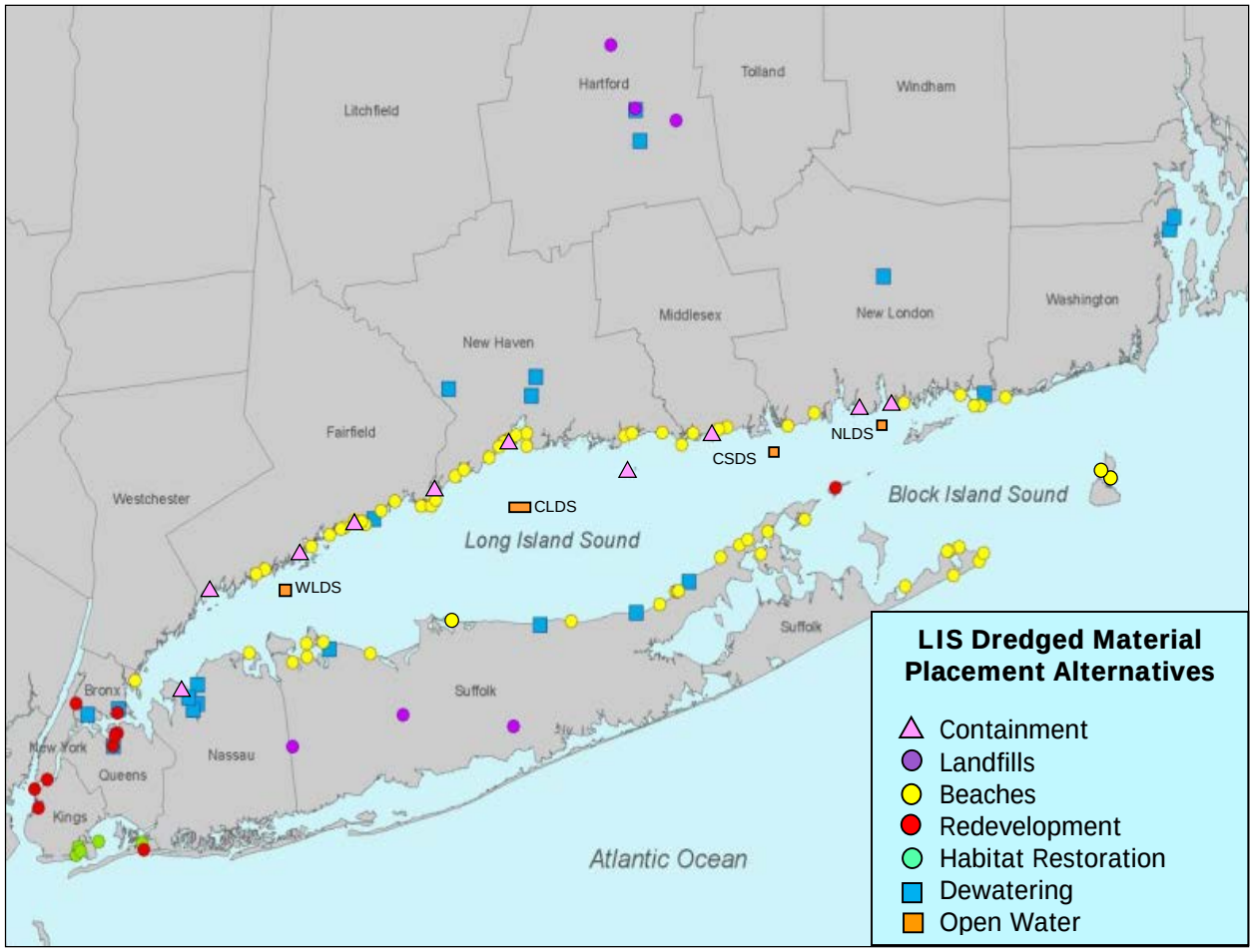
December 2015

APPENDICES B THROUGH K FOR THE

LONG ISLAND SOUND

FINAL DREDGED MATERIAL MANAGEMENT PLAN AND FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

CONNECTICUT, NEW YORK AND RHODE ISLAND



DECEMBER 2015

List of Appendices

Long Island Sound Dredged Material Management Plan

A Pertinent Correspondence and Public Involvement (in Separate Volume)
B Federal Navigation Project Authorization and History
C Harbor Characterization Report
D Dredging and Disposal Alternatives Cost Analysis and Cost Matrix
E Sediment Reduction Report
F US EPA Final Rulemaking, Site Designations, June 2005
G Alternative Site Evaluation and Screening Process
H Treatment Technologies and New York District Experience
I LIS DMMP Project Management Plan
J EPA Annual Reports on Long Island Sound DMMP Progress - 2007-2015
K USACE October 21, 2015 Memorandum on the Federal Standard

LONG ISLAND SOUND

FINAL
DREDGED MATERIAL MANAGEMENT PLAN AND FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

APPENDIX B

FEDERAL NAVIGATION PROJECTS

PROJECT FEATURES, AUTHORIZATION, AND WORK HISTORY

Appendix B – Federal Navigation Project Histories
Table of Contents

Block Island Dredging Center B-1

Block Island Harbor of Refuge FNP, New Shoreham, RI B-1

Great Salt Pond FNP, New Shoreham, RI B-10

Fishers Island Sound/Little Narragansett Bay Dredging Center B-14

Pawcatuck River, Little Narragansett Bay, and Watch Hill Cove FNP, Westerly, RI and Stonington, CT B-14

Watch Hill Cove FNP, Stonington, CT.....B-14

Little Narragansett Bay FNP, Stonington, CT B-14

Stonington Harbor FNP, Stonington, CT.....B-20

Mystic Harbor & River FNP, Groton & Stonington, CT B-24

Fishers Island Dredging Center..... B-28

Hay (West) Harbor FNP, Fishers Island, NY.....B-28

New London Dredging Center..... B-30

New London Harbor FNP, New London, CT B-30

Main Ship Channel and Turning Basin B-30

Waterfront Channels and Anchorages..... B-30

Shaw's Cove..... B-30

Thames River FNP, New London & Groton, CT B-35

39-Foot Lower Channel to Navy Submarine Base and Maneuvering Area..... B-35

25-Foot Upper Channel to Norwich and Turning Basin B-35

Niantic Dredging Center B-44

Niantic Bay and Harbor FNP, East Lyme & Waterford, CT B-44

Connecticut River Dredging Center..... B-45

Hartford Bar - Connecticut River FNP, Hartford, CT.....B-45

Claybanks Upper Bar - Connecticut River FNP, Hartford, CT B-45

Claybanks Bar - Connecticut River FNP, Hartford, CT B-45

Wethersfield Shoal - Connecticut River FNP, Wethersfield, CT B-46

Wethersfield Cove - Connecticut River FNP, Wethersfield, CT B-46

Cys Hollow Bar - Connecticut River FNP, Wethersfield, CT B-46

Naubuc Bar (Pratt's Ferry Bar) - Connecticut River FNP, Wethersfield, CT B-46

Press Barn Bar - Connecticut River FNP, Glastonbury, CT B-46

Crow Point Bar - Connecticut River FNP, Glastonbury, CT B-47
Glastonbury Upper Bar - Connecticut River FNP, Glastonbury, CT B-47
Glastonbury Two Piers Bar - Connecticut River FNP, Glastonbury, CT B-47
Dividend Bar - Connecticut River FNP, South Glastonbury, CT B-47
Pistol Point Bar - Connecticut River FNP, North Cromwell, CT B-49
Gildersleeve Island Shoal - Connecticut River FNP, Gildersleeve, CT B-50
Cromwell Bar - Connecticut River FNP, Cromwell, CT B-50
Portland (Wilcox Island) Bar - Connecticut River FNP, Portland, CT B-50
Mouse Island Bar - Connecticut River FNP, Middletown, CT B-50
Bodkin Rock - Connecticut River FNP, Portland, CT B-50
Paper Rock Shoal - Connecticut River FNP, Portland, CT B-50
Cobalt Shoal - Connecticut River FNP, East Hampton, CT B-51
Sears Shoal Upper Bar - Connecticut River FNP, East Hampton, CT B-51
Sears Shoal - Connecticut River FNP, East Hampton, CT B-51
Scovill Rock Bar - Connecticut River FNP, Middletown, CT B-51
Higganum Creek Bar - Connecticut River FNP, Haddam, CT B-51
Rock Landing Bar - Connecticut River FNP, Haddam, CT B-53
Haddam Island Bar - Connecticut River FNP, Haddam, CT B-53
Salmon River Bar - Connecticut River FNP, Haddam, CT B-53
Salmon River Cove - Connecticut River FNP, Haddam, CT B-53
Warners Quarry Bar - Connecticut River FNP, Haddam, CT B-53
Eddy Rock Shoal - Connecticut River FNP, East Haddam, CT B-53
Potash Bar - Connecticut River FNP, Lyme, CT B-55
Chester Creek Bar - Connecticut River FNP, Chester, CT B-55
Devils Reef Bar - Connecticut River FNP, Lyme, CT B-55
Brockway Bar - Connecticut River FNP, Essex, CT B-55
Eightmile River - Connecticut River FNP, Hamburg, CT B-55
Essex Cove - Connecticut River FNP, Essex, CT B-55
Essex Shoal - Connecticut River FNP, Essex, CT B-56
Calves Island Bar - Connecticut River FNP, Old Lyme, CT B-56
Saybrook Railroad Reach - Connecticut River FNP, Old Saybrook, CT B-56
Saybrook Shoal - Connecticut River FNP, Old Saybrook, CT B-56
North Cove - Connecticut River FNP, Old Saybrook, CT B-56
Saybrook Outer Bar - Connecticut River FNP, Old Saybrook, CT B-56

Clinton/Westbrook Dredging Center B-83
Patchogue River FNP, Westbrook, CT B-83
Duck Island Harbor of Refuge FNP, Westbrook, CT B-86
Clinton Harbor FNP, Clinton, CT B-90
Guilford/Branford Dredging Center B-93
Guilford Harbor FNP, Guilford, CT B-93
Stony Creek Harbor FNP, Branford, CT B-95
Branford Harbor FNP, Branford, CT B-97
New Haven Dredging Center B-100
New Haven Harbor FNP- Main Entrance Channel, New Haven, CT B-100
West River FNP - New Haven Harbor, New Haven, CT B-101
Mill River FNP - New Haven Harbor, New Haven, CT B-101
Quinnipiac River FNP - New Haven Harbor, New Haven, CT B-101
Housatonic River/Milford Dredging Center B-116
Milford Harbor FNP, Milford, CT B-116
Housatonic River FNP, Stratford to Ansonia, CT B-122
Bridgeport Dredging Center B-130
Bridgeport Harbor FNP, Bridgeport, CT B-130
Pequonnock River FNP - Bridgeport Harbor, Bridgeport B-130
Yellow Mill Channel FNP - Bridgeport Harbor B-131
Johnsons River FNP - Bridgeport Harbor B-131
Black Rock Harbor FNP, Bridgeport, CT B-143
Southport Harbor FNP, Fairfield, CT B-148
Norwalk Dredging Center B-153
Westport Harbor & Saugatuck River FNP, Westport, CT B-153
Norwalk Harbor FNP, Norwalk, CT B-157
Wilson Point Harbor FNP, Norwalk, CT B-166
Fivemile River FNP, Darien & Norwalk, CT B-167
Stamford Dredging Center B-170
Westcott Cove FNP, Stamford, CT B-170
Stamford Harbor FNP, Stamford, CT B-172

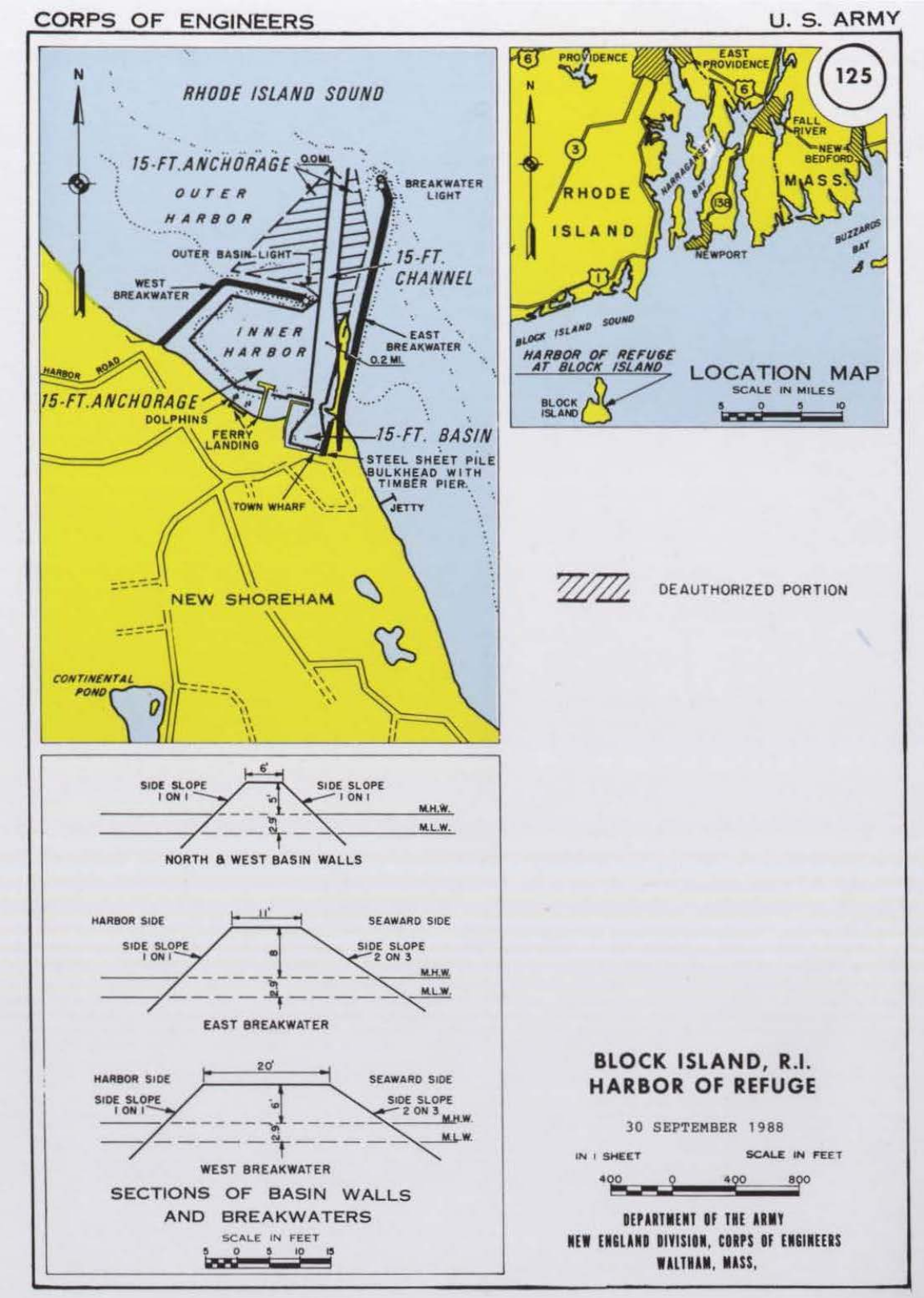
Greenwich Area Dredging Center B-178
Mianus River FNP, Greenwich, CT B-178
Greenwich Harbor FNP, Greenwich, CT B-181
Port Chester/Rye Dredging Center B-185
Port Chester Harbor FNP, Rye, NY B-185
Milton Harbor FNP, Rye, NY B-189
Mamaroneck Area/New Rochelle Area Dredging Center B-191
Mamaroneck Harbor FNP, Mamaroneck, NY B-191
Echo Bay, New Rochelle, NY B-195
New Rochelle Harbor, New Rochelle, NY B-196
Eastchester Bay Area Dredging Center B-198
Eastchester Creek FNP, Bronx, NY B-198
Manhasset & Little Neck Bays Dredging Center B-202
Little Neck Bay FNP, Bayside & Douglaston, NY B-202
Hempstead Harbor Area Dredging Center B-204
Hempstead Harbor FNP, Roslyn, NY B-204
Glen Cove Creek FNP, Glen Cove, NY B-206
Huntington & Northport Bay Area Dredging Center B-208
Huntington Harbor FNP, Huntington, NY B-208
Northport Harbor FNP, Huntington, NY B-211
Port Jefferson/Mount Sinai Dredging Center B-213
Port Jefferson Harbor, Brookhaven, NY B-213
Suffolk County Northeast Shore Dredging Center B-215
Mattituck Harbor and Inlet FNP, Mattituck, NY B-215
Great & Little Peconic Bays Dredging Center B-218
Peconic River FNP, Riverhead, NY B-218
Shelter Island Sound - Gardiner's Bay Dredging Center B-220
Greenport Harbor FNP, Greenport, NY B-220
Sag Harbor FNP, East Hampton & Southampton, NY B-222
Montauk Dredging Center B-225
Lake Montauk Harbor FNP, Montauk, NY B-225

Block Island Dredging Center

Block Island Harbor of Refuge FNP, New Shoreham, RI

The Block Island Harbor of Refuge Federal Navigation Project (FNP) was first authorized by the River and Harbor Act of 1870. The original project was completed in 1877 and consisted of a 500-foot stone breakwater which was extended to 1,150 feet in length to make it a harbor of refuge under the same authority. The project was modified multiple times throughout its history with additional features added while some were deauthorized. Major modifications include: construction of the inner basin by enclosing the area with stone filled timber cribs in 1871; increasing the length of the main breakwater to 1,150 linear feet as part of the R&H Act of 1876; adding a 9-foot entrance channel and deepening the inner basin to 9 feet by R&H Act in 1880; constructing the West breakwater in dogleg to form the harbor of refuge by R&H Act of 1886; raising the main breakwater by the R&H Act of 1896; deepening of outer and inner harbors and portion of inner basin to 15 feet by the R&H Act of 1912; the outer harbor anchorage areas were deauthorized in 1986. Today, the Block Island Harbor of Refuge consists of two rubblemound breakwaters enclosing an area of about 800 square feet, the east breakwater extends northerly for about 1,950 feet from the shore, with a top-width of 11 feet and the western breakwater extends northeasterly for approximately 1,100 feet that is 20 feet wide at the top; a “T” shaped stone jetty, 140 feet long and 100 feet wide, located about 600 feet southeast of the east breakwater; masonry walls in the southeast corner of the inner harbor enclosing an area, 300 square feet, designated as the Inner Basin; steel sheet pile bulkhead, 255 feet long, constructed on the east side of the 15-foot basin with a stone ballast placed against the bulkhead (constructed in 1942 maintenance program) and a timber pier constructed over the bulkhead (constructed in 1971 maintenance program); a 15-foot channel, 1,500 feet long and 100-175 feet wide; a 2-acre, 15-foot inner basin at the southern end of the channel; and a 15-acre, 15-foot anchorage to the West of the channel. See Project Map 125 for visual.

Project Map 125: Block Island Harbor of Refuge



Block Island Harbor of Refuge List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 11 July 1870	Harbor for Local Needs at Sands Landing by Constructing a 500-Foot Stone Breakwater Extending Northerly. Length Increased During Construction to 1,150 Feet for Harbor of Refuge under same Authorization.	Breakwater - Oct 1870 – Nov 1877 Dredging – Aug 1871 – May 1873
Annual Report for 1871, Page 739	Construct Inner Basin by Enclosing with Stone Filled Timber Cribs – 260x280 Feet – Dredged to –7 Feet	Aug 1871 – July 1872
Annual Report for 1872, Page 821	600-Foot Long Fieldstone West Jetty – 1,200 Feet West of Main Breakwater. Planned Length Increased in 1873 to Partly Enclose Main Harbor. West Jetty was Removed in June 1894 as the New West Breakwater Neared Completion.	FY 1872 – FY 1873
Annual Report for 1873, Page 40	Removal of Boulders from Main Harbor and Placement of Pilings & Dolphins in Basin. Bend Planned for End of Main Breakwater.	Boulders - FY 1873 – FY 1878
Annual Report for 1874, Page 71	Timber Wharves Added to Inside of Inner Basin.	FY 1874
River & Harbor Act of 14 August 1876	Increase Main Breakwater Length to 1,150 Feet Beyond Basin Walls (1,430 Feet) with 300-Foot Detached Section and 200 Foot Gap between Sections.	May 1877 – Nov 1877
River & Harbor Act of 14 June 1880	9-Foot Entrance Channel and Deepen Inner Basin to –9 Feet.	Oct 1880 – Dec 1880
River & Harbor Act of 2 August 1882	Replace East Inner Basin Wall Cribwork with Stone – 287 Feet Long at +8.5 Feet MHW. Stone T Jetty 150 Feet Long with 100-Foot T to East of Main Breakwater for Shore Protection of Cliffs.	T Jetty - April 1883 – Dec 1883 (Shore Arm only 140 Feet Long). Basin Wall – April 1883 – Dec 1883
River & Harbor Act of 5 July 1884	Filling 200-Foot Gap in Main Breakwater to make Total Length with Basin Wall 1,900 Ft.	March 1885 -
River & Harbor Act of 5 August 1886	Construct West Breakwater in Dogleg to form Harbor of Refuge. Shore Arm Originally Stone Filled Timber Crib with Rubblemound North Wall to Connect to Main Breakwater	July 1887 -

	with Fendered Navigation Opening 160 Feet West of Main Breakwater.	
Annual Report for 1886, Page 609	Wooden Plank Sand Fence added to Top of East Basin Wall to Prevent Sand Shoaling.	FY 1886
River & Harbor Act of 11 August 1888	Expand 9-Foot Entrance Channel to Deepen Harbor Easterly along Main Breakwater.	Nov 1888 – Dec 1888
River & Harbor Act of 19 Sept 1890	Transfers Ownership of South Basin Wharf to Town of New Shoreham	
River & Harbor Act of 3 June 1896	Strengthening and Raising the Top Elevation of the East and West Breakwaters, Sand-Tightening of the Middle Reach of the East Breakwater, and Dredging the Main Harbor Entrance and Anchorage to 10 Feet.	Dredging – Sept 1905 – Sept 1907 West Breakwater – Aug 1899 – Nov 1899 East Breakwater – June 1903 – October 1904
House Document #60, 58th Congress, 2nd Session, 10 December 1903	Removal of the North Breakwater Spur Attached to the Main Breakwater and Retention of the Inner Basin North & West Cribwork Walls	
River & Harbor Act of 25 July 1912	Deepening of Outer & Inner Harbors and Portion of Inner Basin to -15 Feet, Rebuild Shore End of Main Breakwater to Shore, and Replace Old Cribwork Inner Basin Walls with Stone or Concrete, Inner Harbor Anchorage South Limit Stepped Back from along North Inner Basin Wall. Outer Harbor Anchorage Deferred 1916 and Deauthorized 1986.	15-Foot Harbor – Sept 1913 – Dec 1915 East Breakwater – Sept 1914 – May 1916 Basin Walls – Sept 1915 – May 1916
Annual Report for 1914, Page 1638	Widening the -15-Foot Channel by 30 to 75 Feet (to 130-175 Feet).	August 1914
Chief of Engineers Letter, 12 June 1934	Resumption of Federal Maintenance of Remaining 9-Foot Portions of Inner Basin	September 1934
Annual Report for 1940, Page 110	Rehabilitation of East Basin Wall by Construction of a Steel Sheet Piling Bulkhead	July 1940 – Aug 1940
Annual Report for 1971, Page 1-9	Modification & Rehabilitation of Inner Basin East Wall. Stone Placed against the Sheet Pile Bulkhead and New Timber Dock Built	September 1970 – March 1971
Water Resources Development Act of 17 November 1986	Deauthorized Two Outer Harbor 15-Foot Anchorage Areas as Authorized in the River & Harbor Act of 25 July 1912	Deauthorization

Block Island Harbor of Refuge Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Oct 1870 – Oct 1873	Construction of the Main (East) Breakwater	40,657 Tons Stone
Aug 1871 – July 1872	Inner Harbor Stone-Filled Timber Crib Walls	5,600 Tons Stone
Aug 1871 – May 1873	Dredging of 7-Foot Inner Basin and Construction of Government Wharf	Unknown
FY 1872 – FY 1873	Construction of 350 LF Stone West Jetty	Unknown
FY 1873	General Removal of Boulders from Outer Harbor	Unknown
FY 1874	Timber Wharves Built along Inner Basin Walls	Unknown
Oct 1874 – Nov 1874	General Removal of Boulders from Outer Harbor Placed in Main (East) Breakwater	446 Tons Boulders
Sept 1874 – June 1875	Continue Construction of East Breakwater	8,122 Tons Stone
July 1874 – Aug 1874	General Removal of Boulders from Outer Harbor Placed in Main (East) Breakwater and used to Build Bulkhead on Shore Side of Inner Basin	595 Tons Boulders
FY 1876	Repairs to Timber Wharves and Placement of Timber Piles around Inner Basin Walls	Unknown
May 1877 – Nov 1877	Continue Construction of East Breakwater including Detached Seaward Section	34,269 Long Tons Stone
Aug 1877 – Oct 1877	General Removal of Boulders from Outer Harbor	517 Tons Boulders
June 1878 – Nov 1878	Repairs and Continued Improvement to Main (East) Breakwater – 1870 Project Completed	2,927 Long Tons New Stone
Oct 1880 – Dec 1880	Improvement Dredging of 9-Foot Inner Basin	16,146 cy
FY 1881	Removal of Two Boulders from Outer Harbor	28 Tons Boulders
FY 1881	Removal of Wrecked Schooner from Entrance	NA
April 1883 – Dec 1883	Construction of Stone T Jetty to East of Harbor	Unknown
April 1883 – Dec 1883	Replacement of East Wall of Inner Basin with Shoreward Extension of Main Breakwater – 287 Feet Long by +8½ Foot MHW Top Elevation	Unknown
FY 1883	Inner Basin South Wharf Repaired and West Wharf Removed	Unknown

FY 1884	Inner Basin South Wharf Repaired again and East Timber Wharf Removed	Unknown
FY 1885	Further Repairs to Inner Basin Timber Wharves	Unknown
Mar 1885 – Aug 1885	Construction to Fill Gap in Main Breakwater	8,171 Tons Stone
FY 1886	Plank Barrier Built atop East Wall of Inner Basin to Prevent Blown Sand Shoaling of Basin	Unknown
July 1887 -	Continuing Closing of Gap in Main Breakwater	4,258 Tons Stone
July 1887 – Feb 1889	Initiate Construction of West Breakwater – Timber Crib for Shore Arm – Rubble for North	3,530 Tons Stone in FY 1889
Aug 1889 – Fall 1889	Continuing Construction of West Breakwater	1,941 Tons Stone
Fall 1889	Repairs to Main Breakwater	420 Tons Stone
Nov 1889 – Dec 1889	Improvement Dredging of 9-Ft Entrance Channel	3,025 cy
Spring 1891–Oct 1891	Continuing Construction of West Breakwater	6,092 Tons Stone
June 1893 – Dec 1893	Continuing Construction of West Breakwater	6,798 Tons Stone
July 1893 – Aug 1893	Improvement Dredging of 12-Foot Entrance Channel and 10-Foot Inner Basin Entrance	5,412 cy plus One Large Boulder
May 1894 – June 1894	Removal of Old West Jetty with Stone Placed in Main Breakwater and West Breakwater to Repair	208 Tons in Main 974 Tons in West
June 1895 – July 1895	Maintenance Dredging of 12-Foot Entrance Channel and 9-Foot Inner Basin	3,123 cy Entrance 318 cy Basin
June 1896	Maintenance Dredging of 12-Foot Entrance Channel to Depth of 10 Feet	2,704 cy
June 1897 – July 1897	Maintenance Dredging of 12-Foot Entrance Channel to Depth of 10 Feet	5,000 cy
Aug 1899 – Nov 1899	Repair and Strengthen North Wall of West Breakwater to Address Storm Damage	2,902 Tons Stone
June 1900	Maintenance of Entrance Channel to 10 Feet	5,500 cy
June 1902	Maintenance of Entrance Channel to 10 Feet	9,068 cy
Aug 1902 – Sept 1902	Maintenance of Entrance Channel to 10 Feet	11,640 cy
June 1903 – Sept 1903	Sand Tightening of Main Breakwater Center	9,972 Tons Stone
June 1903	Maintenance of Entrance Channel to 10 Feet	2,954 cy
June 1905 – Oct 1904	Complete Sand Tightening of Main Breakwater	10,000 Tons Stone

	Center with Core and Larger Armor Stone	
Sept 1905 – June 1906	Begin Improvement Dredging of 10-Foot Harbor of Refuge Anchorage	89,384 cy plus 267 cy Boulders
July 1907 – Sept 1907	Continue Improvement Dredging of 10-Foot Harbor of Refuge Anchorage	32,226 cy plus 682 cy Boulders
Aug 1909 – Oct 1909	Maintenance and Improvement Dredging of Entrance Channel and 10-Foot Refuge Anchorage	40,000 cy plus 17 cy Boulders
Spring 1910	After Dec 09 Storm Damage - Second Timber Barrier Erected atop East Wall to Prevent Overwash of Sand into Inner Basin from Beach	Unknown
Sept 1913 – Nov 1913	Improvement Dredging of 15-Foot Entrance Channel	48,347 cy plus 55 cy Boulders
June 1914 – Aug 1914	Emergency Maintenance Dredging of Channel and Harbor after Storm	62,805 cy plus 134 cy Boulders
Sept 1914 – Nov 1914	Repair, Raise and Strengthen Shore Arm of Main Breakwater along East Wall of Inner Basin	3,314 Tons Stone
July 1915 – Dec 1915	Improvement Dredging of 15-Foot Harbor of Refuge Anchorage	126,057 cy plus 269 cy Boulders
Sept 1915 – May 1916	Repair and Rehabilitation of the Inner Basin Walls, Main Breakwater and West Breakwater	2,183 Tons Basin 1,117 Tons Main 1,503 Tons West
November 1915	Removal of the Wreck of the Schooner *North Star* from the Inner Basin	Sunk Offshore
November 1917	Removal of Boulders from Harbor Entrance	78 cy Boulders
FY 1921	Maintenance Dredging of 15-Ft Entrance Channel	Unknown
Early FY 1922	Emergency Maintenance Dredging of 15-Foot Entrance Channel	Unknown
Summer 1922	Maintenance of 15-Foot Entrance Channel	7,998 cy
FY 1925	Maintenance of 15-Foot Entrance Channel	Unknown
Spring 1928 – July 1928	Maintenance Dredging of the 15-Foot Entrance Channel	26,603 cy
July 1930 – Aug 1930	Maintenance of 15-Foot Entrance Channel	22,297 cy
June 1932 – July 1932	Maintenance of 15-Foot Entrance Channel	17,838 cy

Feb 1933 – June 1933	Repairs and Sand Tightening of 500 LF of the Main (East) Breakwater	1,200 Long Tons Chip Stone plus 1,853 Long Tons Armor Stone
May 1934 – July 1934	Maintenance of 15-Foot Entrance Channel	13,795 cy
June 1934	Repairs to Main (East) Breakwater	804 Long Tons
September 1934	Maintenance Dredging of 9-Foot Corner Areas of Inner Basin	1,964 cy
July 1935 – Oct 1935	Repairs to Main (East) Breakwater	3,380 Long Tons
June 1937 – July 1937	Maintenance of 15-Foot Entrance Channel	13,434 cy
June 1939 – July 1939	Maintenance of 15-Foot Entrance Channel	15,406 cy
June 1939 – Aug 1939	Repairs to Main (East) Breakwater	3,765 Long Tons
July 1940 – Aug 1940	Rehabilitation and Repairs to the East Basin Wall by Construction of a Steel Sheet Piling Bulkhead	9,285 SF Bulkhead 1,016 LF Bracing
Aug 1941 – Oct 1941	Maintenance of 15-Foot Entrance Channel	23,500 cy
November 1943	Maintenance Dredging of 15-Foot Entrance and Basin Channel and 15-Foot Refuge Anchorage	27,891 cy Channel 25,718 cy Anch.
June 1947 – July 1947	Maintenance Dredging of 15-Foot Channel	27,875 cy
May 1950 – Aug 1950	Repairs to West Breakwater	12,902 Tons Stone
Jan 1952 – Mar 1952	Maintenance Dredging of 15-Foot Channel	42,562 cy
Aug 1955 – Nov 1955	Repairs to Main (East) Breakwater	11,357 Tons New 650 Tons Reset
Jan 1956 – April 1956	Maintenance of 15-Foot Entrance Channel	24,940 cy
June 1962 – Mar 1963	Repairs to Main (East) Breakwater	11,715 Tons Stone
Aug 1962 – Sept 1962	Maintenance of 15-Foot Entrance Channel	21,500 cy
June 1968 – July 1968	Maintenance Dredging of 15-Foot Entrance and Basin Channel and 15-Foot Refuge Anchorage	10,300 cy in FY68 FY69 Unknown
Sept 1970 – Mar 1971	Repairs to the Steel Sheet Bulkhead in the Inner Basin and Stone Toe Added	Unknown
May 1974	Maintenance of 15-Foot Entrance Channel	5,000 cy
Apr 1976 – May 1976	Maintenance Dredging of 15-Foot Entrance and Basin Channel and 15-Foot Refuge Anchorage	20,800 cy

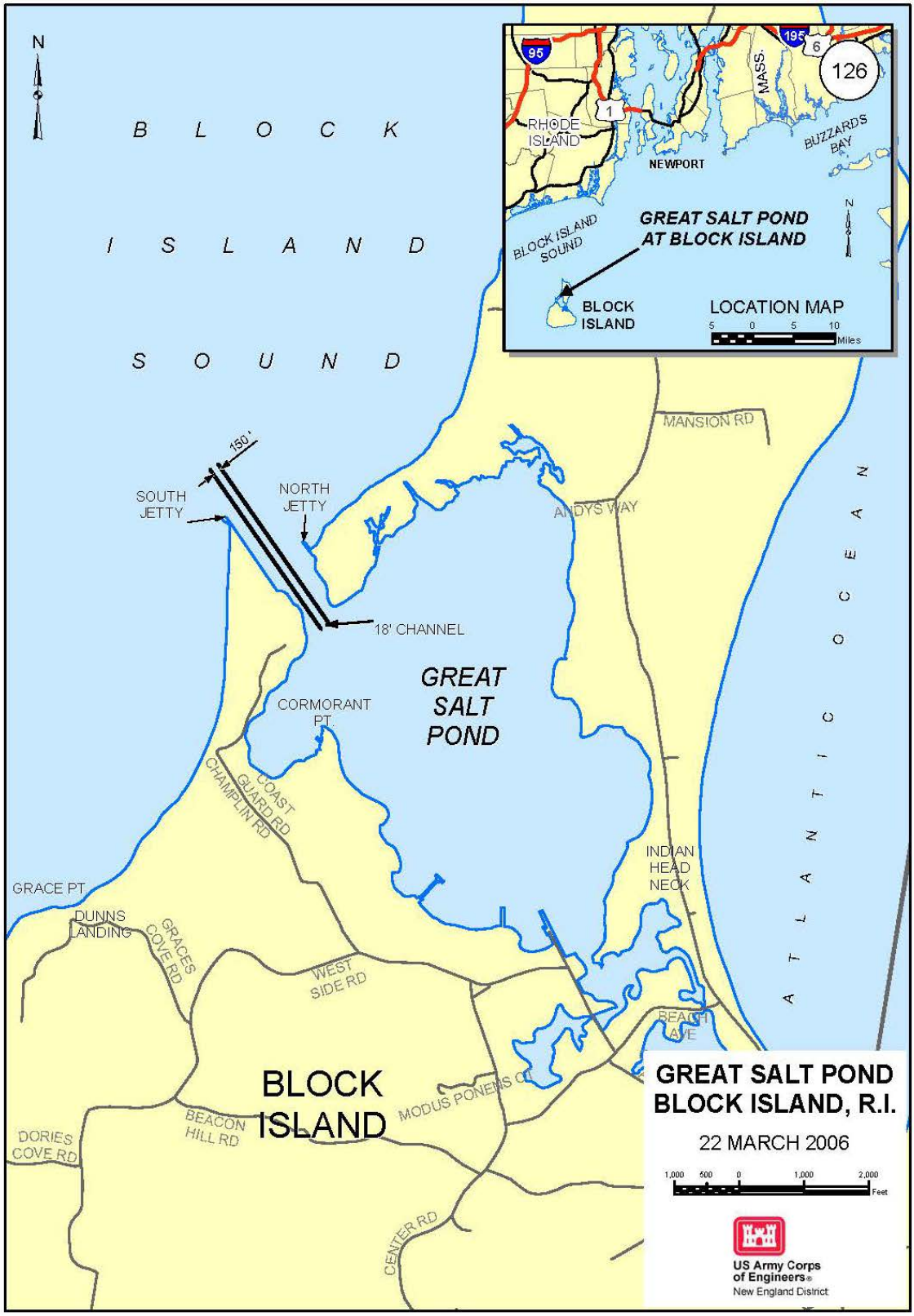
July 1982 – Aug 1982	Maintenance Dredging of 15-Foot Entrance and Basin Channel and 15-Foot Refuge Anchorage	3,532 cy
June 1987	Emergency Maintenance Dredging of 15-Foot Entrance Channel – Pumped to Crescent Beach	16,200 cy
Sept 1989 – Nov 1989	Emergency Maintenance Dredging of 15-Foot Entrance Channel	10,000 cy in FY89
January 1993	Emergency Maintenance Dredging of 15-Foot Entrance Channel – Scow Deposited off Beach	13,864 cy
Sept 1994 – Nov 1994	Repairs to Outer End of Main (East) Breakwater Plus New Navigation Aid Tower and Foundation	640 Tons New Stone Plus 160 Tons Reset Stone
February 1995	Maintenance of 15-Foot Entrance Channel by Hopper Dredge – Disposal off Crescent Beach	27,353 cy
June 1996	Maintenance of 15-Foot Entrance Channel by *Currituck* – Disposal off Crescent Beach	10,000 cy
May 2000 – June 2000	Maintenance Dredging of 15-Foot Entrance and Basin Channel and 15-Foot Refuge Anchorage	39,500 cy
June 2006	Maintenance Dredging of 15-Foot Entrance Channel by US Hopper Dredge *Currituck*	18,570 cy
June 2009	Maintenance Dredging of 15-Foot Entrance Channel by US Hopper Dredge *Currituck* with Disposal off Crescent Beach	7,674 cy
May 2011 – June 2011	Maintenance Dredging of 15-Foot Entrance Channel by US Hopper Dredge *Currituck* with Disposal off Crescent Beach	19,778 cy
Sept 2011 - April 2012	Major Rehabilitation of the Inner Basin East Bulkhead	N/A
June 2012	Maintenance Dredging of 15-Foot Entrance Channel by US Hopper Dredge *Currituck* with Disposal off Crescent Beach	19,961 cy
June 2013	Maintenance Dredging of 15-Foot Entrance Channel by US Hopper Dredge *Currituck* with Disposal off Crescent Beach	30,000 cy
June 2014	Maintenance Dredging of 15-Foot Entrance Channel by US Hopper Dredge *Currituck* with Disposal off Crescent Beach	12,069 cy

Great Salt Pond FNP, New Shoreham, RI

The Great Salt Pond FNP was initially authorized by the River and Harbor Act of June 3, 1896 to include an entrance channel 12-foot to 25-foot deep and 600 feet wide decreasing in width to 150 feet from deeper water, an extension of the preexisting South jetty by 700 linear feet, and construction of a 510 linear foot long North jetty. The South jetty was extended by 350 feet in the River and Harbor Act of 1940 and the North jetty was deauthorized in the Water Resources Development Act of 1986. Today, the entrance channel is authorized for a width of 150 feet at an 18-foot depth throughout the channel. See Project Map 126.

Great Salt Pond List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 3 June 1896	Entrance Channel 600 Feet Wide, -12 Feet with Middle Cut of 18 Feet by 300 Feet Wide, and Center Cut of -25 Feet by 150 Feet Wide, Extending the Existing South Jetty 700 LF at Top Elevation +8 Feet MLLW, and Construction of a North Jetty, 510 LF	South Jetty – Oct 1896 – July 1897 12-Ft Channel – July 1898 – Sept 1898 18-Ft Channel – Dec 1899 – Sept 1900 25-Ft Channel – Sept 1900 – June 1908
Annual Report for 1900, Page 1276	Reduce Planned Inlet Width between Jetties to 600 Feet. Sand Fences and Inlet Revetment.	Unknown
River & Harbor Act of 13 June 1902	Extension of the Projected South Jetty Design by 350 Feet	April 1903 – Nov 1905
River & Harbor Act of 17 October 1940	10-Foot MLLW Interior Entrance Channel to Trims Pond – Temporary War-Powers Improvement – Not Civil Works	October 1943
River & Harbor Act of 2 March 1945	Channel -12 Feet MLLW by 100 Feet Wide Extending into Trims Pond to a Basin -12 Feet MLLW by 1.4 Acres	Never Constructed
Water Resources Development Act of 17 November 1986	Deauthorized the 1,200-Foot Long North Jetty at the Pond Entrance and the -12-Foot MLLW Channel and Anchorage Basin in Trims Pond	Deauthorization

Project Map: Great Salt Pond Federal Navigation Project



Great Salt Pond Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Oct 1896 – July 1897	Begin Construction of South Jetty Extension	27,901 Tons Stone
July 1898 – Sept 1898	Improvement Dredging of 18-Foot Channel Cut to Depth of 12 Feet	10,756 cy
Dec 1899 – Sept 1900	Improvement Dredging to Complete the 18-Foot Channel Cut 300 Feet Wide	132,210 cy Plus 214 cy Boulders
June 1900 – July 1900	Repairs to South Jetty	1,613 Tons Stone
Sept 1900 – Dec 1900	Improvement Dredging of 25-Foot Channel Cut with Initial Width of 30 Feet	43,786 cy Plus 45 cy Boulders
August 1901	Continuing Repairs to South Jetty	3,958 Tons Stone
Apr 1903 – Sept 1903	Improvement to Extend South Jetty	23,989 Tons Stone
June 1903 – Sept 1903	Dredging of Shoal at Sea Entrance to Channel	4,610 cy Sand
Sept 1905 – Nov 1905	Continuing Construction of South Jetty Extension	12,013 Tons Stone
Aug 1905 – Nov 1906	Continue Improvement Dredging of 25-Foot Channel Center Cut	99,383 cy Plus 47 cy Boulders
Sept 1907 – June 1908	Continue Improvement Dredging of 25-Foot Channel Center Cut	87,640 cy Plus 199 cy Boulders
June 1909	Continue Improvement Dredging of 25-Foot Cut	1,751 cy
December 1909	Continue Improvement Dredging of 25-Foot Cut	716 cy
July 1935 – Dec 1935	Maintenance Dredging of 18-Foot Entrance Channel Cut 300 Feet Wide	55,390 cy Plus 118 cy Boulders
August 1935	Repairs to South Jetty	1,436 Long Tons
Sept 1943 – Oct 1943	Maintenance Dredging of 25-Foot Entrance Channel Center Cut 150 Feet Wide	56,678 cy

October 1943	Wartime Powers Improvement of 10-Foot Channel into Trims Pond – No Civil Works	29,431 cy
Dec 1951 – Jan 1952	Maintenance Dredging of Entrance Channel but only to –15 Feet	5,050 cy
Jan 1956 – April 1956	Maintenance Dredging of Entrance Channel but only to –15 Feet	6,699 cy
August 1962	Hopper Dredge Maintenance of 18-Foot Entrance Channel Cut	23,757 cy
March 1972 – May 1972	Maintenance Dredging of 18-Foot Entrance Channel Cut at 150-Foot Width by Pipeline Dredging with Disposal Offshore of Jetty	55,300 cy
June 1982 -	Maintenance Dredging of 18-Foot Entrance Channel Cut	52,485 cy
Aug 2000 – Sept 2000	Emergency Maintenance Dredging of 18-Foot Entrance Channel Cut but only to 15 Feet	13,650 cy
June 2004 – July 2004	Maintenance Dredging of 18-Foot Entrance Channel Cut by the US Hopper Dredge *Currituck*	8,800 cy
May 2009 – June 2009	Maintenance Dredging of 18-Foot Entrance Channel Cut by the US Hopper Dredge *Currituck* with Disposal off the Beach West of Sachem Pond	30,316 cy
May 2010 – June 2010	Maintenance Dredging of 18-Foot Entrance Channel Cut by the US Hopper Dredge *Currituck* with Disposal off the Beach West of Sachem Pond	18,947 cy
May 2012 – June 2012	Maintenance Dredging of 18-Foot Entrance Channel Cut by the US Hopper Dredge *Currituck* with Nearshore Disposal off the Beach West of Sachem Pond	18,682 cy
June 2013	Maintenance Dredging of 18-Foot Entrance Channel Cut by the US Hopper Dredge *Currituck* with Nearshore Disposal off the Beach West of Sachem Pond	17,133 cy

Fishers Island Sound/Little Narragansett Bay Dredging Center

Pawcatuck River, Little Narragansett Bay, and Watch Hill Cove FNP, Westerly, RI and Stonington, CT

The Pawcatuck River channel is part of the Pawcatuck River, Little Narragansett Bay and Watch Hill Cove Federal Navigation Project. The river enters from the eastern side into Little Narragansett Bay. The project was initially authorized in the River and Harbor Act of 3 March 1871 which called for a channel, 75 feet wide and 5-foot deep from a point up to Westerly, RI. The project was modified by several River and Harbor Acts in subsequent years producing the current FNP at Pawcatuck River that is a 10-foot channel, 100 feet wide extending from Rhodes Point up the Pawcatuck River for about 3 miles where it decreases to a 7-foot depth. See Project Map 127.1.

Watch Hill Cove FNP, Stonington, CT

Authorization for a 2,000-foot long West jetty; a 10-foot, 100-foot wide channel; and a 16-acre, 10-foot anchorage at Watch Hill Cove was established in the River and Harbor Act of 2 March 1945. The project has not been modified since that time. See Project Map 127.1 for features.

Little Narragansett Bay FNP, Stonington, CT

The Federally-authorized project in Little Narragansett Bay was permitted by the River and Harbor Act of 1876. The authorization allowed for a 7.5-foot deep by 200-foot wide channel that is approximately 2.75 miles long from Stonington Point around Sandy Point to Pawcatuck Point. The channel was deepened to a 10-foot depth by the 1896 River and Harbor Act to form the project as it stands today. See Project Map 127.1.

Project Map 127.1: Pawcatuck River, Little Narragansett Bay, and Watch Hill Cove FNP

Little Narragansett Bay & Pawcatuck River List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 3 March 1871	Channel 75 Feet Wide by -5 Feet MLLW from "Certain-Draw" Point up to Westerly, RI.	Oct 1871 – Sept 1875
Annual Report for 1872, Page 17	Dredge Depth Increased to -5½ Feet MLLW to Permit more Efficient Dredging	See Above
Annual Report for 1876, Appendix B-11, Page 14	Extension of the Channel 2,400 Feet Upstream at -6 Feet MLLW, between the Wharves at Westerly at a Width of 45 Feet. Approved by the Chief of Engineers, 9 Oct 1875, Provided Local Interest Pay 50 Percent.	Nov 1875 – May 1876 (Rock Encountered Not Removed)
River & Harbor Act of 14 August 1876	Channel through Little Narragansett Bay - 7.5 Feet by 200 Feet Wide around Sandy Point to Watch Hill Cove & Entrance to Pawcatuck River (Completed 1883), also the Removal of Rocks at Watch Hill Landing & Roads Folly.	7½-Ft Channel - July 1877 – FY 1884 Watch Hill Cove – April 1882 – June 1884
River & Harbor Act of 5 August 1886	Channel -8-Foot MLLW 100 Feet Wide, from Deep Water off Lottery Point, Upstream to the Lower Wharves at Westerly, then 40 Feet Wide to Upper Wharves.	April 1887 – Aug 1895
River & Harbor Act of 3 June 1896	Channel to -10 Feet MLLW, 200 Feet Wide below Avondale, 100 Feet Wide between Avondale and Westerly and 40 Feet Wide Alongside the Wharves at Westerly.	April 1897 – FY 1924 (Portions Remained Uncompleted)
River & Harbor Act of 3 March 1905	Removal of Rocks and Obstructions in the Channel into Watch Hill Cove.	Jan 1906 – Feb 1906
River & Harbor Act of 2 March 1945	Channel at Watch Hill Cove, -10 Feet MLLW by 100 Feet Wide, -10-Foot MLLW by 16- Acre Anchorage and a 2,000-Foot Long West Jetty.	Jetty – May 1948 Dredging - Oct 1948 – Dec 1949
River & Harbor Act of 14 July 1960	At Watch Hill Cove: Anchorage Enlargement of 1.75 Acres at -6 Feet MLLW, 100-Foot Extension of West Jetty, and Construction of a 400-Foot Long Stone Breakwater.	Never Constructed

2 November 1979 House Doc. #96-157 4th Annual Deauth. Report, 26 June 1979	Deauthorizes above Listed Project for Jetty, Breakwater and Anchorage Extension in Watch Hill Cove as Authorized by the River & Harbor Act of 14 July 1960	Deauthorization
Water Resources Development Act of 17 October 1986	Deauthorized Uncompleted Portions of the Modifications of the River & Harbor Act of 3 June 1896 Including; Widening the Middle Section of the Channel through Little Narragansett Bay an Additional 100 Feet to 200 Feet Wide, Widening a 5,000-Foot Long Section of the Pawcatuck River Channel at Avondale an Additional 100 Feet to 200 Feet Wide, and the Deepening of the Upper 2,000 Feet Long Reach of the Pawcatuck Channel by 3 Feet to -10 Feet MLLW.	Deauthorization

Little Narragansett Bay & Pawcatuck River Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Oct 1871 – Nov 1871	Improvement Dredging of 5.5 Foot Channel	8,206 cy
Mar 1872 – May 1872	Improvement Dredging of 5.5 Foot Channel	4,724 cy
Nov 1872 – Nov 1873	Continue Improvement of 5.5 Foot Channel	40,578 cy
Sept 1874 – June 1875	Continue Improvement of 5.5 Foot Channel – now Complete 75 Feet Wide to Icehouse and 60 Feet Wide to Westerly.	38,650 cy Plus a 20 cy Boulder
July 1875 – Sept 1875	Continue Improvement of 5.5 Foot Channel to Widen Upper End to 75 Feet at Westerly	22,618 cy Plus Some Boulders
Nov 1875 – May 1876	Extend Channel at Westerly -6 Feet by 45 Feet Wide (Ledge Discovered)	14,137 cy
July 1877 – June 1878	Improvement Dredging of 7.5-Foot Channel through Little Narragansett Bay and Removal of Rhodes Folly Rocks	4,015 cy Plus 69 cy Boulders Plus 131 cy Rock (the Folly)
Aug 1878 – June 1879	Improvement Dredging of 7.5-Foot Channel through Little Narragansett Bay	19,777 cy Plus 349 cy Boulders
April 1880 – May 1880	Improvement Dredging of 7.5-Foot Channel through Little Narragansett Bay	17,935 cy

May 1881 – Oct 1881	Improvement Dredging of 7.5-Foot Channel through Little Narragansett Bay	41,776 cy
April 1882 – June 1882	Removal of Boulders from 7.5-Foot Bay Channel (East End) and from Approach to Watch Hill Cove	25 Large Boulders from Bay Channel and 57 Boulders from Cove Channel
Nov 1882 – May 1883	Improvement Dredging of East End of 7.5-Foot Channel through Little Narragansett Bay	20,867 cy
FY 1883	Rock Removal from 7.5 Foot Bay Channel at Pawcatuck Point	Unknown
FY 1884	Removal of Boulders from Bay Channel and Ledge and Boulders from Watch Hill Cove Approach Channel (Completed 1876 Project)	Unknown
April 1887 – August 1888	Improvement Dredging of 8-Foot River Channel to Westerly	77,016 cy Plus 14 cy Boulders
July 1889 – Oct 1889	Improvement of 8-Foot Channel – Removal of Ledge at Certain Draw Pt & Pawcatuck Rock	339 Tons Ledge
March 1890 – April 1890	Continue Improvement Dredging of 8-Foot River Channel to Westerly	7,509 cy
April 1891 – June 1892	Continue Improvement Dredging of 8-Foot River Channel to Westerly	42,732 cy
Aug 1893 – Sept 1893	Improvement of 8-Foot Channel – Removal of Ledge and Boulders at Westerly	67 Tons Boulders and 50 Tons Ledge
May 1895 – Aug 1895	Continue Improvement Dredging of 8-Foot River Channel at Westerly	15,363 cy Plus 14 cy Boulders
April 1897 – Sept 1897	Begin Improvement of 10-Foot Bay Channel – Removal of Ledge	324 cy Ledge
July 1897 – Dec 1897	Improvement Dredging of 10-Foot Channel at Westerly and working Downstream	34,980 cy Plus 56 cy Boulders
July 1899 – May 1900	Continue Improvement Dredging of 10-Foot River Channel	43,797 cy
Dec 1902 – May 1903	Maintenance Dredging of 10-Foot Bay Channel	28,617 cy
Nov 1905 – Jan 1906	Maintenance Dredging of 10-Foot Bay Channel	15,779 cy
January 1906	Boulder Removal from 10-Foot Bay Channel	56 cy Boulders

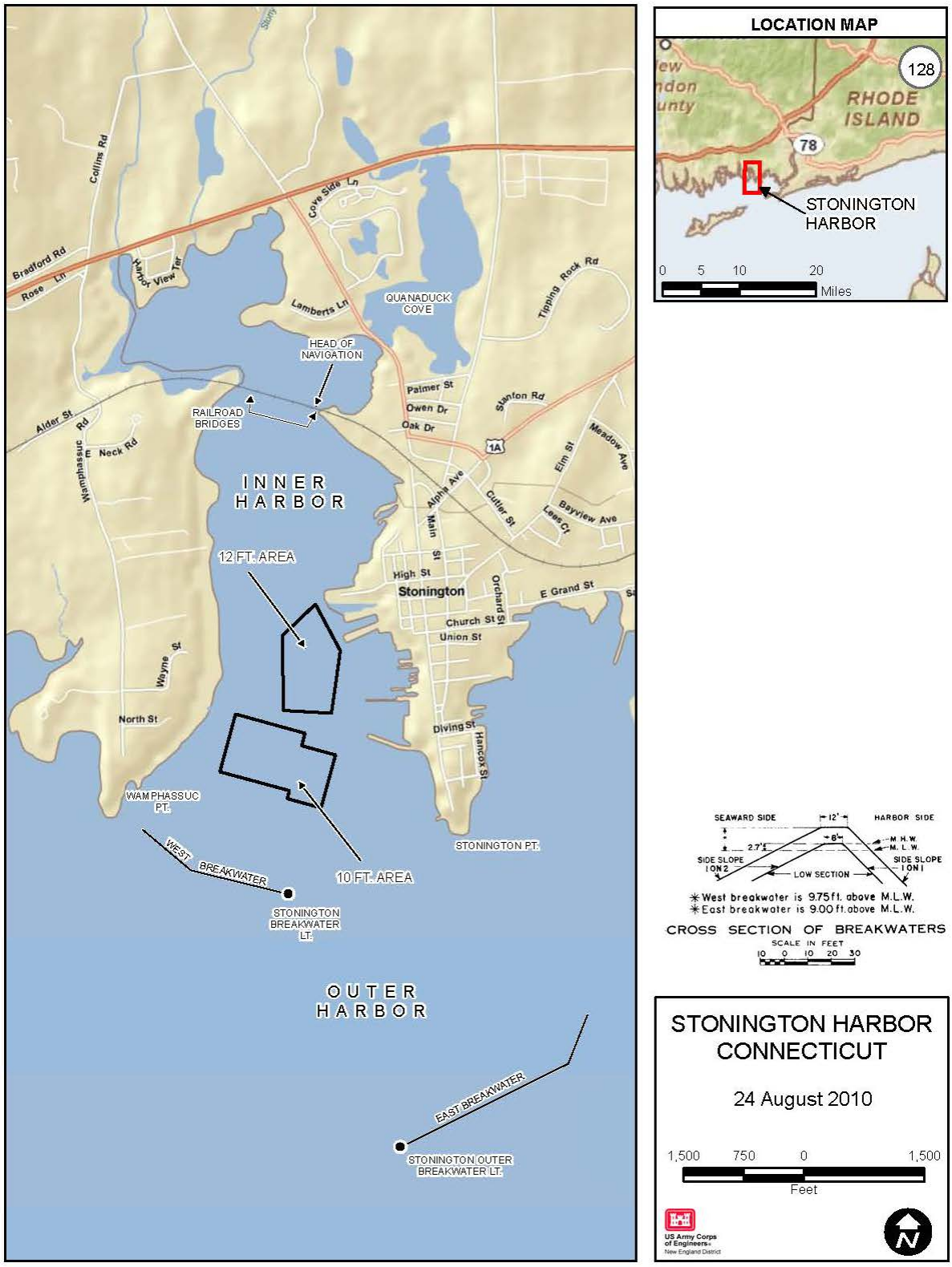
Jan 1906 - Feb 1906	Boulder Removal from Watch Hill Cove Chan.	40 cy Boulders
Mar 1908 – Sept 1908	Maintenance Dredging of 10-Foot River Channel at Westerly	1,460 cy Plus 35 cy Boulders
Mar 1908 – Sept 1908	Improvement Dredging of 10-Foot Bay Channel East from Folly Rocks	58,987 cy Plus 66 cy Boulders
Sept 1908 – June 1909	Improvement Dredging of 10-Foot River Channel at Avondale and Removal of Ledge and Hard Material from 10-Foot Channel off Pawcatuck Point	60,966 cy Plus 2 cy Boulders
June 1909 – Sept 1909	Improvement of 10-Foot Bay Channel Removal of Ledge and Boulders off Pawcatuck Point	Unknown
Sept 1912 – June 1913	Improvement Dredging of 10-Foot River Channel, Widening of Bends to 150 Feet, and Widening of Channel at Sandy Point.	38,338 cy Plus 45 cy Boulders
Spring 1913	Maintenance and Widening of the Bay Entrance Channel at Stony Point.	8,569 cy
May 1913 – Oct 1913	Improvement of 10-Foot Channel – Removal of Ledge and Boulders from River Channel, off Pawcatuck Point and at Rhodes Folly	151 cy Ledge Rock & 67 cy Boulders
FY 1916	Removal of Large Boulder from River Channel	Unknown
May 1918	Snag Removal from River Channel	Unknown
October 1919	Removal of Boulders at Rhodes Folly	89 cy Boulders
Nov 1919 – Dec 1919	Maintenance Dredging of 10-Foot Channel at Westerly	2,576 cy Plus 16 cy Boulders
FY 1920	Removal of Boulders from Channel at Westerly	8 cy Boulders
Aug 1923 – June 1924	Maintenance and Improvement (Widening) Dredging of 10-Foot Bay Channel	50,000 cy Est. Plus 125 cy Boulders
FY 1928 – July 1928	Maintenance Dredging of 10-Foot River Channel near Westerly	1,937 cy
Oct 1932 – June 1933	Maintenance Dredging of 10-Foot Bay Channel and River Channel	86,597 cy Plus 170 cy Boulders
June 1948 – Aug 1948	Maintenance Dredging of 10-Foot River Channel near Westerly	91,470 cy
May 1948	Construction of Jetty at Watch Hill Cove	456 Tons Stone

Oct 1948 – Mar 1949	Improvement Dredging of 10-Foot Channel and Anchorage at Watch Hill Cove	177,651 cy Plus Hurricane Debris
Sept 1949 – Dec 1949	Continue Improvement Dredging of 10-Foot Watch Hill Cove Anchorage Extension	28,306 cy
May 1955	Maintenance Dredging of 10-Foot Bay Channel near Rhodes Folly	29,719 cy
Aug 1961 – Oct 1961	Maintenance Dredging of 10-Foot Bay Channel near Rhodes Folly	10,160 cy
May 1962 – Aug 1962	Ledge Removal from 10-Foot Bay Channel Opposite Rhodes Folly	Unknown
May 1977	Sidecast Maintenance Dredging of 10-Foot Bay Channel at Sandy Point	12,810 cy
Sept 1996 – Jan 1997	Pipeline Maintenance Dredging of 10-Foot Bay Channel at Sandy Point with Disposal on Point	47,000 cy

Stonington Harbor FNP, Stonington, CT

Stonington Harbor's FNP was first authorized by the Act of 23 May 1828. At that time, a stone breakwater extending approximately 740 feet West from the West shore of Stonington Point with a 12-foot top width and +8.5-foot top elevation was approved for construction. The project was modified by the River and Harbor Act of 1873, which added a 12-foot anchorage area above the existing breakwater, and the R&H Act of 1875, which approved a stone breakwater with a 12-foot top-width extending about 2,150 linear feet in a southeasterly direction off Wampasset Point. Additionally, the River and Harbor Acts of 1880 and 1884 allowed for the construction of an eastern breakwater 2,900 linear feet long that extended between the North end of the Middle Ground Shoal and the South end of Bartletts Reef with a top-width of 12 feet to create a harbor of refuge. In 1950, the River and Harbor Act permitted a second anchorage (6-foot depth) at Stonington Harbor to be built. The final FNP consists of the two outer breakwaters (eastern and western), a 10-foot anchorage, and a 12-foot anchorage in the inner harbor. See Project Map 128.

Project Map 128: Stonington Harbor FNP



Stonington Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
Act of 23 May 1828	Stone Breakwater Extending about 740 Feet West from West Shore of Stonington Point, with a 12-Foot Top Width, +8.5 Foot MLW Top Elevation, to Protect the Town Wharves.	Constructed 1828-1834
Senate Ex. Doc. #23, 42nd Congress, 2nd Session, 26 January 1872	Two Stone Breakwaters Offshore to form a Harbor of Refuge. One South of Stonington Point, Extending 2,000 LF Southwesterly from Bartlett Reef to the Middle Ground Shoal, with a Rubble-Mound Substructure Up to MLW Elevation, with a 20-Foot Top Width, Topped by Fitted Granite Block Wall Superstructure with a 8-Foot Top Width, Top Elevation of +8 Feet MLW. The Second, a Rubble-Mound Structure, Extending about 2,900 LF Southeasterly from Off Wampasset Point to Wampasset Shoal, with a Top Elevation of MHW.	Project Not Constructed but Later Authorized and Finished
River & Harbor Act of 3 March 1873	Dredging a -12-Foot MLW Anchorage Area, West of the Steamboat Channel, below the Steamboat Wharf and above the Existing Breakwater.	Oct 1873 – June 1874
River & Harbor Act of 3 March 1875	Stone Breakwater Extending about 2,150 LF from the 6-Foot Contour off Wampasset Point, Southeasterly to about the -18-Foot Contour, together with the Removal of the Remaining Southern and Western Portions of Penguin Shoal to -12 Feet MLW.	Aug 1875 – Sept 1880
River & Harbor Act of 14 June 1880 Extended by the River & Harbor Act of 5 July 1884	Rubblestone Eastern Breakwater, 2000 Feet Long (Later 2,900 LF), Extending on a Line between the North End of the Middle Ground Shoal and the South End of Bartletts Reef, to Create a Harbor of Refuge	Dec 1880 – Sept 1891
River & Harbor Act of 17 August 1894	Channel Extending 500 LF Across Noyes Shoal, at 800 Feet Wide by -18 Feet MLW (Completed to only 160 Feet Wide)	FY 1896 – First Half
River & Harbor Act of 3 June 1896	Seawall to Halt Erosion at the Lighthouse at Stonington Point, about 386 Feet Long along the MHW Contour with an Average Height of about 8 Feet.	April 1897 – June 1897
River & Harbor Act of 17 May 1950	Abandon Portions of the Existing Project for Stonington Harbor Including the 17-Foot Channel across Noyes Shoal and the Seawall	10-Foot Anchorage – Oct 1956 – May 1957

	around Stonington Point, Retain Maintenance of the Existing Outer Harbor Breakwaters, Dredging Penguin Shoal to -10 Feet MLW as New Anchorage, Retention of the Existing 12-Foot Inner Harbor Anchorage, and Dredging of a Third Anchorage at the Northeast Head of the Harbor to -6 feet MLW by 7 Acres.	6-Foot Anchorage – Never Constructed
Water Resources Development Act of 17 October 1986	Deauthorized the Unconstructed 6-Foot MLW Anchorage at the Northeast Head of the Harbor, as Adopted by the Act of 1950.	Deauthorization

Stonington Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Spring 1829 -1834	Construction of Stone Breakwater/Pier Extending West from Stonington Point 740 LF	24,435 cy Stone (82,268 Tons Est)
Oct 1873 - June 1874	Improvement Dredging of the 12-Foot Depth Area along Inner Harbor Waterfront	91,087 cy
Oct 1874 - Sept 1875	Improvement Dredging of the 12-Foot Inner Penquin Shoal North Anchorage	118,422 cy
Aug 1875 - May 1876	Begin Construction of the Western Refuge Breakwater Southeasterly off Wampasset Point	14,507 Long Tons Stone
Oct 1878 - Aug 1879	Continue Construction of the Western Refuge Breakwater off Wampasset Point	41,821 Long Tons Stone
Sept 1879 - Aug 1880	Continue and Complete Construction of the Western Refuge Breakwater Southeasterly off Wampasset Point – 2,025 Feet Long – Total of 94,158 Long Tons Stone used	37,840 Long Tons Stone
Dec 1880 - June 1881	Begin Construction of the East Refuge Breakwater at Bartletts Reef	24,750 Long Tons Stone
June 1881 - Nov 1881	Continue Construction of the East Refuge Breakwater at Bartletts Reef	23,909 Long Tons Stone
Oct 1882 - Sept 1883	Continue Construction of the East Refuge Breakwater at Bartletts Reef	21,400 Long Tons Stone
Nov 1884 - Apr 1885	Continue Construction of the East Refuge Breakwater at Bartletts Reef	7,500 Long Tons Stone
Jan 1887 - Oct 1887	Continue Construction of the East Refuge Breakwater at Bartletts Reef	16,385 Long Tons Stone
Mar 1889 - Aug 1889	Continue Construction of the East Refuge	5,590 Long Tons

	Breakwater at Bartletts Reef	Stone
Dec 1890 - Sept 1891	Continue Construction of the East Refuge Breakwater at Bartletts Reef	11,148 Short Tons Stone
Aug 1894 - Nov 1894	Complete Construction of the East Refuge Breakwater at Bartletts Reef - 2,900 LF	7,789 Short Tons Stone
July 1895	Improvement Dredging of the 17-Foot Noyes Shoal Channel	9,566 cy
Apr 1897 - June 1897	Construction of Fieldstone and Granite Seawall at Stonington Point – 386 LF	540 Tons
June 1901	Project Considered Completed	
April 1915 - June 1915	Repairs to the West Breakwater off Wampasset Point	1,355 Long Tons Stone
April 1915 - July 1915	Repairs to East Breakwater at Bartletts Reef	4,291 Long Tons Stone Placed
May 1940 - July 1940	Repairs to Hurricane (1938) Damage to the East and West Outer Breakwaters	10,800 Long Tons Stone
Oct 1956 - May 1957	Improvement Dredging of the 10-Foot West Penquin Shoal Anchorage	28,370 cy
June 1958 - July 1958	Repairs to the East Outer Breakwater at Bartletts Reef	4,000 Tons Stone Placed
October 2012 – April 2013	Repairs to the East Outer Breakwater at Bartletts Reef	3,107 Tons Stone Placed

Mystic Harbor & River FNP, Groton & Stonington, CT

The FNP at Mystic Harbor was initially authorized by the 1890 River and Harbor Act which provided for a 2.5 mile long, 15 feet deep by 100 feet wide channel that widened at the Bends up to 300 feet and extended from Fishers Island Sound to the highway bridge at Mystic. In 1913 the R&H Act permitted a second channel that was 1.25 miles long, 12 feet deep and 100 feet wide above the highway bridge up to Greenmanville. A 9-foot and 200 by 400-foot wide turning basin was constructed west of the channel below the highway bridge and an 8.5-acre, 9-foot anchorage area East of the channel and North of Mason Island was built as approved by the R&H Act of 1945. The final configuration of the FNP at Mystic Harbor consists of a 15-foot channel, 125 feet wide, from Fishers Island Sound to Murphy Point, thence 100 feet wide to the highway bridge; thence a 12-foot channel, 100 feet wide, to a point 700 feet above the Marine Historical Association Wharf; a 9-foot anchorage basin situated southwest of Murphy Point; and a 9-foot turning basin situated northwest of the railroad bridge. The upper 0.75 mile of the channel which was not constructed to full project width was deauthorized in November 1986. The final configuration can be seen in Project Map 129.

Project Map 129: Mystic Harbor and River FNP

BRIDGE CLEARANCES:

RAILROAD BRIDGE (SWING)
HOR 63 ft. (Left Draw Span)
65 ft. (Right Draw Span)
VERT 4.5 ft. M.H.W.

HIGHWAY BRIDGE (BASCULE)
HOR 65 ft.
VERT 4.5 ft. M.H.W.

Mystic River and Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 19 September 1890	15-Foot MLLW by 100-Foot Wide Channel, Widened at the Bends up to 300 Feet, Extending from Fishers Island Sound to the Highway Bridge at Mystic.	April 1891 - June 1900
River & Harbor Act of 25 July 1912	Restoration and Maintenance of the -15 Feet MLLW by 100 Feet Wide Channel up to the Highway Bridge as Adopted in 1890	April 1913 – June 1913
River & Harbor Act of 4 March 1913	Channel -12 Feet MLLW by 100 Feet Wide above the Highway Bridge up to Greenmanville, Widened through the Bend Opposite Starr Street to 200 Feet.	Aug 1914 – Sept 1914
River & Harbor Act of 2 March 1945	Widen the Entrance Channel to 125 Ft to the Bend below the Railroad Bridge, a Turning Basin -9 Feet MLLW and 200 by 400 Feet West of the Channel below the Highway Bridge, and an Anchorage Area -9 Feet MLLW by 8.5-Acres East of the Channel and North of Mason Island.	Sept 1956 – May 1957
River & Harbor and Flood Control Act of 23 October 1962	Hurricane Barrier across Mystic Harbor from Groton/Noank Mainland East to Mason Island, with Navigation Gates for the Entrance Channel, then Extending East from Mason Island back to the Mainland with a Small Boat Opening.	Never Constructed
August 1972		Deauthorization
Water Resources Development Act of 17 October 1986, §1002	Deauthorized the Uncompleted Portion of the Project Involving Widening the Lower 4,700 Feet of Channel above US Route 1 from its Constructed Width of 80 to 90 Feet to a Width of 100 Feet, as Adopted by the Act of 1913.	Deauthorization
Permit Documents, 22 February 1988	Permit Holder was Required to Dredge a Replacement -9-Foot Turning Basin East of the Channel above the Railroad Bridge as a Marina Expansion had Occupied the Area of the Authorized Basin to the West	February 1988
Water Resources	P.L. 104-303. Deauthorized a Triangular	Deauthorization

Development Act of 25 September 1996, §364(4)	Portion of the 15-Foot Channel, as Adopted by the Act of 1913.	
Water Resources Development Act of 8 November 2007, P.L. 110-114, Section 3181(a)(2)	Deauthorizes a Portion of the Upper 12-Foot Channel, as Authorized by the Act of 19 September 1890, alongside the Mystic Seaport Wharves to Resolve Encroachments	Deauthorization

Mystic River and Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Apr 1891 - May 1891	Begin Improvement Dredging of the 15-Foot MLLW Lower Channel between Bridges	10,821 cy
Sept 1981 - Nov 1891	Continue Improvement Dredging of the 15-Foot MLLW Lower Channel	49,179 cy
Oct 1892 - Dec 1892	Continue Improvement Dredging of the 15-Foot MLLW Lower Channel	38,034 cy
Apr 1894 - May 1894	Continue Improvement Dredging of the 15-Foot MLLW Lower Channel	20,000 cy
Mar 1895 - Apr 1895	Continue Improvement Dredging of the 15-Foot MLLW Lower Channel	21,600 cy
Sept 1897 - Oct 1897	Continue Improvement Dredging of the 15-Foot MLLW Lower Channel	25,088 cy
July 1899 - Feb 1900	Improvement of the 15-Foot MLLW Lower Channel through Removal of Rock	466 cy Rock
May 1900 - June 1900	Continue Improvement Dredging of the 15-Foot MLLW Lower Channel	45,655 cy
Apr 1913 - June 1913	Maintenance Dredging of the 15-Foot MLLW Lower Channel	15,351 cy
June 1913	Maintenance Dredging by the NYNH&H Railroad of the 15-Foot MLLW Lower Channel through Railroad Span	445 cy
Aug 1913 - Sept 1913	Improvement Dredging of the 12-Foot MLLW Upper Channel above the Highway Bridge	30,904 cy

Oct 1941 - Dec 1941	Maintenance Dredging of the 15-Foot Lower & 12-Foot Upper Channels	123,487 cy
Nov 1956 - Mar 1957	Maintenance Dredging of the 15-Foot Lower Channel	17,204 cy
Sept 1956 - May 1957	Improvement Dredging to Widen the 15-Foot MLLW Channel and to Begin the 9-Foot Anchorage & 9-Foot Turning Basin	109,662 cy
February 1988	Relocation of the 9-Foot MLLW Turning Basin to East of Channel by Local Interests	8,000 cy Estimated

Fishers Island Dredging Center

Hay (West) Harbor FNP, Fishers Island, NY

The FNP name of Hay (West) Harbor is a quirk of the Congressional legislation authorizing the study and project. The actual FNP is located at West Harbor. West Harbor and Hay Harbor are two distinctly different harbors both located on Fishers Island. West Harbor (formerly known as Big Hay Harbor), site of the FNP adopted in 1930 through the River and Harbor Act, is located along the northern shore of the Island, while Hay Harbor (formerly known as Little Hay Harbor) is located along the western shore. Authorization in 1930 provided for a channel, 14 feet deep by 100 feet wide from the entrance of Fishers Island Sound into West Harbor. The existing project has remained unchanged since that time. See Project Map 130 for location.

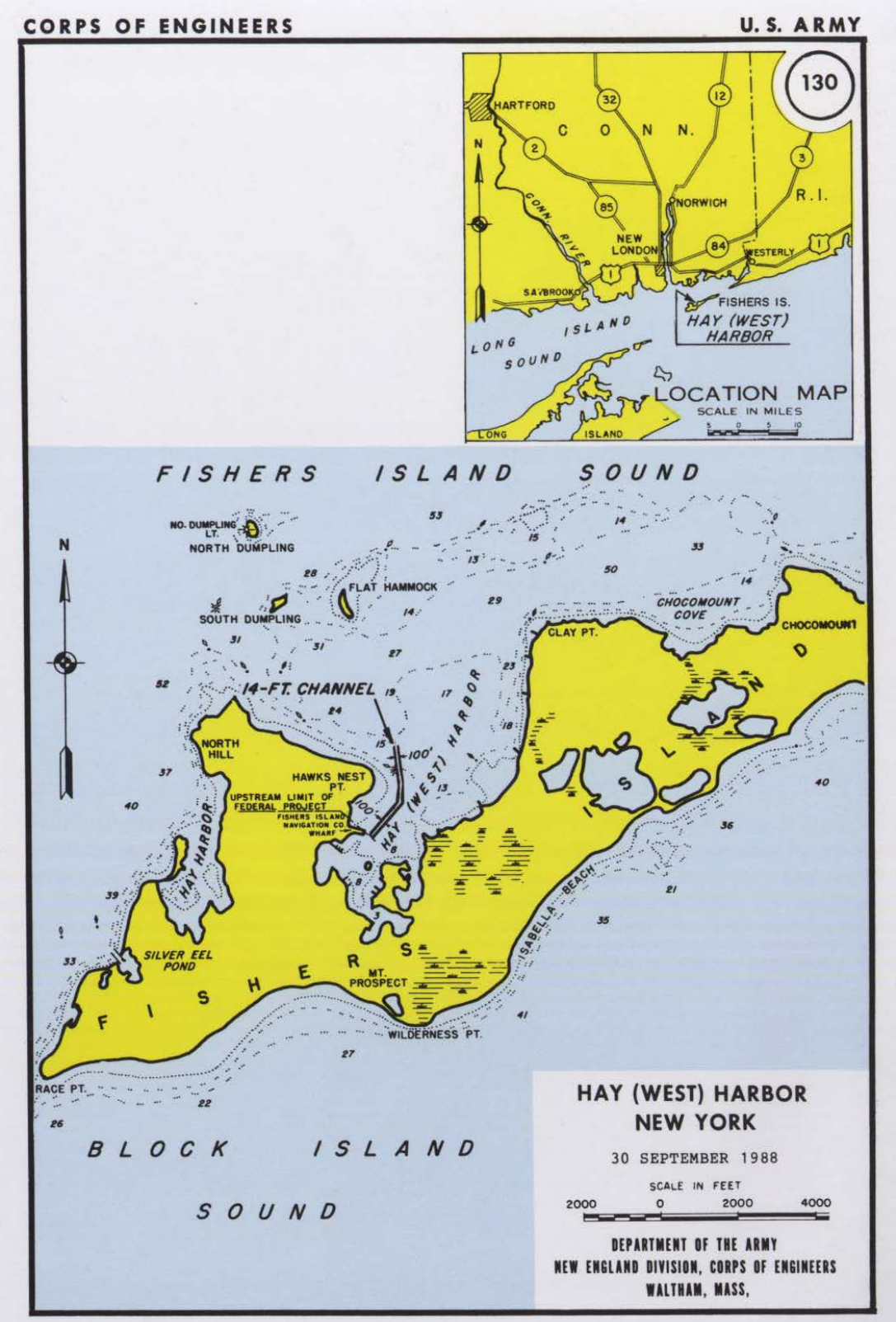
Hay (West) Harbor
List of Authorizations

Authorization	Work Authorized & Constructed	Construction Dates
River & Harbor Act of 1930	Improvement of Hay (West) Harbor by Providing a Channel -14 Feet (MLLW) Deep and 100 Feet Wide from the Entrance to a Point Opposite the Wharf of the Fishers Island Navigation Company, About 0.4 Miles	1931

Hay (West) Harbor
Project Construction & Maintenance History

Work Dates	Work Accomplished	Quantities
1931	Improvement Dredging of the 14-Foot Channel	23,418 cy

Project Map 130: Hay (West) Harbor, Fishers Island, NY



New London Dredging Center

New London Harbor FNP, New London, CT

Main Ship Channel and Turning Basin

The main ship channel of the New London Harbor FNP was originally authorized by the River and Harbor Act of 1916. At that time, the project was permitted to a depth of 33 feet by 600 feet wide with an approximate length of 3.25 miles from deep water in the Long Island Sound up to the Groton Power Plant Dock. The Act of 1976 allowed for the deepening of the main ship channel to a 40 foot depth to above the Hess Pier along with a 40-acre turning basin, at a 30-foot depth, and a 32-foot deep by 4.9-acre maneuvering area, 160 feet wide to the state pier. The Corps did not construct these features, but the channel was deepened to 40 feet by the US Navy and later the Corps assumed maintenance of the channel at the new depth. See Project Map 131.

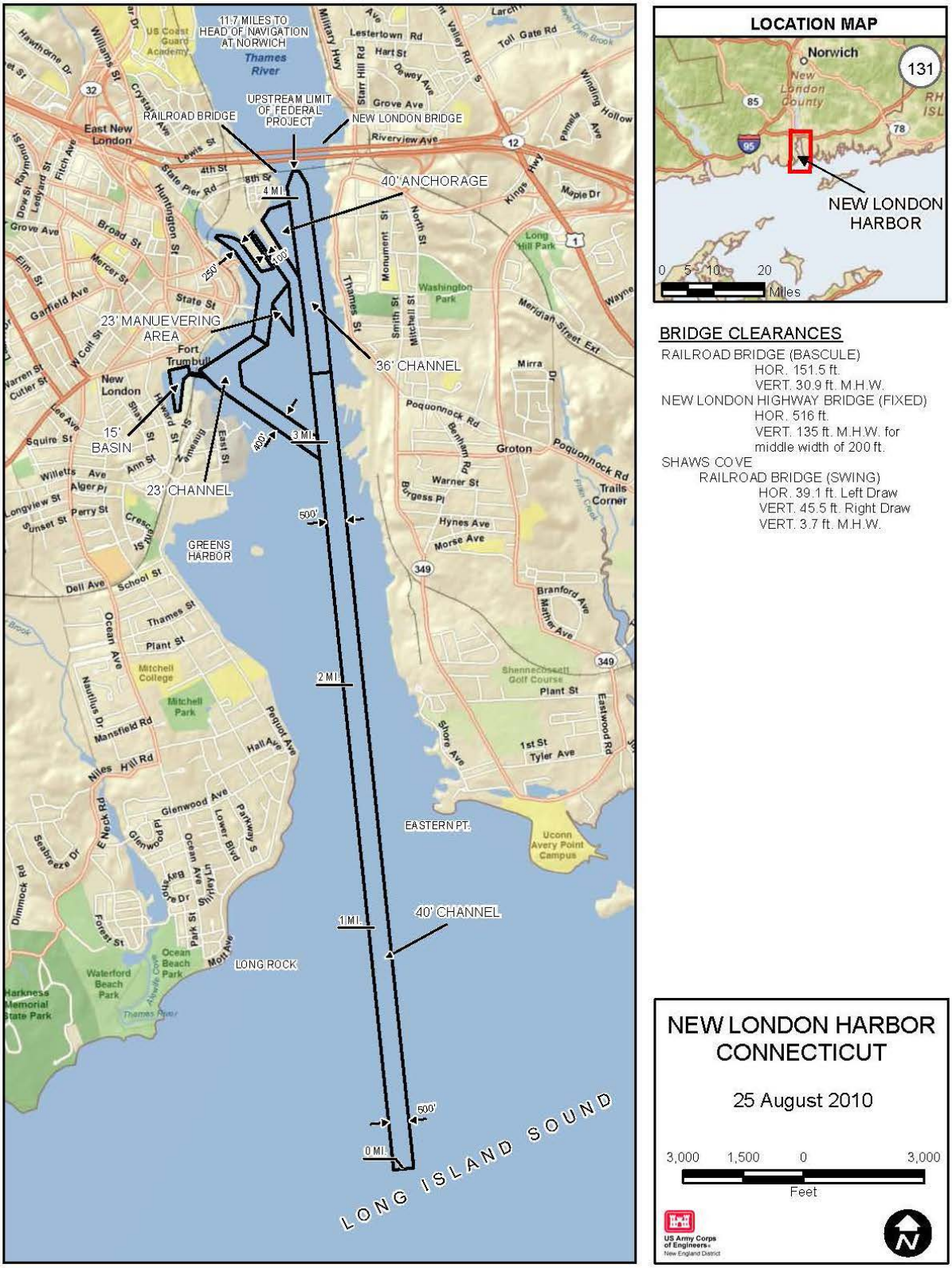
Waterfront Channels and Anchorages

A 23-foot by 400-foot wide channel along the waterfront of New London was authorized by the River and Harbor Act of 1902. The channel would span from deep water in the outer harbor near Fort Trumbull northwest to the mouth of Shaw's Cove then northeast and north along the city waterfront and northeast again to return to deep water. Two, 23-foot deep branch channels into Winthrop's Cove and into the area between the Railroad Wharf and the State Pier were also permitted under the 1902 R&H Act. An additional 23-foot maneuvering area south of the State Pier and east of the Waterfront Channel was authorized by the 1937 R&H Act. See Project Map 131.

Shaw's Cove

In 1892, Congress authorized the portion of the FNP at Shaw's Cove under authority of the River and Harbor Act. The Act called for a 12-foot channel, 100 feet wide into Shaw's Cove, then west and south along the sides of the cove for a total length of 2,000 feet, and a 12-foot anchorage basin, 400 by 800 feet in size. In 1910, the entire project was deepened to 15 feet by the R&H Act of that year. Project Map 131 shows the details of this project.

Project Map 131: New London Harbor Federal Navigation Project



BRIDGE CLEARANCES

RAILROAD BRIDGE (BASCULE)
HOR. 151.5 ft.
VERT. 30.9 ft. M.H.W.
NEW LONDON HIGHWAY BRIDGE (FIXED)
HOR. 516 ft.
VERT. 135 ft. M.H.W. for middle width of 200 ft.
SHAWS COVE
RAILROAD BRIDGE (SWING)
HOR. 39.1 ft. Left Draw
VERT. 45.5 ft. Right Draw
VERT. 3.7 ft. M.H.W.

New London Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 14 June 1880	Removal of the Boulder Shoal Located between the Harbor Channel and the Railroad Wharf to -16 Feet MLLW	Oct 1880 – Nov 1886
River & Harbor Act of 13 July 1892	Shaws Cove - Channel -12 Feet MLLW by 100 Feet Wide into Shaws Cove, then West and South along the Sides of the Cove a Total Length of 2,000 Feet, and an Anchorage Basin at the Bend in the Channel, also at -12 Feet MLLW, 400 Feet by 800 Feet	Nov 1892 – July 1900
River & Harbor Act of 13 June 1902	Channel -23 Feet MLLW by Generally 400 Feet Wide from Deep Water in the Outer Harbor Near Fort Trumbull Northwest to the Mouth of Shaws Cove then Northeast and North along the City Waterfront and Northeast to Return to Deep Water East of the Railroad Wharves, with 23-Foot Branch Channels into Winthrops Cove and into the Area between the Railroad Wharf and the Proposed State Pier Site.	June 1903 – June 1907
River & Harbor Act of 25 June 1910	Deepening the Existing -12-Foot Shaws Cove Project to -15 Feet MLLW	Aug 1912 – May 1913
River & Harbor Act of 27 July 1916	Main Entrance Channel to -33 Feet MLLW by 600 Feet Wide from Deep Water in the Sound up to the Groton Power Plant Dock	Sept 1916 – Feb 1933
River & Harbor Act of 26 August 1937	23-Foot Maneuvering Area South of the State Pier and East of the 23-Foot Waterfront Channel, and 33-Foot by 1,200-Foot Wide by 3,700-Foot Long Maneuvering Area between the City Wharf and the -33-Foot Main Channel.	23-Foot Maneuvering Area - June 1938 – July 1939 33-Foot Maneuvering Area – Never Built
Act of 22 October 1976	Deepen the 600-Foot Wide Main Ship Channel to -40 Feet MLLW to above the Hess Pier, a Turning Basin -30 Feet MLLW by 40 Acres Located about the Head of the Channel, and a 32-Foot by 4.9-Acre Maneuvering Area 160 Feet Wide to the State Pier.	Never Constructed Built in Part by US Navy

Annual Report for 1980, New England Division Extract, Page 1-8	U.S. Navy Completed its Second Channel Deepening Project in March 1980, Deepening the Entrance Channel to 40 Feet	Corps Assumes Maintenance of Navy Depth within Corps Project Limits
Water Resources Development Act of 8 November 2007, P.L. 110-114, Section 3181(b)	Redesignates a Portion of the 23-Foot Waterfront Channel, as Authorized by the Act of 13 June 1902, as an Anchorage Area	Redesignation

New London Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
October 1880	Begin Clearing Boulder Shoals for Access from the Harbor Channel to the Railroad Wharf at –16 Feet – a Narrow Cut was Made	1,222 cy Material and Boulders
November 1881 – Jan 1882	Continue Clearing Boulder Shoal between the Harbor Channel and the Railroad Wharf at –16 Feet	6,619 cy Plus 140 Tons Boulders
Nov 1882 – Feb 1883	Continue Clearing 16-Foot Channel through the Boulder Shoal between the Harbor Channel and the Railroad Wharf.	9,794 cy Plus 637 Tons Boulders
April 1885 – May 1885	Continue Clearing 16-Foot Channel through the Boulder Shoal between the Harbor Channel and the Railroad Wharf.	2,725 cy Plus 131 cy Boulders
Oct 1886 – Nov 1886	Complete Clearing 16-Foot Channel through the Boulder Shoal between the Harbor Channel and the Railroad Wharf.	2,725 cy Plus 131 cy Boulders
Nov 1892 – May 1893	Begin Improvement Dredging of the 12-Foot Channel and Anchorage at Shaws Cove	52,120 cy
Aug 1895 – Sept 1895	Continue Improvement Dredging of the 12-Foot Channel and Anchorage at Shaws Cove	50,814 cy
Sept 1899 – Dec 1899	Continue Improvement Dredging of the 12-Foot Channel and Anchorage at Shaws Cove	52,683 cy
May 1900 – July 1900	Continue Improvement Dredging of the 12-Foot Channel and Anchorage at Shaws Cove	29,716 cy Plus 27 cy Ledge
June 1903 – Oct 1904	Begin Improvement Dredging of the 23-Foot	1,273,229 cy

	Waterfront Channel	
Oct 1905 – Nov 1905	Maintenance Dredging of the 12-Foot Channel and Anchorage at Shaws Cove	11,095 cy
Nov 1906 – June 1907	Complete Improvement of the 23-Foot Waterfront Channel by Ledge Removal	637 cy Ledge Removed
Aug 1912 – Nov 1912	Improvement Dredging of 15-Foot Shaws Cove Channel and Anchorage	73,643 cy (Incl. 6,000 cy O&M) Plus 227 cy Rock
April 1913 – May 1913	Complete Improvement Dredging of 15-Foot Shaws Cove Channel and Anchorage	45 cy Ledge Removed
Sept 1916 – July 1917	Begin Improvement Dredging of the 33-Foot Main Entrance and Harbor Channel by US Hopper Dredge	1,445,853 cy
Jan 1920 – May 1920	Continue Improvement Dredging of the 33-Foot Main Entrance and Harbor Channel by US Hopper Dredge	316,039 cy
Jan 1921 – April 1921	Continue Improvement Dredging of the 33-Foot Main Entrance and Harbor Channel by US Hopper Dredge	355,500 cy Estimated
Oct 1929 – Jan 1930	Maintenance Dredging of the 23-Foot Winthrop Cove Channel	88,505 cy
Dec 1932 – Feb 1933	Maintenance and Improvement Dredging of the 33-Foot Main Harbor Channel – 33-Foot Channel Now Completed	480,571 cy (Incl. 55,333 cy O&M)
Dec 1933 - Feb 1934	Maintenance Dredging of the 15-Foot Shaws Cove Channel & Anchorage	19,028 cy Plus 6 cy Boulders
June 1938 - July 1938	Improvement Dredging of the 23-Foot Upper Harbor Maneuvering Area by U.S. Hopper	30,761 cy
October 1938	Emergency Maintenance Dredging and Removal of Hurricane Debris from the Entire Harbor by U.S. Lighter	Unknown
Oct 1942 - June 1943	Improvement Dredging of the 33-Foot Main Harbor & Entrance Channel	89,814 cy
Oct 1942 - June 1943	Improvement Dredging of the 23-Foot New London Waterfront Channel	316,751 cy
1973 - 1974	US Navy Improvement Dredging of 36-Foot	1,576,000 cy

US Navy Work	Main Harbor Channel 500 Feet Wide up to Hess Terminal	Estimated
- May 1980 US Navy Work	2d US Navy Improvement Dredging of the 40-Foot Main Channel	3,260,000 cy Estimated
May 1984 - Jun 1984	Maintenance Dredging of the 40-Foot Main Channel	$289000
FY 1984	Maintenance Dredging of the 40-Foot Main Channel at the Outer Bars by U.S. Hopper Dredge	$378809
June 1984	Relocation of Short-Dumped Disposal Mound at the New London Disposal Site – No Harbor Dredging	9,000 cy

Thames River FNP, New London & Groton, CT

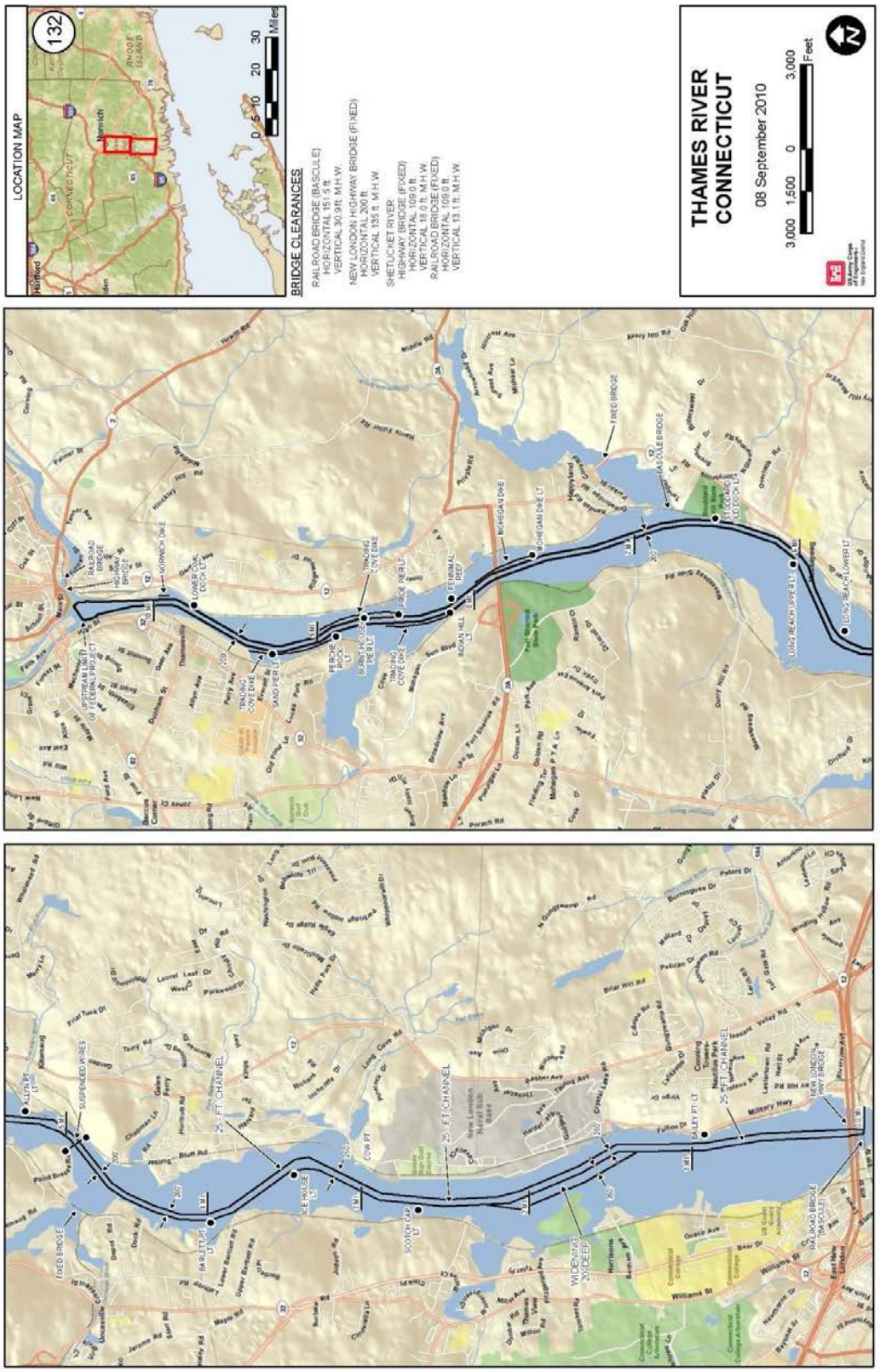
39-Foot Lower Channel to Navy Submarine Base and Maneuvering Area

The Act of 4 July 1836 authorized a channel 9 to 11-feet deep by 60 to 100 feet wide from deep water upriver, and dike rehabilitations as well new dikes with a top elevation grading from +3.5 feet Mean High Water (MHW) at the upstream end to +1.5 Feet MHW for the downstream-most structures. This portion of the project was modified throughout history with major modifications occurring in 1888, 1907, 1930, 1945, and 1980. It should be noted that the USACE in partnership with the U.S. Navy made the changes in 1945 and 1980 resulting in the following configuration: widening of the channel alongside the U.S. Navy Submarine Base by about 235 feet over a distance of 0.75 miles along the west side of the existing channel at a depth of 20 feet; and deepening, widening, and straightening the channel above the railroad bridge up to the Navy Base to 36 feet. See Project Map 132 for details.

25-Foot Upper Channel to Norwich and Turning Basin

This portion of the FNP in Thames River was authorized in 1866 and included a channel, 14 feet deep by 100 feet wide for several miles upriver to Norwich. This part of the project was modified in 1871, 1878, 1879, 1881, 1882, 1910, 1927, and 1935 to deepen, realign, lengthen and widen the channel. See the List of Authorizations below for details. Today, this portion of the FNP is approximately 9.5 miles long, 25 feet deep and 200 feet wide. See Project Map 132.

Project Map 132. Thames River Federal Navigation Project



Thames River List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
Act of 3 March 1821	Authorized the Navy to Removed Obstructions in the Thames River placed by U.S. Forces during the War of 1812 to Obstruct Enemy Passage.	
Act of 4 July 1836	Channel -9 or -11 Feet MLLW (-12 to -14 Feet MHW) by 60 to 100 Feet Wide, with Stone Training Dikes to be Built by Rehabilitating One of the Four Existing Stone Piers, by Adding Wings to the Other Three Existing Stone Piers and by Building Ten New Dikes. Dikes to have Top Elevations Grading from +3.5 Feet MHW at the Upstream End of the Series to +1.5 Feet MHW for the Downstream-Most Structures	1836 - 1839
Act of 23 June 1866 and Act of 2 March 1867	Channel -14 Feet MHW by 100 Feet Wide for 3 Miles upriver to Norwich (75,918 cy, Estimated), with Repairs to the Stone Dikes where Injured by Subsidence or where Stone had been Removed	June 1867 – Aug 1869
Annual Report for 1868, Page 67 and App. P, Page 747	Widening the Channel at the Shetucket Mouth at Norwich to 200 Feet to Compensate for Shoaling due to Ice Jams	FY 1869
River & Harbor Act of 3 March 1871	14-Foot MHW Channel from Trading Cove Flats up to Norwich, 100 Feet Wide through the Shoals from Bushnells Reef up to Upper Rolling Mill, then 200 Feet Wide to Norwich, with Removal of the Middle Ground Shoal at Norwich t o –9 Feet MLLW.	April 1872 – June 1873
River & Harbor Act of 18 June 1878	Restoration of a Channel 100 Feet Wide by -11 Feet MLLW from Indian Point to Norwich	Aug 1878 – Oct 1878
River & Harbor Act of 3 March 1879	Channel -14 Feet MLLW by 200 Feet Wide from Deep Water below Indian Point up to Norwich.	Sept 1879 – Oct 1883 1912
River & Harbor Act of 3 March 1881	1,600 LF Stone-Filled Timber Piling Crib Training Dike at Trading Cove Flats.	April 1882 – Oct 1882 July 1887 -

Annual Report for 1882, Appendix C-3, Page 601, Chief of Engineers Report, 18 March 1882	Four additional Dikes, some Stone some Timber Crib; (1) Opposite Mohegan (East Bank, 3,000 LF), North from Long Rock (East Bank, 2,800 LF), North from Perch Rock to Rolling Mills (West Bank, 4,350 LF), and South from the Railroad Wharf (East Bank, 1,050 LF), all to an Elevation of at Least MHW.	Mohegan Dike - May 1883 – Nov 1883 Long Rock Dike – Nov 1884 – July 1885 Rolling Mill Dike – July 1885 – Dec 1887 (to only 3,093 LF) Railroad Wharf Dike - Apr 1906 -
River & Harbor Act of 11 August 1888	200-Foot Wide Channel -16 Feet MLLW from above New London up to Allyns Point, and a Channel -14 Feet MLLW above to Norwich with Removal of the Middle Ground.	16-Ft Channel - Jan 1889 – June 1889 14-Ft Channel - April 1889 – March 1901 Norwich Basin – Sept 1912 – Nov 1912
River & Harbor Act of 2 March 1907	20-Foot MLLW by 200-Foot Wide Channel up to Allyns Point	March 1908 – Nov 1908
River & Harbor Act of 25 July 1910	Removing Two Rocks/Ledges and other Obstructions in the Shetucket River (the North One to -9 Feet MLLW and the South One to -12 Feet MLLW) Located Immediately Upstream of the Laurel Hill Bridge, Downstream of the Norwich City Dock, as an Upstream Extension of the Thames River Channel	Aug 1911 – June 1912
River & Harbor Act of 21 January 1927	18-Foot by 200-Ft Wide Channel from Allyns Point up to Norwich, Widened to 250-300 Feet at Long Reach Bend and the Basin at Norwich.	Fall 1928 – Oct 1930
River & Harbor Act of 3 July 1930	Channel -25 Feet MLLW by 250 Feet Wide from Deep Water at the New London Bridges Upriver about 7 Miles to Bartlett Crossover, then at -25 Feet MLLW by 200 Feet Wide for a Further 2 Miles up to Allyns Point	July 1932 – July 1933
River & Harbor Act of 30 August 1935	Channel -25 Feet MLLW Upriver from Allyns Point (Head of the then Existing 25-Foot Depth) to Norwich at 200 Feet Wide, Widened through Long Reach, at the Bends, and at the Head of Navigation at Norwich	Oct 1939 – April 1941 (Except for Full Width at Long Reach)
River & Harbor Act	Widening the Channel Alongside the U.S.	FY 1940 by US Navy

of 2 March 1945	Navy Submarine Base by an Average of 350 Feet Over a Distance of 3/4 Mile along the West Side of the Existing Channel at a Depth of -20 Feet MLLW	
Interdepartmental Agreement with US Navy for Corps Maintenance	Deepen, Widen and Straighten the Thames River Channel above the Railroad Bridge up to the Navy Base to -36 Feet MLLW	FY 1980 by US Navy
Water Resources Development Act of 17 October 1986	Deauthorized the Uncompleted Widening of the 25-Foot Channel at the Bend at Long Reach as Adopted by the Act of 1935	Deauthorization §1002
Water Resources Development Act of 25 September 1996	Reconfigured the Turning Basin at Norwich, Deauthorized Areas of the Basin Not Included in the Realignment, and Required Non-Federal Interests to Pay the Price for Compensatory Dredging.	Deauthorization §312

Thames River Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
1821	Remove Naval Obstructions from War of 1812 from the River Channel	Unknown
1836	Construction of 2 Stone Training Dikes along the East Shore of the Upper River (One 1500 LF)	3,036 CY Stone
1837	Construction of 4 Stone Training Dikes along the Upper River. Two on the East Shore Totaling 870 LF and Two on the West Shore Totaling 1,100 LF	East Dikes = 2,822 CY Stone West Dikes = 3,444 CY Stone
Fall 1837 - 1838	Construction of 8 Stone Training Dikes	Unknown
1837 - July 1838	Improvement Dredging of 14-Foot MHW (11-Foot MLLW) by 60-Foot Wide Channel up to Norwich	Unknown
June 1867 - Sept 1867	Dredging to Re-establish the 11-Foot Channel in Reaches below Norwich	14,820 cy
Sept 1867 - June 1868	Continue Dredging of the 11-Foot Channel below Norwich	52,381 cy

FY 1869 - Aug 1869	Continue Dredging of the 11-Foot Channel below Norwich	92,197 cy
Apr 1872 - Oct 1872	Maintenance and Improvement Dredging of the 11-Foot Channel from Trading Cove up to Norwich	56,521 cy
Oct 1872 - June 1873	Maintenance and Improvement Dredging of the 11-Foot Channel from the Coal Yard Bar to Norwich and Improvement Dredging of the 9-Foot Middle Ground Area. All Disposal before this Date was along the River Banks and Behind the Training Dikes and Bulkheads	50,189 cy
Aug 1878 - Nov 1878	Maintenance Dredging of the 11-Foot Channel to Norwich – Disposal Outside River Mouth	55,000 cy
Sept 1879 - Nov 1879	Begin Improvement Dredging of the 14-Foot MLLW Channel from Indian Point to Norwich	38,614 cy
May 1881 - June 1881	Continue Improvement Dredging of the 14-Foot Channel to Norwich	9,387 cy
July 1881 – Nov 1881	Continue Improvement Dredging of the 14-Foot Channel to Norwich	Unstated
Apr 1882 - June 1882	Begin Construction of Stone Training Dike at Trading Cove Flats	6,595 Tons Stone
July 1882 - Oct 1882	Continue and Complete Construction of the Dike at Trading Cove Flats	10,612 Tons Stone
July 1882 - Oct 1883	Continue Improvement Dredging of the 14-Foot Channel to Norwich	95,016 cy
May 1883 - Nov 1883	Begin Construction of the 2,988 LF Mohegan Dike using Stone Filled Timber Crib Design	Unknown
Nov 1884 - July 1885	Begin and Complete Construction of Long Rock Dike – All Rubblestone Design	11,945 Tons Stone
July 1885 - Oct 1885	Begin Construction of Rolling Mill Dike	8,000 Tons Stone
July 1885	Repairs to the Trading Cove Dike	105 Tons Stone
Dec 1886 - June 1887	Repair & Add Icebreaker to the Mohegan Dike	600 Tons Stone
Dec 1886 - Dec 1887	Continue Extension of Rolling Mill Dike – Length now 3,093 LF	10,421 Tons Stone
July 1887 - Oct 1887	Continue Improvement Dredging of the 14-Foot by 100-Foot Channel at Thamesville	37,953 cy

July 1888 - Sept 1888	Maintenance Dredging of the 9-Foot Middle Ground at Norwich and the 12-Foot Branch Channel to the East	34,964 cy
Jan 1889 - June 1889	Initiate and Complete Improvement Dredging of the 16-Foot by 200-Foot Wide Channel below Allyns Point	84,890 cy
Apr 1889 - Oct 1889	Improvement Dredging of the 14 Foot by 200-Foot Channel to Norwich	83,968 cy
June 1890 - Oct 1890	Repairs to Mohegan Dike to Raise Elevation to Compensate for Settlement	1,141 Tons Stone
May 1891 - Oct 1891	Continue Improvement Dredging of the 14 Foot by 200-Foot Channel to Norwich	101,833 cy
May 1893 - Aug 1893	Continue Improvement Dredging of the 14 Foot by 200-Foot Channel to Norwich	75,015 cy
June 1896 - Aug 1896	Continue Improvement Dredging of the 14 Foot by 200-Foot Channel to Norwich	42,711 cy
July 1897 - Sept 1897	Continue Improvement Dredging of the 14 Foot by 200-Foot Channel to Norwich	60,446 cy
July 1899 - Sept 1899	Continue Improvement Dredging of the 14-Foot Upper Channel by Removal of the Middle Ground at Norwich to –12 Feet	42,827 cy
Jan 1901 - Mar 1901	Improvement Dredging of the 12-Foot West Steamboat Slip Dredging at Norwich	19,259 cy
FY 1903	Maintenance Dredging of the 16-Foot Channel at Bartletts Crossover	15,915 cy
October 1905	Maintenance Dredging of the 16-Foot Channel at Bartletts Crossover	1,350 cy
Oct 1905 - Nov 1905	Maintenance Dredging of the Middle Ground Basin at Norwich to 12 Feet	12,477 cy
Apr 1906 - May 1906	Extension of Rolling Mill Dike to Close Gap	1,020 Tons Stone
May 1906 - Oct 1906	Begin Construction of Stone Dike at Norwich	6,670 Tons Stone
May 1906 - Nov 1907	Maintenance and Improvement Dredging to Widen the 14-Foot Channel to 200 Feet to Norwich	129,460 cy
Aug 1908 - Nov 1908	Initiate and Complete Improvement Dredging of the 20-Foot Lower Channel to Allyns Point	83,368 cy

Aug 1911 - June 1912	Removal of Two Ledge Areas in the Shetucket River to 9 & 12 Feet	103 cy Ledge Removed
Sept 1912 - Nov 1912	Maintenance and Improvement Dredging to Widen the 14-Foot Channel to 200 Feet to Norwich and Deepening the Basin to 14 Feet – Completion of the 14-Foot Channel and Basin	125,621 cy
FY 1914	Repairs to Stone & Timber Mohegan Dike	1,236 Tons New Stone Plus 2,344 LF of Old Cap Stone Relaid
FY 1914 - June 1915	Repairs to Long Rock Dike and Construction of Icebreaker Head using Stone Salvaged from Older Adjacent 1830's Stone Dike	2,651 Long Tons New Stone Plus 120 Long Tons Old Stone
June 1915	Repairs to Trading Cove Dike using Salvaged Dike Stone from Adjacent 1830s Structures	146 Long Tons Old Stone
Mar 1915 - Aug 1915	Maintenance Dredging of the 20-Foot Channel to Allyns Point	42,041 cy
Aug 1915 - Dec 1915	Repairs to Trading Cove Dike	2,101 Long Tons Stone
FY 1921 - Fall 1921	Maintenance Dredging of the 14-Foot and 20-Foot Channels	40,000 cy
Summer - Fall 1925	Maintenance Dredging of the 14-Foot Channel to Norwich	110,000 cy
July 1928 - Oct 1929	Improvement Dredging of the 18-Foot Channel from Allyns Point to Norwich	1,103,781 cy Plus 13 cy Boulders
July 1930 - Oct 1930	Continue Improvement Dredging of the 18-Foot Channel from Allyns Point to Norwich	378,551 cy Plus 2 cy Boulders
Aug 1930 – Dec 1930	Maintenance Dredging of the 20-Foot Channel to Allyns Point	79,538 cy
FY 1933 - July 1933	Improvement Dredging of the 25-Foot Lower Channel to Allyns Point	541,463 cy
June 1934 - Oct 1934	Maintenance Dredging of the 18-Foot Channel from Allyns Point to Norwich	530,597 cy
Mar 1938 - May 1938	Maintenance Dredging of the 18-Foot Basin at Norwich	33,193 cy

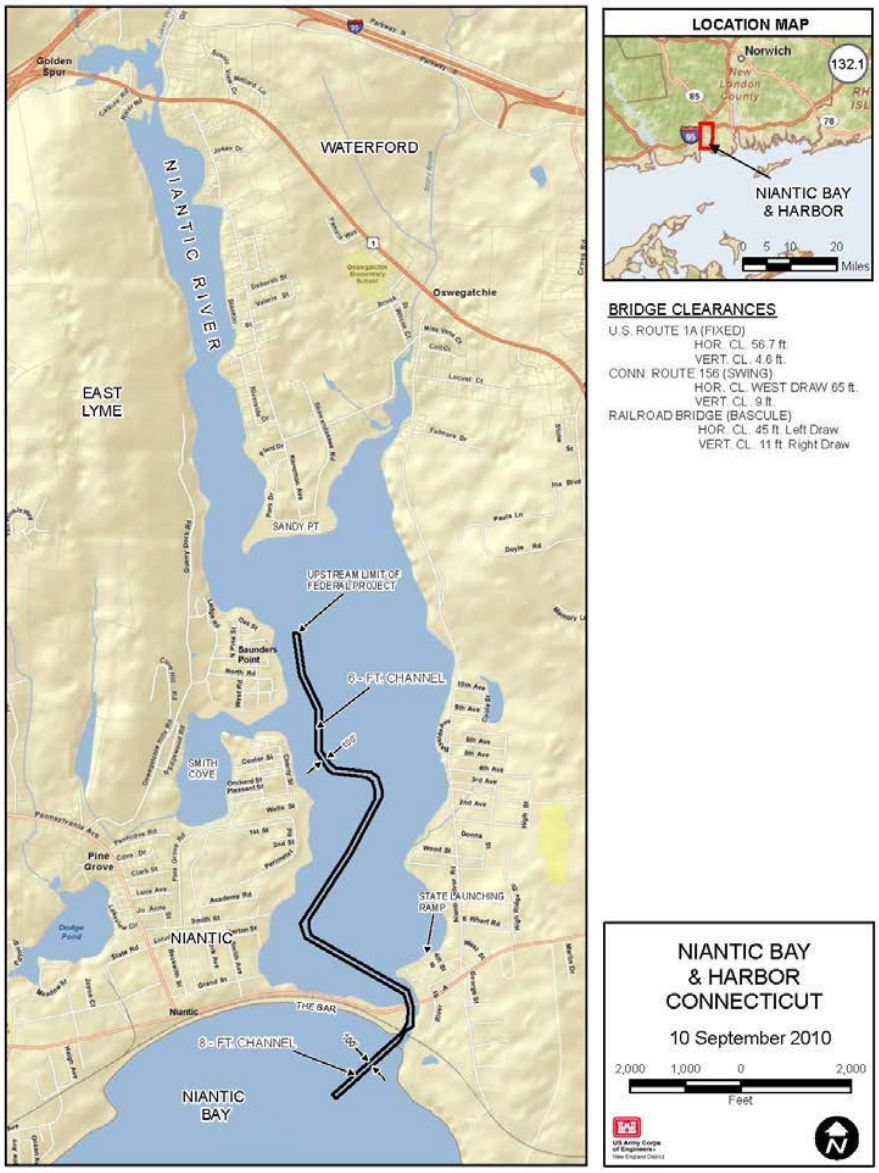
Oct 1939 - Mar 1940	Improvement Dredging of the Lower Reaches of the 25-Foot Channel above Allyns Point to Norwich	470,145 cy
Feb 1940 - Apr 1941	Improvement Dredging of the Upper Reaches of the 25-Foot Channel above Allyns Point to Norwich	2,002,557 cy Plus 5 cy Boulders
1940 US Navy Work	Widen Channel Opposite Navy Base at 20 Feet by US Navy	460,000 cy
March 1941	Removal of Rock Obstructions from the 25-Foot Basin at Norwich	47 cy Rock
Jan 1941 - Mar 1941	Maintenance Dredging of the 25-Foot Channel below Allyns Point	221,097 cy
Aug 1949 - Dec 1949	Maintenance Dredging of the 25-Foot Channel above Allyns Point to Norwich	219,633 cy
Mar 1954 - May 1954	Maintenance Dredging of the 25-Foot Lower Channel to Allyns Point	158,480 cy
Dec 1956 - Feb 1957	Maintenance Dredging of the 25-Foot Upper Channel above Allyns Point to Norwich	20,034 cy
Feb 1966 - Apr 1966	Maintenance Dredging of the 25-Foot Upper Channel above Allyns Point to Smiths Cove	237,388 cy
1980 US Navy Work	Improvement Dredging of 36-Foot Channel from General Dynamics Yard Upriver to Naval Submarine Base	Unknown
Dec 1985 - Feb 1986 US Navy Work	Maintenance Dredging of 36-Foot Channel from General Dynamics Yard Upriver to Naval Submarine Base & 42-Foot US Navy Pier 15 Berth Deepening Improvement Dredging Work	331,400 cy
October 1995 – January 1996 US Navy Work	Improvement Dredging of 39-Foot Channel from I-95 Bridge to above USNSB Pier 17 and 42 Foot Berth Areas and Approaches (NLDS)	1,029,215 cy (Seawolf)
February 1996 US Navy Work	Improvement Dredging at US Navy Submarine Base for 59-Foot Pier 15 Floating Drydock Area Work	24,000 cy

Niantic Dredging Center

Niantic Bay and Harbor FNP, East Lyme & Waterford, CT

Niantic Bay and Harbor was permitted funding in 1964 by the Continuing Authority of Section 107. Original authority for the construction of a channel from the Bay into the river, 8 feet deep by 100 feet wide up to the highway bridge, thence 6 feet deep by 100 feet wide extending about 1.7 miles upstream to deep water south of Sandy Point came from the River and Harbor Act of 1960. The FNP stands the same today as authorized in 1964. See Project Map 132.1 for visual.

Project Map 132.1: Niantic Bay and Harbor FNP



Niantic Bay & Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
Chief of Engineers, 24 August 1964, Continuing Authority of Section 107 of the River & Harbor Act of 1960	Entrance Channel from the Bay into the River, -8 Feet MLLW by 100 Feet Wide up to the Highway Bridge, then -6 Feet MLLW by 100 Feet Wide to Deep Water South of Sandy Point	May 1970 – Aug 1970

Niantic Bay & Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
May 1970 – Aug 1970	Improvement Dredging of the 10-Foot Entrance Channel and -8 Foot Bay Channel Upriver to Deep Water South of Sandy Point	35,000 cy

Connecticut River Dredging Center

Hartford Bar - Connecticut River FNP, Hartford, CT

The Hartford Bar in the Connecticut River was authorized as an 8-foot channel, 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12 feet in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was further deepened and widened by the River and Harbor Act of that year to 15 feet deep by 150 feet wide. See Project Map 133.5 for details.

Claybanks Upper Bar - Connecticut River FNP, Hartford, CT

The FNP at Claybanks Upper Bar in the Connecticut River was authorized as a channel, 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12 feet in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was further deepened and widened by the River and Harbor Act of that year to 15 feet deep by 150 feet wide. See Project Map 133.5.

Claybanks Bar - Connecticut River FNP, Hartford, CT

The FNP at Claybanks Bar in the Connecticut River was authorized as a channel, 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12 feet in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was

deepened again by the River and Harbor Act of that year to 15 feet and widened to 150 feet. See Project Map 133.5.

Wethersfield Shoal - Connecticut River FNP, Wethersfield, CT

Wethersfield Shoal in the Connecticut River was authorized as an 8-foot deep channel, 100 feet wide, by the River and Harbor Act of 11 July 1870. In 1935, the channel depth and width were increased to 15 feet deep and 150 feet wide by the River and Harbor Act of 1935. See Project Map 133.5 and 133.6 for details.

Wethersfield Cove - Connecticut River FNP, Wethersfield, CT

The FNP at Wethersfield Cove was authorized in 1960 and remains unmodified. The authorization provides for a channel, 6 feet deep by 60 feet wide, leading 1,200 feet west off the Connecticut River into Wethersfield Cove to a 6-foot deep anchorage basin, 30-acres in area. See Project Map 133.6 for details.

Cys Hollow Bar - Connecticut River FNP, Wethersfield, CT

The 15-foot channel at Cys Hollow Bar in the Connecticut River was initially authorized as a channel, 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to a depth of 12 feet in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was further deepened by the River and Harbor Act of that year to 15 feet deep and widened to 150 feet wide. See Project Map 133.5 for visual.

Naubuc Bar (Pratt's Ferry Bar) - Connecticut River FNP, Wethersfield, CT

The FNP at Naubuc (originally called Pratt's Ferry) Bar in the Connecticut River was initially authorized as an 8-foot deep channel, 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to a 12-foot depth in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel depth was increased to 15-feet and the channel was widened to 150 feet wide by the River and Harbor Act of that year. See Project Map 133.5.

Press Barn Bar - Connecticut River FNP, Glastonbury, CT

The FNP at Press Barn Bar in the Connecticut River was initially authorized by the River and Harbor Act of 1870. The FNP provided for a channel, 9 to 9.5 feet deep by 100 feet wide. The channel was deepened to 12 feet in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was further deepened and widened by the River and Harbor Act to 15 feet deep by 150 feet wide. See Project Map 133.5.

Crow Point Bar - Connecticut River FNP, Glastonbury, CT

The Crow Point Bar is another 15-foot channel in the Connecticut River. The FNP was initially authorized as a channel, 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel depth increased to 12 feet in 1911 under authority of the River and Harbor Act of 1911. The channel was deepened and widened by the River and Harbor Act of 1935 to 15 feet deep by 150 feet wide**.**

Glastonbury Upper Bar - Connecticut River FNP, Glastonbury, CT

The Glastonbury Upper Bar in the Connecticut River FNP was permitted by Congress and constructed under authority provided by the River and Harbor Act of 11 July 1870. Authorization provided for an 8-foot deep channel, 100 feet wide. The channel was deepened to 12 feet in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was further deepened by the River and Harbor Act to 15 feet and widened to 150 feet wide. See Project Map 133.5.

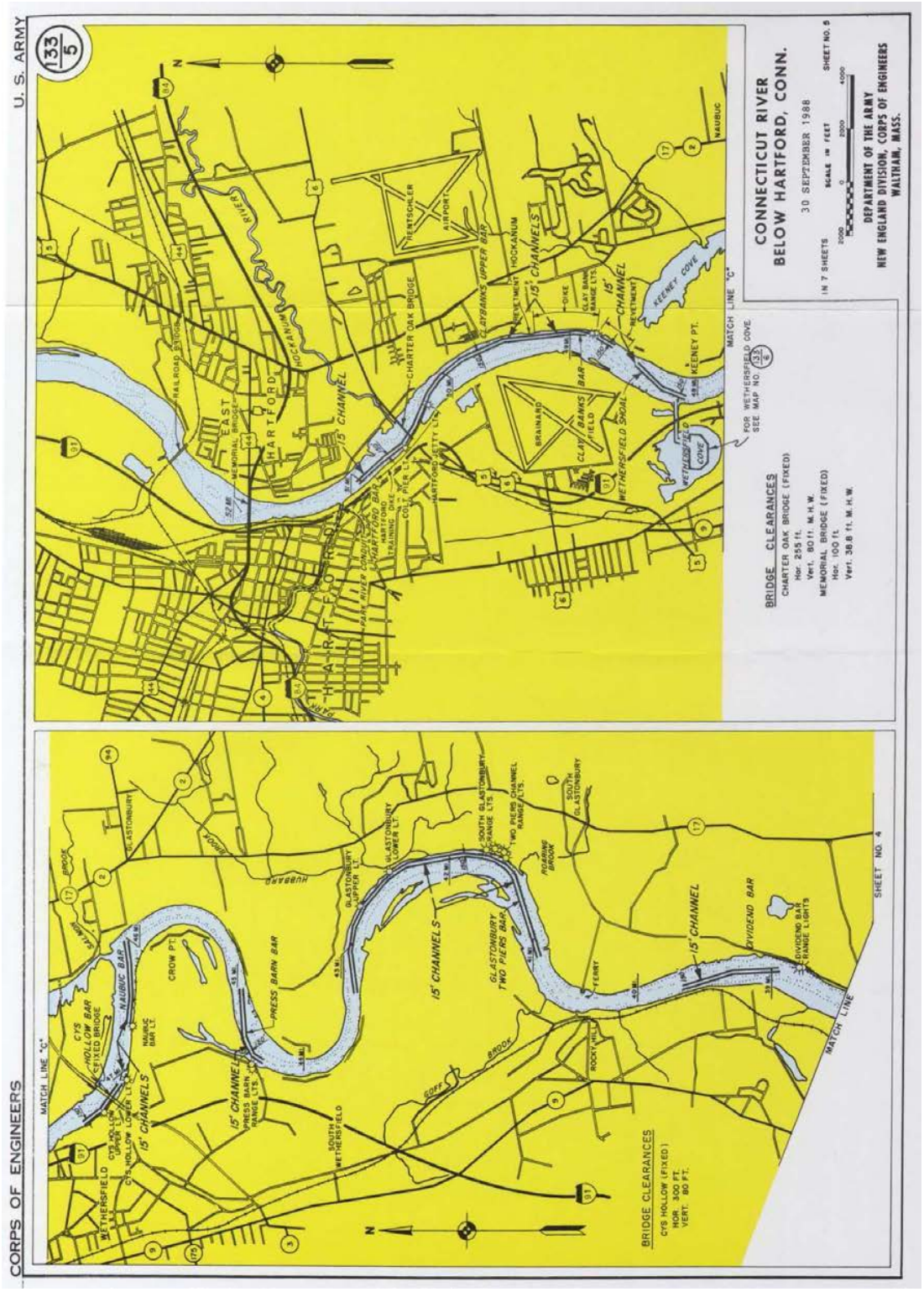
Glastonbury Two Piers Bar - Connecticut River FNP, Glastonbury, CT

The channel at Glastonbury Two Piers Bar was authorized by the River and Harbor Act of 11 July 1870 to be 8 feet deep by 100 feet wide. The channel was deepened to a 12-foot depth in 1911 under authority of the River and Harbor Act of that year. In 1935, the channel was further deepened and widened by the River and Harbor Act of 1935 to a 15-foot depth and 150-foot width. See Project Map 133.5.

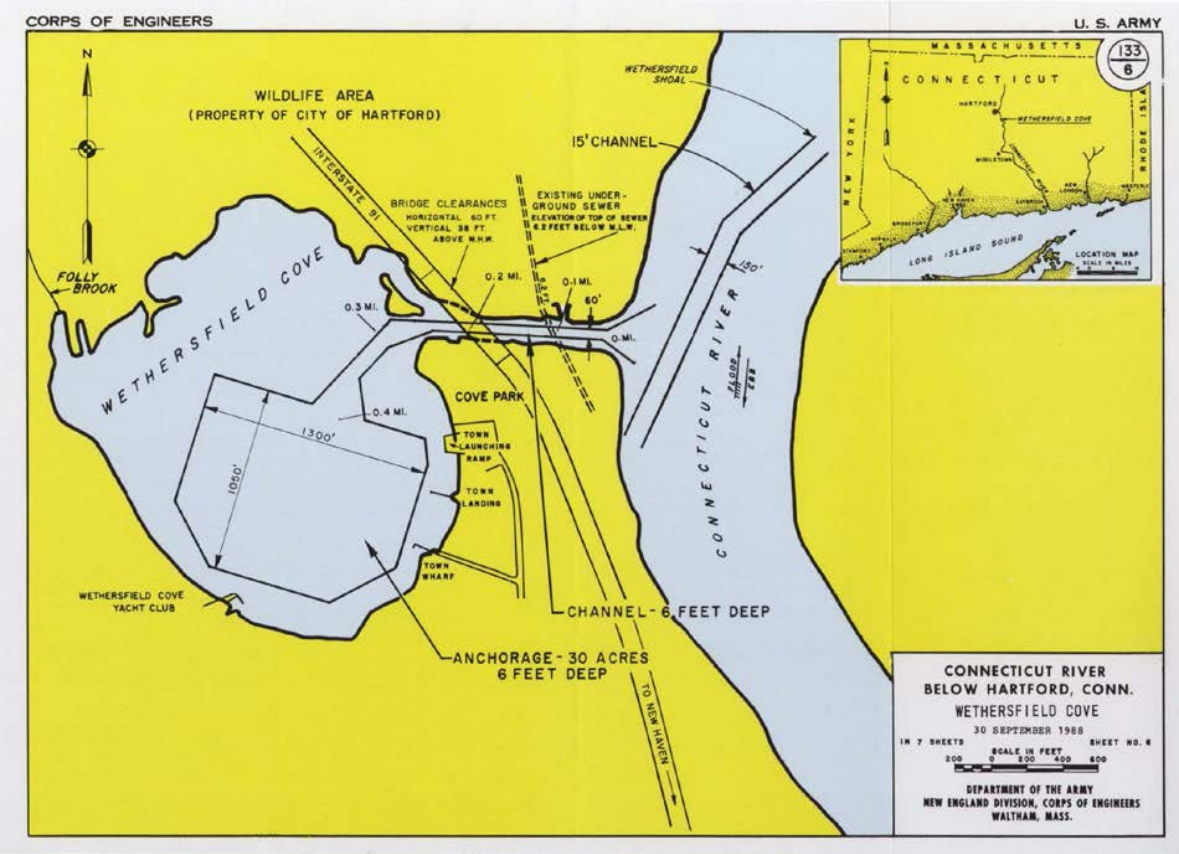
Dividend Bar - Connecticut River FNP, South Glastonbury, CT

The FNP at Dividend Bar in the Connecticut River was initially authorized as a channel, 9 to 9.5 feet deep by 100 feet wide, under the River and Harbor Act of 1870. In 1911, the channel was deepened to 12 feet under authority of the River and Harbor Act of that year. In 1935, the channel was further deepened by the River and Harbor Act to 15 feet and widened to 150 feet. See Project Map 133.5.

Project Map 133.5: Connecticut River FNP: Hartford, Claybanks Upper, Claybanks, Wethersfield Shoal, Cys Hollow, Naubuc, Press Barn, Glastonbury Upper, Glastonbury Two Piers, and Dividend Bars



Project Map 133.6: Wethersfield Cove FNP



Brownstone Bar - Connecticut River FNP, North Cromwell, CT

The Brownstone Bar was authorized by the River and Harbor Act of 11 July 1870. Authorization provided for an 8-foot deep by 100 foot wide channel. The channel was deepened to 12 feet in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was deepened and widened by the River and Harbor Act of that year to a 15-foot depth and 150-foot width. See Project Map 133.4 for visual.

Pistol Point Bar - Connecticut River FNP, North Cromwell, CT

The FNP at Pistol Point Bar was authorized by the River and Harbor Act of 11 July 1870 to be a channel, 8 feet deep by 100 feet wide. The channel was deepened by the River and Harbor Act of 1911 to a 12-foot depth. In 1935, the channel was deepened to 15 feet and widened to 150 feet by the River and Harbor Act of that year. See Project Map 133.4.

Gildersleeve Island Shoal - Connecticut River FNP, Gildersleeve, CT

The 15-foot channel at Gildersleeve Island Shoal was initially authorized as a channel, 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12 feet in 1911 under authority of the River and Harbor Act of 1911. The channel was further deepened by the River and Harbor Act of 1935 to 15 feet and widened to 150 feet. See Project Map 133.4.

Cromwell Bar - Connecticut River FNP, Cromwell, CT

The River and Harbor Act of 11 July 1870 authorized an 8-foot channel, 100 feet wide at the Cromwell Bar as part of the Connecticut River FNP. The channel depth increased to 12 feet in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was further deepened and widened by the River and Harbor Act of that year to 15 feet deep by 150 feet wide. See Project Map 133.4 for visual.

Portland (Wilcox Island) Bar - Connecticut River FNP, Portland, CT

The FNP at the Portland (originally named Wilcox Island) Bar in the Connecticut River was authorized as a channel, 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. In 1911, under authority of the River and Harbor Act of that year, the channel was deepened to 12 feet. The channel was further deepened by the River and Harbor Act of 1935 to 15 feet and widened to 150 feet. See Project Map 133.4.

Mouse Island Bar - Connecticut River FNP, Middletown, CT

The 15-foot channel at Mouse Island Bar in the Connecticut River was initially authorized by the River and Harbor Act of 11 July 1870. Authorization provided for an 8-foot deep channel, 100 feet wide. The channel was deepened to 12 feet in 1911 under authority of the River and Harbor Act of 1911. The channel was deepened and widened by the River and Harbor Act of 1935 to 15 feet deep by 150 feet wide. See Project Map 133.4.

Bodkin Rock - Connecticut River FNP, Portland, CT

The Bodkin Rock Bar in the Connecticut River was initially authorized as a channel, 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12 feet under authority of the River and Harbor Act of 1911. The River and Harbor Act of 1935 authorized a new depth of 15 feet and width of 150 feet. See Project Map 133.4.

Paper Rock Shoal - Connecticut River FNP, Portland, CT

The FNP at Paper Rock Shoal was authorized by the River and Harbor Act of 11 July 1870. Authorization provided for a channel, 8 feet deep by 100 feet wide. The channel was deepened to a 12-foot depth in 1911 under authority of the River and Harbor Act of 1911. The River and Harbor Act of 1935 allowed for the channel to be deepened and widened by to 15 feet deep by 150 feet wide. See Project Map 133.4.

Cobalt Shoal - Connecticut River FNP, East Hampton, CT

Cobalt Shoal was authorized as a channel, 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to a 12-foot depth under authority of the River and Harbor Act of 1911. The channel was deepened again by the River and Harbor Act of 1935 to the current depth of 15 feet and widened to 150 feet. See Project Map 133.4.

Sears Shoal Upper Bar - Connecticut River FNP, East Hampton, CT

The Sears Shoal Upper Bar in East Hampton, CT consists of 15-foot deep channel. It was initially authorized by the River and Harbor Act of 11 July 1870 to be a channel, 8 feet deep by 100 feet wide. Then, it was deepened to a 12 foot depth under authority given in the River and Harbor Act of 1911. In 1935, the channel was deepened by the River and Harbor Act of that year to a 15-foot depth and widened to a 150-foot width. See Project Map 133.4.

Sears Shoal - Connecticut River FNP, East Hampton, CT

The Sears Shoal Bar was initially authorized as a channel, 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12 feet in 1911 under authority of the River and Harbor Act of 1911. The River and Harbor Act of 1935 deepened the channel to 15 feet and widened it to 150 feet wide. See Project Map 133.4.

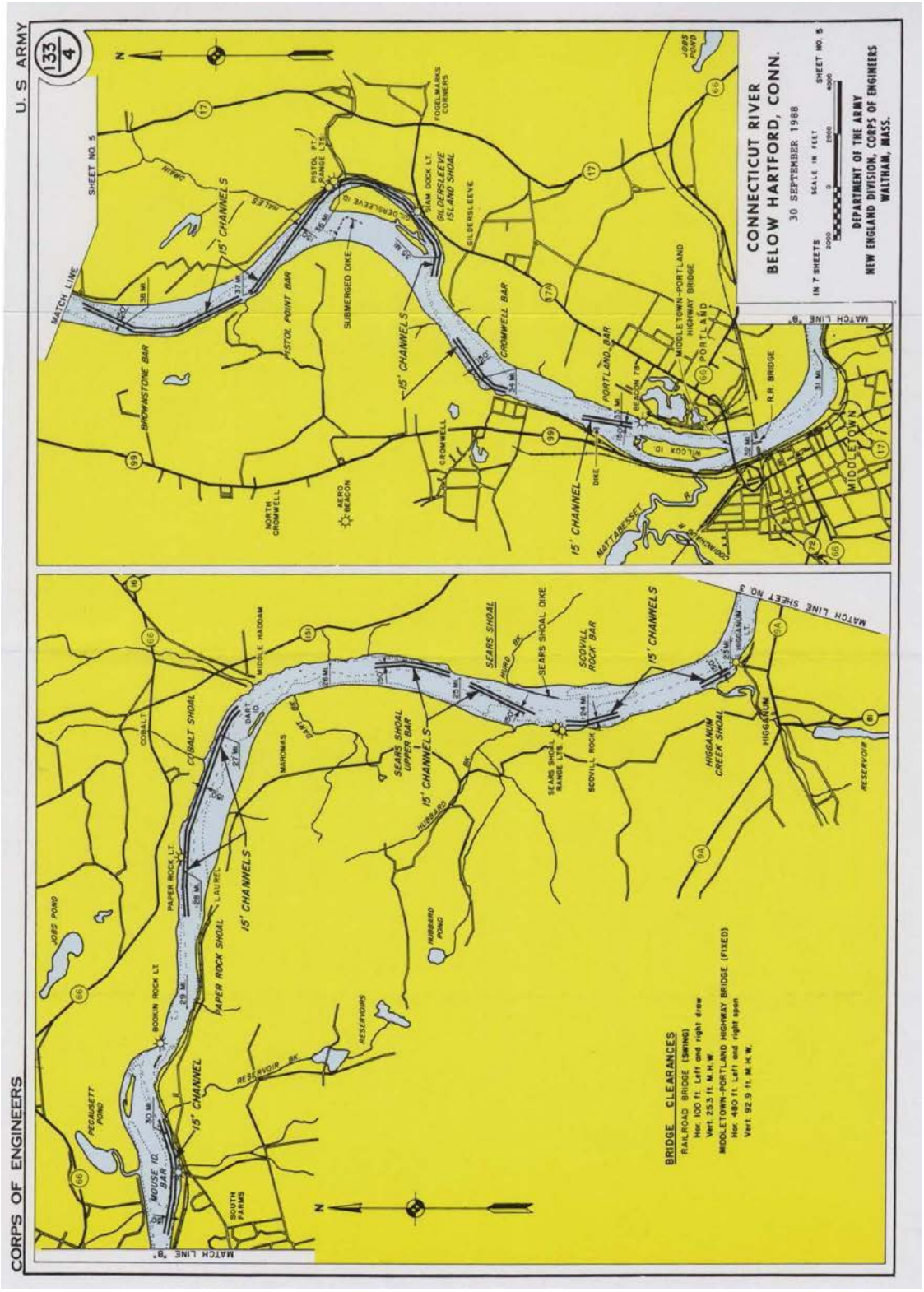
Scovill Rock Bar - Connecticut River FNP, Middletown, CT

The Federally-maintained 15-foot channel at Scovill Rock Bar was initially authorized by the River and Harbor Act of 11 July 1870 to be a channel, 8 feet deep by 100 feet wide. The River and Harbor Act of 1911 authorized the channel to a depth of 12 feet; in 1935, the channel was deepened to a 15-foot depth and widened to 150 feet by the River and Harbor Act of 1935. See Project Map 133.4.

Higganum Creek Bar - Connecticut River FNP, Haddam, CT

The River and Harbor Act of 11 July 1870 authorized the Higganum Creek Bar as part of the Connecticut River FNP to consist of a channel, 8 feet deep by 100 feet wide. The channel was deepened to a 12-foot depth in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was further deepened by the River and Harbor Act of that year to 15 feet deep and widened to 150 feet wide. See Project Map 133.4.

Project Map 133.4: Connecticut River FNP:
Brownstone, Pistol Point, Gildersleeve Island Shoal, Cromwell, Portland, Mouse Island, Paper Rock, Cobalt, Sears Upper, Sears Shoal, Scovill Rock, Higganum Creek Bars



Rock Landing Bar - Connecticut River FNP, Haddam, CT

The Rock Landing Bar was authorized as a channel, 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12 feet in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was further deepened by the River and Harbor Act of that year to 15 feet and widened to 150 feet. See Project Map 133.3.

Haddam Island Bar - Connecticut River FNP, Haddam, CT

The FNP at Haddam Island Bar was also authorized as a channel, 8-feet MLLW by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12-feet MLLW in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was further deepened by the River and Harbor Act to 15-feet MLLW by 150 feet wide. See Project Map 133.3.

Salmon River Bar - Connecticut River FNP, Haddam, CT

The Salmon River Bar is another 15-foot channel in the Connecticut River. The FNP was initially authorized as a channel, 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel depth increased to 12 feet in 1911 under authority of the River and Harbor Act of 1911. The channel was deepened and widened by the River and Harbor Act of 1935 to 15 feet deep by 150 feet wide**.** See Project Map 133.3.

Salmon River Cove - Connecticut River FNP, Haddam, CT

Salmon River Cove was originally authorized by the River and Harbor Act of 18 June 1878 to consist of a 7-foot deep channel at the mouth of the Salmon River. The channel was extended up to the Moodus Wharves by the River and Harbor Act of 1882 and deepened to 8.5 feet and widened to 75 feet across the bar into the mouth of the Salmon River by the River and Harbor Act of 1902. See Project Map 133.3.

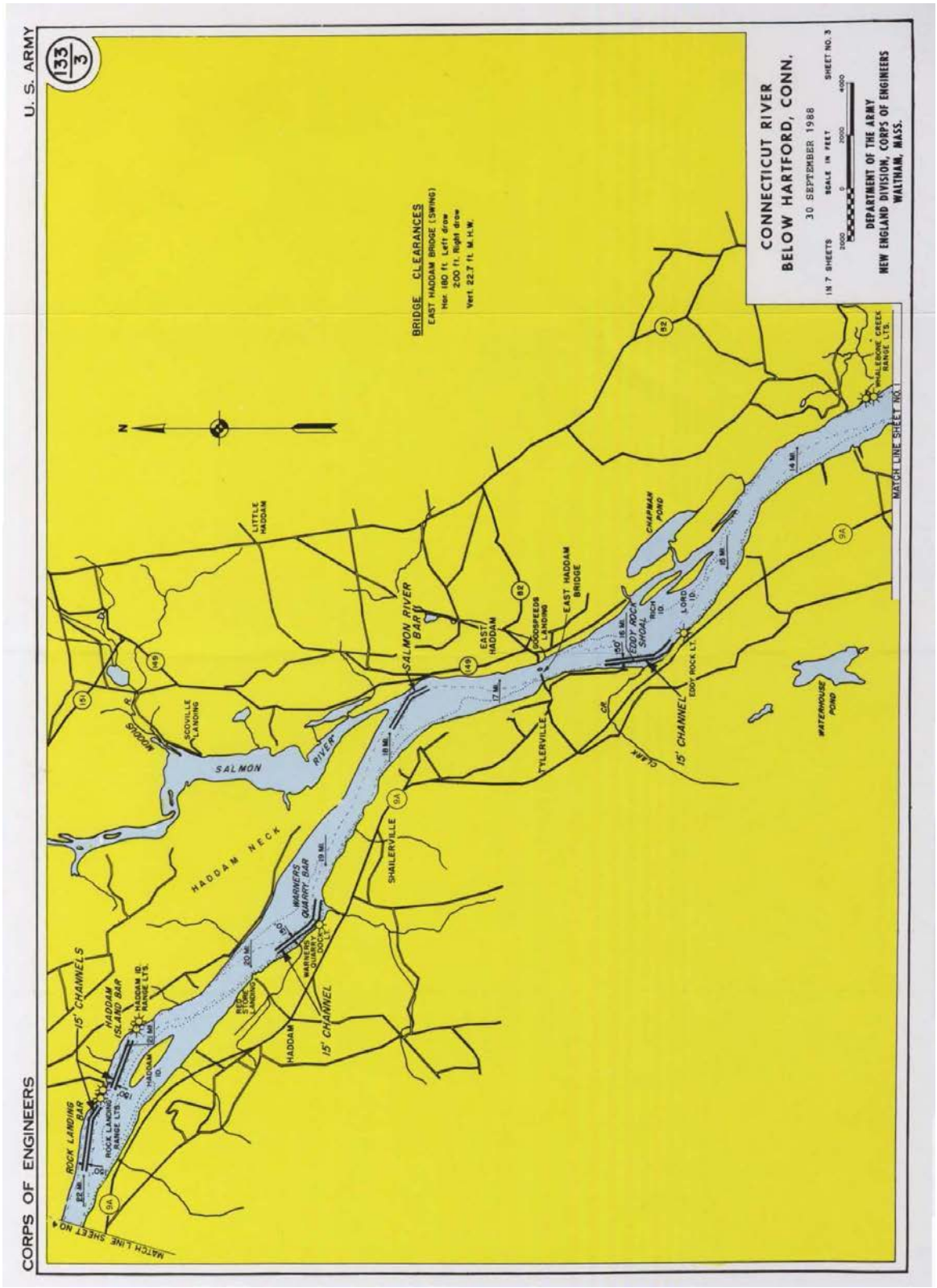
Warners Quarry Bar - Connecticut River FNP, Haddam, CT

The Federally-maintained channel at Warners Quarry Bar was initially authorized as an 8-foot by 100-foot wide channel, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12 feet in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was further deepened by the River and Harbor Act to 15 feet and widened to 150 feet. See Project Map 133.3.

Eddy Rock Shoal - Connecticut River FNP, East Haddam, CT

Eddy Rock Shoal is a part of the Connecticut River FNP. This 15-foot deep channel was also originally authorized as 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to a depth of 12 feet in 1911 under authority of the River and Harbor Act of 1911. The River and Harbor Act of 1935 deepened and widened the channel to 15 feet deep and 150 feet wide. See Project Map 133.3.

Project Map 133.3: Connecticut River FNP:
Rock Landing, Haddam Island, Warners Quarry, Salmon River, and Eddy Rock Bars



Potash Bar - Connecticut River FNP, Lyme, CT

The Federal project at Potash Bar in the Connecticut River consists of a 15-foot channel, 150 feet wide along the eastern slope of the bar at Selden Neck and north of Selden Creek. This project was originally authorized to be 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12 feet in 1911 under authority of the River and Harbor Act of 1911. The River and Harbor Act of 1935 deepened the channel to 15 feet and widened it to 150 feet. See Project Map 133.1.

Chester Creek Bar - Connecticut River FNP, Chester, CT

The Chester Creek Bar was also originally authorized by the River and Harbor Act of 11 July 1870 to be an 8-foot channel, 100 feet wide. The River and Harbor Act of 1911 allowed for the deepening of the channel to 12 feet and in 1935, the channel was again deepened by the River and Harbor Act (of 1935) to 15 feet and widened to 150 feet.

Devils Reef Bar - Connecticut River FNP, Lyme, CT

The Devils Reef Bar also originally authorized to be 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The project has not been modified since that time.

Brockway Bar - Connecticut River FNP, Essex, CT

The Federal project at Brockway Bar in the Connecticut River consists of a 15-foot channel, 150 feet wide along the northern slope of the bar. The project was initially authorized as 8 feet deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12 feet under authority of the River and Harbor Act of 1911. The River and Harbor Act of 1935 also deepened the channel, this time to 15 feet and widened it to 150 feet. See Project Map 133.1.

Eightmile River - Connecticut River FNP, Hamburg, CT

The River and Harbor Act of 1910 authorized an 8-foot MLLW deep channel by 75 feet wide from the Connecticut River upstream to a turning basin, 150 by 300 feet long in the Eightmile River. The two 6-foot anchorages authorized by the R&H Act of 1950 were never built and were deauthorized in 1986 by WRDA. See Project Map 133.2 for project details.

Essex Cove - Connecticut River FNP, Essex, CT

The Essex Cove FNP consists of two anchorages (one 8-foot deep by 19 acres and the other 10-foot deep by 15 acres), and a 4,400-foot long branch loop channel,10-foot MLLW by 100 feet wide in the Connecticut River at Essex. This project was authorized by the Chief of Engineers in 1961 under Section 107 of the 1960 River and Harbor Act. See Project Map 133.7 for visual.

Essex Shoal - Connecticut River FNP, Essex, CT

Essex Shoal is mainly a recreational project in the Connecticut River at Essex. The Federal project consists of a 15 foot channel, 150 feet wide along the northern slope of the bar. The project was initially authorized as 8-feet MLLW deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12-feet MLLW in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was further deepened by the River and Harbor Act to 15-feet MLLW by 150 feet wide. See Project Map 133.1.

Calves Island Bar - Connecticut River FNP, Old Lyme, CT

The Calves Island Bar FNP consists of a 15 foot channel, 150 feet wide along the northern slope of the bar. The project was initially authorized as 8-feet MLLW deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12-feet MLLW in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was further deepened by the River and Harbor Act to 15-feet MLLW by 150 feet wide. See Project Map 133.1.

Saybrook Railroad Reach - Connecticut River FNP, Old Saybrook, CT

The FNP at Saybrook Railroad Reach consists of a 15 foot channel, 150 feet wide along the northern slope of the bar. The project was also initially authorized as 8-feet MLLW deep by 100 feet wide, by the River and Harbor Act of 11 July 1870. The channel was deepened to 12-feet MLLW in 1911 under authority of the River and Harbor Act of 1911. In 1935, the channel was further deepened by the River and Harbor Act to 15-feet MLLW by 150 feet wide.

Saybrook Shoal - Connecticut River FNP, Old Saybrook, CT

Saybrook Shoal consists of a 15 foot channel, 200 feet wide along the northern slope of the bar. It was first authorized in July 1836 as a channel, 1,500 linear feet long, 11 to 12-feet MLLW deep by 500 feet wide. The River and Harbor Act of 1870 changed the configuration of the channel by decreasing the depth to 8.5 feet MLLW and the width to 200 feet. In 1880, the River and Harbor Act once again modified the channel by increasing its depth to 12 feet MLLW. Finally, in 1935 the channel was deepened to its existing depth of 15-feet MLLW as part of the River and Harbor Act of that year. See Project Map 133.1.

North Cove - Connecticut River FNP, Old Saybrook, CT

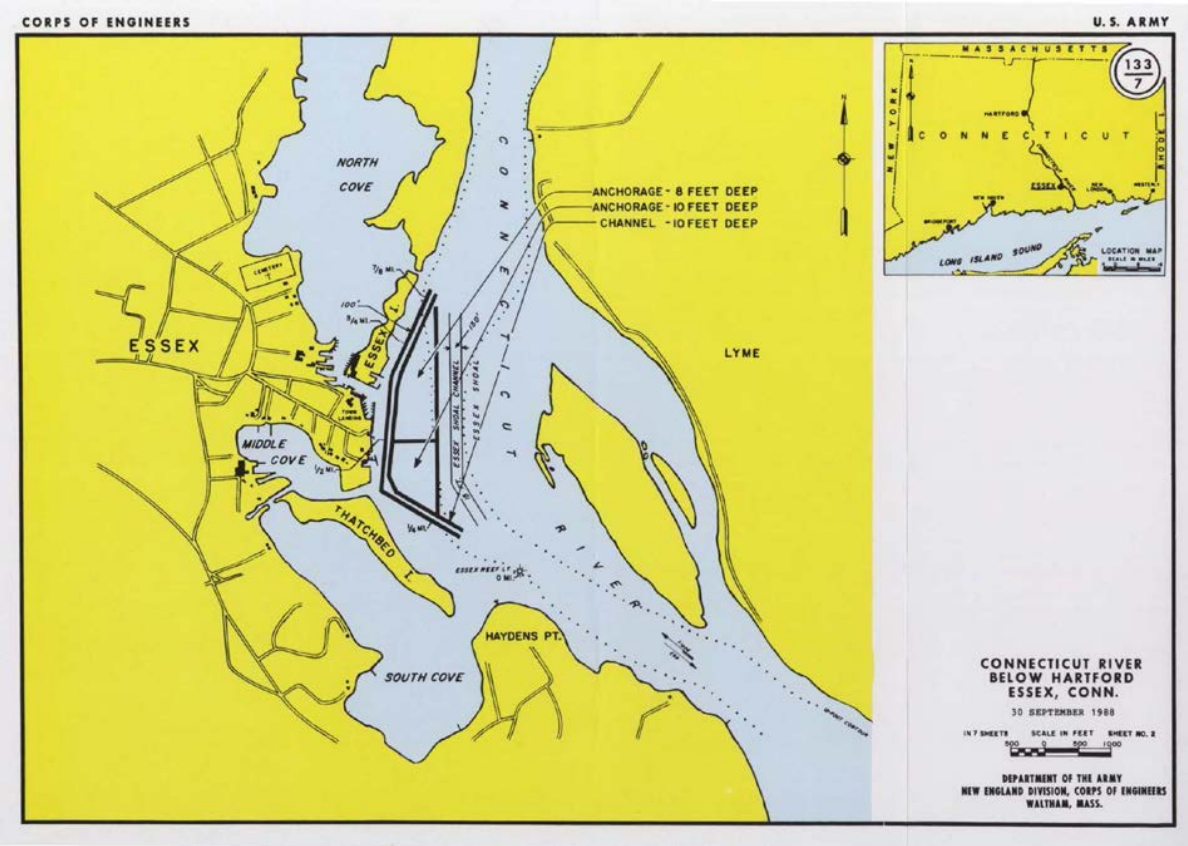
The River and Harbor Act of 1945 permitted the North Cove FNP which includes a channel from Connecticut River into North Cove, 11-feet MLLW by 100 feet wide to a stepped anchorage that is 650 feet wide, 11 Feet MLLW by 12 Acres and 6 feet MLLW by 17 acres by 1,150 Feet Long. The Federal project has remained unmodified since its initial authorization. See Project map 133.1 for visual.

Saybrook Outer Bar - Connecticut River FNP, Old Saybrook, CT

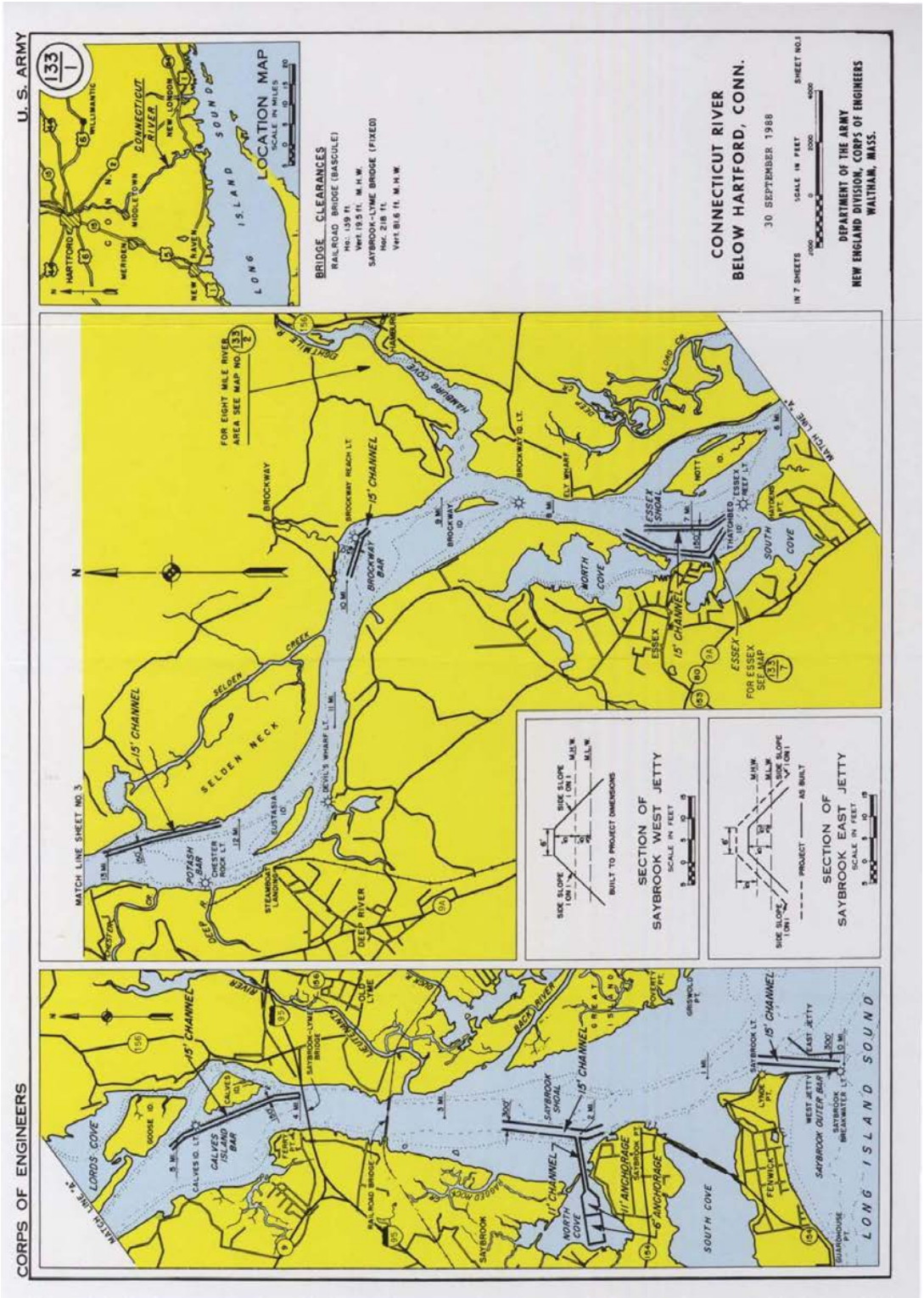
The channel through the Saybrook Outer Bar is the entrance channel to the Connecticut River shipping channel. The two stone jetties were the first parts of the FNP to be built (east and west)

with a top elevation of 5 feet MLLW. They were approved for construction by the Annual Report for 1873. Over time the project was modified to include: an extension of the east jetty by 200 linear feet southerly under authority of the River and Harbor Act of 1880; an extract for the Annual Report for 1885 detailed an extension of the west jetty seaward for a total length of 1,934 linear feet and extending the east jetty to the 12-foot contour; raising the top elevation of the east jetty to 6 feet MLLW. In 1911, the channel was added through the outer Saybrook bar, it was permitted to 15-feet MLLW depth, by 300 feet wide at the mouth of the Connecticut River and 12-feet MLLW by 100 feet wide upriver. See Project Map 133.1.

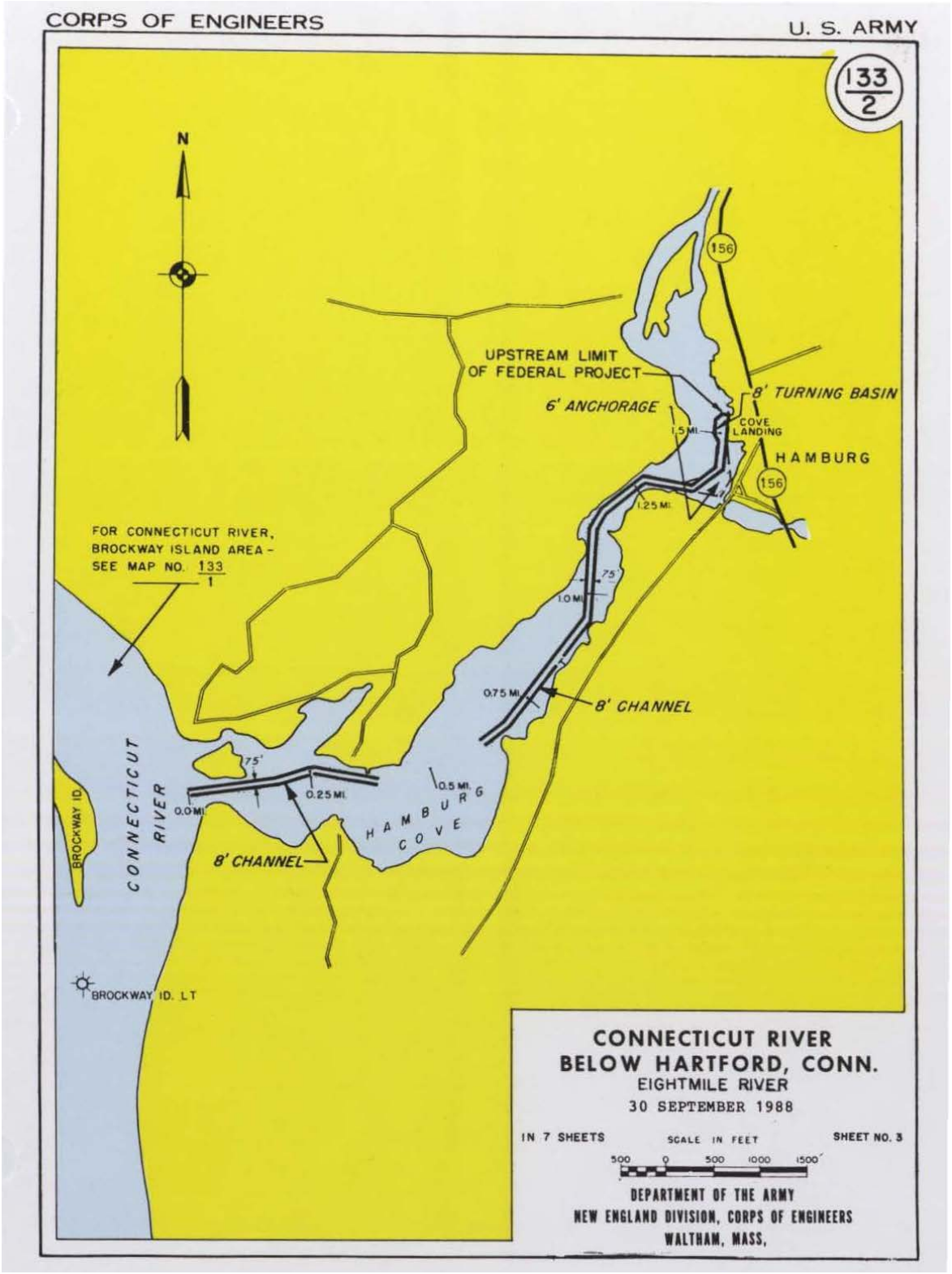
Project Map 133.7: Connecticut River FNP: Essex Cove



Project Map 133.1: Connecticut River FNP:
Potash, Brockway, Essex Shoal, Calves Island, Saybrook Shoal, North Cove, and Saybrook Outer Bar.



Project Map 133.2: Connecticut River FNP: Eightmile River.
*Note: The 6-foot anchorage was never built and was deauthorized by WRDA 1986.



Connecticut River List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction**
Act of 4 July 1836	Dredging the Saybrook Bar Channel 1,500 LF by -11 to -12 Feet MLLW by 500 Feet Wide	May 1838 - Fall of 1840 Channel 50-Ft Wide
River & Harbor Act of 11 July 1870	(1) Channel -8 Feet LLW by 100 Feet Wide through the Bars at Hartford, Clay Banks, Pratts Ferry, Glastonbury, Mouse Island and Pistol Point, and (2) Dredging at Saybrook Bar for a Channel -8½ Feet MLLW by 200 Feet Wide, (3) Timber and Brush Shore Protective Works at Hartford (700 LF) and Wethersfield, (4) Removal of Chester Rock, and (4) Removal of Nine Old Stone Local Piers and Control Works	8-Ft River Channel Dredging – July 1871 – FY 1872 Hartford Bank Wall – July 1871 – Jan 1872 Chester Rock – Aug 1871 – Sept 1871 Old Pier Removal – Aug 1871 – FY 1873 8.5-Ft Saybrook Bar Channel – Never Built
Annual Report for 1872, Appendix T-6, Page 22	River Channel Depth Increased to -9 to -9½ Feet MLLW and Expanded to Include Channels through the Bars at Press Barn, Dividend, and Mouse Island.	9.5-Ft River Channel Dredging – FY 1872 – Sept 1873
Annual Report for 1873 - House Ex. Doc. #125, 42nd Congress, 3rd Sess., 25 January 1873	Stone Jetties at Saybrook, +5 Feet MLLW Top Elevation, and Dredging Channel at Saybrook -9 Feet MLLW by 400 Feet Wide.	West Jetty - June 1873 – June 1875 East (Middle) Jetty – June 1875 – Jan 1880 Saybrook Channel – FY 1875 -
River & Harbor Act of 18 June 1878	Salmon River - Dredging 7-Foot Channel at the Mouth of the Salmon River at East Haddam	Sept 1878 – Oct 1878
River & Harbor Act of 14 June 1880	Extending the East Jetty by 200 LF Southerly. Shore Protection and Bank Stabilization at the Principal Bars at Hartford, Clay Banks, Pratts Ferry. 12-Foot x 200 Ft Saybrook Bar Channel. Deepen River Channel to –12 Feet MLLW (10 Feet LLW) – Attempted at Glastonbury Bar only and Not Continued	East Jetty Extension – Sept 1880 – Jan 1881 Hartford & Glaston-bury Bank Protection – July 1881 – Nov 1886 12-Foot Saybrook Bar Channel – Oct 1884 – June 1885 at 120 Ft
River & Harbor Act of 2 August 1882	Salmon River - Dredging to Extend the 7-Foot Salmon River Channel up to Moodus	Aug 1883 – Sept 1883

	Wharves	
Extract of the Annual Report for 1885, Appendix D-1, Page 632	Extending the West Saybrook Jetty Seaward to -16-Foot Contour (Total Length 1,934 LF), and the East Jetty to the -12-Foot Contour	West Jetty – Spring 1885 – FY 1886 East Jetty - Unknown
Extract of the Annual Report for 1888, Appendix D-3 (2), Page 527	Completion of the Jetties at Saybrook to +5 Feet MLLW (Approved by the Chief of Engineers, 22 December 1887) Widen the Channel through Saybrook Bars to 400 Feet at -12 Feet MLLW.	Jetties - Nov 1886 – Aug 1887 (West Jetty only to +2 Feet)
Annual Report for 1899, Appendix D-5, Page 1158	Chief of Engineers Authorized Inclusion of a Cut-Off Channel at Brockways Point	May 1889 – Aug 1889
River & Harbor Act of 13 June 1902	Salmon River - Channel -8½ Feet MLLW by 75 Feet Wide Across Bar into Mouth of Salmon River	July 1902 – Oct 1902
Annual Report for 1905, Appendix D-4, Page 876	Some of the River Bar Channels Widened beyond Previously Maintained Width to 100 Feet Wide	May 1905 – Oct 1905
Annual Report for 1905, Appendix D-4, Page 876	West Jetty Repaired to Elevation +5 Feet MLLW and East Jetty to Elevation +6 Feet MLLW	Nov 1904 – Feb 1905
River & Harbor Act of 25 June 1910	Eight-Mile River - Channel -8 Feet MLLW by 75 Feet Wide from the Connecticut River Upstream to a Turning Basin 150 by 300 Feet Long at Hamburg	Sept 1910 – July 1911
River & Harbor Act of 27 February 1911	Channel -15 Feet by 300 Feet Wide at the Mouth and -12 Feet MLLW by 100 Feet Wide Upriver to Hartford (with New Alignment at Dividence Bar), with Suitable Training Walls, Dikes and Revetments at Cys Hollow, Clay Banks, Press Barn, Gildersleeve and Sears Shoal (No Modifications to Dikes at Hartford and Glastonbury)	15-Ft Saybrook Channel – Oct 1911 - Oct 1912 12-Ft River Channel – Unknown New Dividence Channel – June 1911-Oct 1911 Protective Works: Clay Banks – June 1912 – May 1915 Cys Hollow – May 1915 – Dec 1915 Press Barn – June 1912 – Dec 1918

		Gildersleeve – Sears Shoal – Oct 1912 - Nov 1914
Annual Report for 1914, Appendix D-7, Page 1653	Outer Arm of the West Jetty at Saybrook Repaired to Elevation +8.4 Feet MLLW	April 1914 – June 1914
River & Harbor Act of 2 March 1919	Final Dimensions and Provisions for Dikes, Training Walls, Revetments and Other Accessory Works for Bars at Hartford, Clay Banks, Cys Hollow, Upper Glastonbury, Glastonbury Bar, Press Barn, Crow Point, Gildersleeve Is., and Sears Shoal	Press Barn – July 1919 – FY 1921 Crow Pt. – May 1920 – FY 1924 Clay Banks – FY 1924 Cys Hollow – FY 1925 Naubec Bar – FY 1926 & FY 1929 Upper Glastonbury – FY 1928 Glastonbury - FY 1925 Gildersleeve – FY1927 Pistol Pt. – FY 1927 Two Piers – FY 1927 Roaring Brook – FY 1927
River & Harbor Act of 30 August 1935	Channel from the River Mouth Across the Bars to the Railroad Bridge at Lyme at -15 Feet MLLW by 300 Feet Wide and for Expanding the Channel from Old Saybrook to Hartford to -15 Feet MLLW by 150 Feet Wide, with Additional Dikes, Training Walls and Revetments	Channel Dredging - Sept 1936 – Aug 1937
River & Harbor Act of 2 March 1945	North Cove - Channel from the River into North Cove -11 Feet MLLW by 100 Feet Wide to a Stepped Anchorage 650 Feet Wide, -11 Feet MLLW by 12 Acres & -6 Feet MLLW by 17 Acres by 1,150 Feet Long.	June 1965 – Sept 1965
River & Harbor Act of 17 May 1950	Eightmile River - Provision of an Anchorage Area at the Head of the Existing Channel at Hamburg, -6 Feet MLLW by 6.5 Acre, in Two Parts	Never Constructed Deauthorized 1986
Annual Report for 1948, NED Extract, Page 107	Construction of Timber Pile Training Dikes at Wethersfield and a New Stone Revetment at Glastonbury	Wethersfield – July 1947 – Nov 1947 Glastonbury – Aug

		1947
Chief of Engineers, 15 November 1960, under Section 107 of the 1960 River & Harbor Act	Wethersfield Cove: Channel -6 Feet MLLW by 60 Feet Wide, Leading 1,200 Ft West off the Connecticut River into Wethersfield Cove to an Anchorage Basin -6 Feet MLLW by 30 Acres	FY 1963
Chief of Engineers, 18 October 1961, under Section 107 of the 1960 River & Harbor Act	Essex Harbor: 4,400-Foot-Long Branch Loop Channel -10 Feet MLLW by 100 Feet Wide Extending off the Main River Channel along Essex Waterfront, with Two Anchorage Areas between the Channels, Southern Anchorage -10 Feet MLLW by 15 Acres, and Northern Anchorage at -8 Feet MLLW by 19 Acres.	FY 1963
3 October 1978	Deauthorized the Unconstructed Portion of the Eight-Mile River Channel from the River and Harbor Act of 1950	Deauthorization
Water Resources Development Act of 17 November 1986 Section 1002	Deauthorized the Unconstructed Anchorage Area at the Head of the Eight-Mile River Channel from 1950 Act	Deauthorization

Connecticut River Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
May 1838 - Fall 1840	Improvement Dredging of Saybrook Bar Channel to –11 to –12 Feet MLLW by 50 Feet Wide for 1,500 LF	26,984 cy
Oct 1870 - FY1871	-8-Foot ELW Bar Channels at Mouse Island, Pistol Point and Pratts Ferry Bars	63,541 cy
Aug 1871 - Jan 1872	At Hartford Bar – 700 LF Wood Pile Dike At Whethersfield – Wood Pile Wall Bank Protection	547 Pilings
Aug 1871 - Sept 1871	Removal of Chester Rock	1,703 cy
June 1871 - Nov 1871	Dredging 8-Foot ELW Channels at Hartford Bar, Clay Banks, Pratts Ferry and South Glastonbury Bars and Old Pier I and Pier J Bars	127,044 cy Plus 3,163 cy Rock

April 1872 - June 1872	Dredging Pistol Point Bar - 8-Foot ELW Channel	25,005 cy
Sept 1872 - FY1873	Maintenance and Improvement Dredging of Bar Channels at Pratts Ferry and Pistol Point	19,289 cy
September 1872	Removal of Wreck of Schooner *Bay State* from off Saybrook Light	Wreck Removal
June 1873 - FY 1873	Begin Construction of West Jetty at Saybrook for Top Elevation of HHW	18,765 Tons Stone
July 1873 - Sept 1873	Maintenance Dredging of 8-Foot ELW (9½-Foot MLLW) Channels at Hartford Bar, Pratts Ferry and South Glastonbury Bars	17,569 cy
Summer 1874	Maintenance Dredging of 8-Foot Channels at Hartford Bar & Pratts Ferry	10,217 cy
Summer 1874	Improvement Dredging of 8-Foot Saybrook Shoals Channel	531 cy
Sept 1874 - June 1875	Continue Construction of West Saybrook Jetty to 2,433 LF	7,468 Tons Stone
June 1875 - Oct 1875	Begin Construction of East Saybrook Jetty	8,178 Tons Stone
July 1875 - Sept 1875	Maintenance and Improvement Dredging of 8-Foot ELW (9½-Ft MLLW) Channels at Hartford Bar, Pratts Ferry and South Glastonbury Bars	14,820 cy
June 1876 - Sept 1876	Maintenance Dredging of 8-Foot ELW (9-Foot MLLW) Channels at Hartford Bar, Clay Banks, Pistol Point and South Glastonbury Bars	11,304 cy
Oct 1876 - Dec 1876	Repairs to Settled Portions of West Jetty and Add Timber Pile Fenders along Jetty	1,440 Tons Stone
June 1877	Maintenance Dredging of 8-Foot ELW Glastonbury Bar Channel	3,617 cy
June 1877 - July 1877	Remove Wreck of Schooner "E.J. Meany"	Wreck Removal
July 1877 - Sept 1877	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford Bar & Glastonbury Bar	16,433 cy
May 1878 - June 1878	Maintenance Dredging of 8-Foot ELW Glastonbury Bar Channel	6,426 cy
July 1878 – Nov 1878	Maintenance Dredging of 9½-Foot MLLW Bar Channel at Hartford, Glastonbury and Pratts	22,629 cy

	Ferry Bars	
July 1878 – Nov 1878	Maintenance at Press Barn Bar – Removal of Stumps and Logs	Debris Removal
Sept 1878 - Oct 1878	Improvement Dredging of 7-Foot Channel through Shoals at Mouth of Salmon River - 35 Feet Wide	12,101 cy
September 1878	Continue Construction of East Jetty	140 L.Tons Stone
May 1879 - Jan 1880	Continue Construction of East Jetty to 2,137 LF	9,849 Long Tons Stone
October 1879	Pile Daybeacon & Additional Timber Fenders Placed on West Jetty	Unknown
July 1879 - Nov 1879	Maintenance Dredging of 9½-Foot MLLW Bar Channels at Hartford & Glastonbury and Press Barn Bars	34,693 cy
Aug 1880 - Oct 1880	Maintenance Dredging of 9½-Foot MLLW Bar Channels at Hartford & Glastonbury	15,930 cy
Sept 1880 - Jan 1881	Repair and Construction of East Jetty Extension (161 LF Added)	6,184 Long Tons Stone
May 1881 - July 1881	Maintenance Dredging of 9½-Foot MLLW Bar Channel at Glastonbury Bars	21,240 cy
July 1881 - Oct 1881	Maintenance Dredging of 9½-Foot MLLW Bar Channel at Hartford & Pratts Ferry Bars	22,877 cy
July 1881 - Oct 1881	Begin Construction of Stone Wing Dam for Bar Channel at Glastonbury Bars	7,109 Long Tons Stone
July 1881 - Nov 1881	Repairs to East & West Saybrook Jetties	4,984 Long Tons Stone
September 1881	Exploratory Dipper Dredging of Several Pits between the Jetties at Saybrook to Investigate Feasibility of Channel Deepening.	Unknown
June 1882 - July 1882	Maintenance Dredging of 9½-Foot MLLW Bar Channel at Glastonbury Bar	21,194 cy
July 1882 - Aug 1882	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford Bar & Clay Banks Bar	19,256 cy
Nov 1882 - Sept 1883	Construction of Stone Dike and Wing Dam at Hartford Bar – 3,698 LF	23,750 Long Tons Stone

June 1883 - July 1883	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford Bar	20,399 cy
October 1883	Repairs to Hartford Dike - Settlement Problem	812 L.Tons Stone
July 1883 - Aug 1883	Maintenance Dredging of 9½-Foot MLLW Channel at Glastonbury, Dividend, Press Barn, & Pistol Point Bars	23,503 cy
Aug 1883 - Sept 1883	7-Foot Channel in the Salmon River from above Connecticut Confluence Upriver to Moodus Landing	30,058 cy
May 1884 - June 1884	Maintenance Dredging of 9½-Foot MLLW Channel at Pratts Ferry Bar	19,922 cy
June 1884 - July 1884	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford Bar	30,028 cy
July 1884 - Sept 1884	Maintenance Dredging of 9½-Foot MLLW Bar Channels at Clay Banks, Press Barn, Dividend, Glastonbury, Pistol Point & Mouse Island Bars	50,059 cy
August 1884	Remove Rock and Debris from Chester Rock Shoals	Unknown
Oct 1884 - June 1885	Improvement Dredging of 12-Foot MLLW Saybrook Shoals Channel	45,411 cy
Spring 1885 - Sept 1885	Extension of West Jetty at Saybrook	10,422 Tons Stone
May 1885 - Sept 1885	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Glastonbury, Dividend & Pistol Point and Pratts Ferry (Naubec) Bars	47,989 cy
June 1885	Removal of Old Stone Pier/Wing at Hartford Dike	2,019 cy Stone Removed
May 1886	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford Bar	10,000 cy
Sept 1886 - Oct 1886	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Glastonbury and Haddam Island Bars	24,820 cy
Oct 1886 - Nov 1886	Increasing Hartford Dike Top Elevation by 2 Feet to +5 Feet MLLW	2,346 Long Tons Stone
Nov 1886 - June 1887	Increasing East Saybrook Jetty Top Elevation	6,289 Tons Stone

	by 3 Feet to +2 Feet MHW	
June 1887 - Aug 1887	Repair and Increase Top Elevation of West Saybrook Jetty to +2 Feet MHW	1,620 Tons Stone
May 1887 - June 1887	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford Bar, Clay Banks, Dividend and Pistol Point Bars	26,441 cy
July 1887 - Aug 1887	Maintenance Dredging of 9½-Foot MLLW Bar Channels at Clay Banks, Pistol Point, Naubec, Press Barn, Glastonbury & Dividend	26,254 cy
September 1887	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford Bar	5,220 cy
June 1888	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, and Glastonbury Bars	15,130 cy
July 1888 – Dec 1888	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn & Crow Point, Glastonbury, Dividend and Pistol Point Bars	47,486 cy
July 1888 – Dec 1888	Maintenance Dredging of 12-Foot MLLW Saybrook Bar Channel	28,792 cy
May 1889 - Sept 1889	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Glastonbury, Dividend & Brockways Bars	63,444 cy
May 1890	Maintenance Dredging of 9½-Foot MLLW Channel at Glastonbury Bar	4,166 cy
May 1891 - Sept 1891	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Glastonbury, Dividend, Pistol Point, Mouse Island and Haddam Island Bars	95,821 cy
July 1892 - Oct 1892	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Naubec, Glastonbury, Sears Shoal, Chester Rock and Devils Reef Bars	24,366 cy
June 1893 - Sept 1893	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Glastonbury, Press Barn, Pistol Point, Dividend, Mouse Island and Calves Island Bars	62,517 cy

May 1894 - Sept 1894	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Glastonbury, Dividend, Press Barn & Pistol Point.	37,894 cy
May 1895 - July 1895	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Glastonbury, Press Barn, Dividend, Pistol Point, Calves Island and Essex Shoal Bars	70,874 cy
May 1896 - Aug 1896	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Glastonbury, Press Barn, Pistol Point, Dividend, Calves Island and Potash Channel Bars	92,714 cy
June 1897 - Oct 1897	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Glastonbury, Dividend, Pistol Point, Sears Shoal and Portland Bars	99,225 cy
May 1898 - Oct 1898	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Glastonbury, Dividend, Pistol Point, and Brockways Channel Bars	99,926 cy
May 1899 - Aug 1899	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Glastonbury, Dividend, Pistol Point, Sears Shoal, Potash Channel, and Brockways Channel Bars	83,763 cy
August 1899	Maintenance Dredging of 12-Foot MLLW Saybrook Bar Channel	16,120 cy
June 1900 - Aug 1900	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Glastonbury-Two Piers, Dividend, Pistol Point, Potash Channel and Calves Island Bars	64,284 cy
May 1902 - Oct 1902	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Glastonbury-Two Piers, Dividend, Pistol Point, Sears Shoal, Potash Channel, and Chester Creek Bars	96,639 cy
September 1902	Maintenance Dredging of 7-Foot Salmon River Entrance Bar Channel	3,958 cy
May 1903 - Sept 1903	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Press Barn, Glastonbury-	81,078 cy

	Two Piers, Dividend, Pistol Point, and Chester Creek Bars	
June 1904 - Sept 1904	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Dividend, Pistol Point, and Sears Shoal Bars	71,106 cy
November 1904	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford Bar	7,536 cy
Nov 1904 - June 1905	Repair and Increase Section of Both Saybrook Jetties to +5 to +6 Feet MHW with 6-Foot Top Width	4,283 Tons West 3,364 Tons East
May 1905 - Oct 1905	Maintenance and Improvement Dredging to Widen 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Glastonbury-Two Piers, Dividend, Pistol Point, Sears Shoal & Potash Channel Bars	103,904 cy
May 1906 - Oct 1906	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Glastonbury-Two Piers, Dividend, and Pistol Point Bars	82,622 cy
Oct 1906 - Dec 1906	Removal of "Sunken Piers" and Shoals below Hartford Dike	15,254 cy
May 1907 - Oct 1907	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Glastonbury-Two Piers, Dividend, Mouse Island and Sears Shoal Bars	80,657 cy
Sept 1907 - Nov 1907	Repair and Raise Hartford Dike Top Elevation - Increased to +15 Feet MLLW	1,260 Long Tons Stone
Oct 1907 - Dec 1907	Maintenance Dredging of 12-Foot MLLW Saybrook Bar Channel (200 Feet Wide)	31,010 cy
May 1908 - Oct 1908	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Glastonbury-Two Piers, Dividend, Pistol Point, Mouse Island & Potash Shoal Bars	105,360 cy
June 1908 - Dec 1908	Continue Raising Hartford Dike Top Elevation	11,267 Long Tons Stone
May 1909 - Sept 1909	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Cys Hollow, Press Barn, Glastonbury-Two Piers, Dividend,	79,076 cy

	Pistol Pt., Sears Shoal & Potash Bars	
June 1909 - Oct 1909	Continue Raising Hartford Dike Top Elevation	8,012 Long Tons Stone
April 1910	Maintenance Dredging of 9½-Foot MLLW Channel at Sears Shoal Bar	10,272 cy
May 1910 - Sept 1910	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Clay Banks, Press Barn, Glastonbury-Two Piers, Dividend, Sears Shoal and Mouse Island Bars	104,909 cy
October 1910	Repair Ice Damage to Hartford Dike	1,483 Long Tons Stone
March 1911 – April 1911	Maintenance Dredging of 9½-Foot MLLW Channel at Lower Gildersleeve Island Shoal	4,834 cy
May 1911 – June 1911	Maintenance Dredging of 9½-Foot MLLW Channel at Hartford, Press Barn, Dividend and Gildersleeve Island Shoal Bars	20,762 cy
June 1911 - Oct 1911	Maintenance and Improvement Dredging of 12-Foot MLLW River Channel at Hartford, Clay Banks, Cys Hollow, Press Barn, Crow Point (Stone), Glastonbury-Two Piers, Gildersleeve, Dividend (New East Channel), Mouse Island, Sears Shoal & Chester Creek Bars	93,328 cy
Oct 1911 - Nov 1911	Improvement Dredging of 15-Foot MLLW Saybrook Bar Channel (300 Feet Wide)	37,073 cy
May 1912 - Sept 1912	Maintenance and Improvement Dredging of 12-Foot MLLW River Channel at Hartford, Clay Banks, Press Barn, Glastonbury, Dividend, Pistol Point, Sears Shoal and Potash Channel	92,068 cy
July 1912 - Oct 1912	Continued Improvement Dredging of 15-Foot MLLW x 300-Foot Saybrook Bar Channel	130,950 cy
Oct 1912 - Dec 1912	Construct Stone Sears Shoal Dike	4,481 Long Tons Stone
April 1913 - June 1913	Continue Construction of Sears Shoal Dike	15,280 Long Tons Stone
May 1913 - Aug 1913	Maintenance and Improvement Dredging of 12-Foot MLLW River Channel at Hartford, Clay Banks, Press Barn, Dividend, Pistol Point, Cys	89,938 cy

	Hollow, and Glastonbury Bars	
June 1913 - Dec 1913	Improvement - Construct Stone Spur Dikes at Press Barn Bar, and Stone Training Wall Construction at Clay Banks Bar	13,763 Long Tons Stone
July 1913 - Nov 1913	Improvement - Construct Six New Timber Crib and Stone Spur Dikes at Press Barn Bar	93 Long Tons Stone
Sept 1913 - Nov 1913	Maintenance and Improvement Dredging of 12-Foot MLLW River Channel at Mouse Island Bar, Sears Shoal, Chester Bar, Devils Wharf Shoal and below Brockways Beacon.	58,621 cy
May 1914 - Oct 1914	Maintenance and Improvement Dredging of 12-Foot MLLW River Channel at Hartford, Clay Banks, Naubuc, Cys Hollow, Press Barn, Dividend, Glastonbury Bars, Pistol Point, Rock Landing, Sears Shoal, Potash Bar, Calves Island, and Saybrook Point Bars	111,218 cy
June 1914 - May 1915	Construct Stone Dike/Training Wall at Clay Banks	9,439 Long Tons Stone
April 1914 - June 1914	Repairs to West Jetty at Saybrook	12,715 Long Tons Stone
June 1914 - Sept 1914	Repairs to Inshore End of West Saybrook Jetty	1,086 Long Tons Stone + 85 cy Concrete
Sept 1914 - Nov 1914	Raise the Top Elevation of Stone Dike/Training Wall at Sears Shoal to +6 Feet MLLW	4,757 Long Tons Stone
October 1914	Improvement Dredging to Straighten the 12-Foot Channel at Gildersleeve Island & Siam Dock	4,461 cy
July 1914 - Nov 1914	Repairing Toe of Hartford Dike	786 Long Tons Stone
July 1914 - Nov 1914	Riprap Blanket - Upper End Clay Banks Dike	200 Tons Stone
November 1914	Repair and Extend Press Barn Spur Dikes	659 Long Tons Stone
May 1915 - Sept 1915	Maintenance Dredging of 12-Foot MLLW River Channel at Hartford, Clay Banks, Press Barn, Glastonbury, Dividend, Pistol Point, Gildersleeve Shoal, Eddy Rock, Sears Shoal,	73,332 cy

	and Essex Shoal Bars.	
May 1915 - Dec 1915	Excavate for and Construct Bank Revetment at Wethersfield (Cys Hollow)	21,880 cy Plus 8,140 Long Tons Stone
September 1915	South Bank at Cys Hollow - Brush Matting under Revetment	480 Long Tons Stone Plus 66,720 SF Brush Matting
Fall 1915	Revetment Repairs at Old Siam Dock	189 L.Tons Stone
Fall 1915	Repairs to Spur Dikes at Press Barn Bar	170 L.Tons Stone
Fall 1915	Repairs to West Saybrook Jetty - Inshore End	345 L.Tons Stone
May 1916 - Oct 1916	Maintenance Dredging of 12-Foot MLLW River Channel at Hartford, Clay Banks, Press Barn, Glastonbury, Dividend, Pistol Point, Gildersleeve Shoal, Portland, Sears Shoal, Chester Creek and Brockways Bars.	89,236 cy
June 1917 - Sept 1917	Maintenance Dredging of 12-Foot MLLW River Channel at Glastonbury, Dividend, Pistol Point, Sears Shoal, Rock Landing Shoal and Potash Bars	58,041 cy
September 1917	Revetment Repairs at Cys Hollow	133 L.Tons Stone
Sept 1917 - Dec 1917	Brush Mattress Placed Prior to New Revetment at Press Barn Reach	Brush Matting Placed on 2,834 LF of Bank
May 1918 - Aug 1918	Maintenance Dredging of 12-Foot MLLW River Channel at Clay Banks, Cys Hollow, Dividend, Pistol Point, Press Barn and Glastonbury Bars.	37,702 cy
Sept 1918 - Dec 1918	Continue Construction of Revetment at Press Barn Bar Reach with Placement of Brush Matting and Stone Revetment Cover	Brush Matting - 2,834 LF of Bank
June 1919 - Oct 1919	Maintenance Dredging of 12-Foot MLLW River Channel at Clay Banks, Cys Hollow, Glastonbury, Pistol Pt., Dividend Bars, Mouse Is. Sears Shoal, Rock Landing, & Brockways Bars	64,455 cy
July 1919 - Nov 1919	Continue Construction of Stone/Brush Revetment at Press Barn Bar Reach	Unknown

May 1920 - FY 1921	Begin Construction of Stone/Brush Revetment at Crow Point	Unknown
June 1920	Maintenance Dredging of 12-Foot MLLW Channel at Pistol Point and Dividend Bars	13,356 cy
FY 1921	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	52,355 cy
FY 1921	Maintenance Dredging of 15-Foot MLLW Saybrook Entrance Channel with US Dredge	Unknown
FY 1921	Continue Construction of Stone/Brush Bank Revetment at Press Barn Bar Reach	Unknown
FY 1921	Revetment Repairs at Cys Hollow & Press Barn	Unknown
FY 1922	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	48,933 cy
FY 1922	Continue Construction of Stone/Brush Revetment at Crow Point with an Unspecified Amount of Stone Placed over Brush Matting	3,195 LF of Brush Mat, and Riprap Placed
FY 1922	Repairs to Bank Revetments at Cys Hollow & Press Barn Bars	Unknown
FY 1923	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars with Dipper Dredge and In-River Disposal	68,237 cy
FY 1923	Continue Construction of Stone/Brush Bank Revetment at Crow Point	3,200 LF of Bank Reveted
FY 1923	Repairs to Bank Revetments at Crow Point & Press Barn Bar	Unknown
FY 1924	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars by Dipper	57,271 cy
FY 1924	Continue and Complete Construction of Stone/Brush Revetment at Crow Point	1,300 Tons Stone Estimated
FY 1924	Revetment Repairs at Press Barn Bar Reach	Unknown
Fall 1923	Begin Construction of Stone and Timber Dike Modifications at Clay Banks	1,116 LF of Dike
FY 1925	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	49,475 cy
FY 1925	Construct Revetment Modifications at Clay	Unknown

	Banks and Glastonbury Two Piers, 4 Stone Spur Dikes at Press Barn and 4 Timber/Brush Hurdles at Cys Hollow.	
FY 1925	Repairs to Revetments at Clay Banks, Cys Hollow, Press Barn, Crow Point and Siam Dock and Timber Hurdles at Clay Banks.	Unknown
FY 1926	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	37,784 cy
FY 1926	Extend Revetment at Cys Hollow and Construct 10 New Spur Dikes at Naubec Reach	Unknown
FY 1926 – Sept 1926	Improvement Dredging at Two Piers Bar – Widen the 12-Foot MLLW Channel by 75 Feet	40,000 cy
FY 1926	Repairs to Revetment and Timber Spurs at Press Barn and Timber Hurdles at Cys Hollow	Unknown
FY 1926 – Spring 1926	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	51,425 cy
FY 1927	New 3,835 LF Stone Revetment at Gildersleeve Island, 2 Stone Spur Dikes at Pistol Point, a 50-Foot Extension of Two Piers Revetment & 2 Stone/Brush Spurs at Roaring Brook	Unknown
FY 1928	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	49,180 cy
FY 1928	Improvements – 3,521 LF New Revetment and 4 Spur Dikes at Upper Glastonbury Bar Reach	Unknown
FY 1928	Repairs to Revetments at Gildersleeve, Two Piers and Glastonbury, Repairs to Dikes and Hurdles at Naubec & Press Barn	Unknown
FY 1929	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	44,218 cy
FY 1929	Construct 2,272 LF of New Stone Naubec Bar Revetments	2,004 Long Tons Stone
FY 1929	Repairs to Revetments at Gildersleeve, Two Two Piers and Crow Point Bars, and to Dikes and Hurdles at Clay Banks, Naubec & Press Barn	530 Long Tons Stone
FY 1930	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	52,373 cy

June 1929 - July 1929	Maintenance Dredging of 15-Foot MLLW Saybrook Bar Channel	214,418 cy
Summer 1929	Repairs to Revetments at Clay Banks, Cys Hollow, Press Barn, Crow Point, Glastonbury & Gildersleeve and to Dikes & Hurdles at Clay Banks, Cys Hollow and Press Barn Reaches	880 Long Tons Stone
July 1930 - Sept 1930	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	45,875 cy
Summer 1930	Maintenance Dredging of 12-Foot MLLW Channel at Press Barn Bar	8,977 cy
Aug 1930 - Sept 1930	Repairs to Revetments at Clay Banks, Cys Hollow, Press Barn, Crow Point, Glastonbury & Gildersleeve Reaches	382 Long Tons Stone
July 1931 - Sept 1931	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	40,262 cy
Aug 1931 - Sept 1931	Revetment Repairs at Cys Hollow & Crow Pt.	164 Long Tons Stone
June 1932	Maintenance Dredging of 12-Foot MLLW Pistol Point Bar Channel	3,476 cy
July 1932 - Sept 1932	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	44,392 cy
June 1933	Maintenance Dredging of 12-Foot MLLW Channel at Potash Bar	6,719 cy
Aug 1932 - Sept 1932	Repairs to Revetments at Naubec, Press Barn, Crow Point, Glastonbury and Gildersleeve Reaches	760 Tons Stone
July 1933 - Nov 1933	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	48,607 cy
Aug 1933 - Sept 1933	Repairs to Revetments at Cys Hollow, Naubec, Press Barn, Crow Pt., Glastonbury, Two Piers, and Gildersleeve Reaches	660 Tons Stone
May 1934 - June 1934	Maintenance Dredging of 12-Foot MLLW Channel at Pistol Point & Dividend Bars	17,734 cy
July 1934 - Oct 1934	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	43,699 cy
Aug 1934 - Sept 1934	Repairs to Revetments at Naubec, Press Barn,	911 Tons Stone

	Crow Point, Glastonbury, and Gildersleeve Reaches	
June 1935	Maintenance Dredging of 12-Foot MLLW Channel at Pistol Point & Dividend Bars	9,572 cy
July 1935 - Sept 1935	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	48,449 cy
July 1935 - Oct 1935	Repairs to Both East and West Stone Saybrook Jetties	5,775 Tons East 1,176 Tons West
Aug 1935 - Sept 1935	Repairs to Revetments at Naubec, Press Barn, Crow Pt., Glastonbury & Gildersleeve Reaches	775 Tons Stone
June 1936	Maintenance Dredging of 12-Foot MLLW Channel at Potash Bar	20,457 cy
July 1936 - Aug 1936	Maintenance Dredging of 12-Foot MLLW Channel at Unspecified River Bars	71,239 cy
Aug 1936 - Sept 1936	Repairs to Revetments at Clay Banks, Naubec, Press Barn, Crow Point, and Gildersleeve Reaches	670 Tons Stone
Sept 1936 - June 1937	Improvement Dredging to Widen and Deepen to 15 Feet MLLW Channel from Saybrook to Hartford Initiated and Completed Except for Cable Crossing Areas near Hartford.	1,720,393 cy
July 1937 - Aug 1937	Maintenance Dredging of 15-Foot MLLW Press Barn and Naubec Bar Channels	79,563 cy
August 1937	Improvement Dredging of Cable Areas at Hartford to Complete the 15-Foot Channel	6,232 cy
Aug 1937 - Sept 1937	Repairs to Revetments at Press Barn, Crow Point, Glastonbury & Gildersleeve Reaches	299 Tons Stone
Oct 1937 - Jan 1938	Maintenance Dredging of 15-Foot MLLW Saybrook Outer Bars Channel	135,900 cy
May 1938 - June 1938	Maintenance Dredging of 15-Foot MLLW Channel at Calves Island, Haddam Island, Rock Landing, Sears Upper, Sears, Essex, Paper Rock & Cobalt Bars	241,608 cy
July 1938 - Aug 1938	Maintenance Dredging of 15-Foot MLLW Channel below Middletown at Calves Island, Scovil Rock, Warners Quarry, Potash Bar, Brockway Bar, & Cobalt and Eddy Rock	111,210 cy

	Shoals.	
Nov 1938 - Dec 1938	Maintenance Dredging of 15-Foot MLLW Channel at Hartford Bar	10,036 cy
June 1939	Maintenance Dredging of 15-Foot MLLW Bar Channels at Calves Island & Essex Shoal	91,338 cy
June 1939	Maintenance Dredging of 15-Foot MLLW Channel at Press Barn Bar & Two Piers Range	36,626 cy
July 1939 - Sept 1939	Maintenance Dredging of 15-Foot MLLW Channel - below Middletown - at Potash, Brockway, Warner Quarry, Haddam Island, Mouse Island, and Paper Rock Bars and Cobalt, Sears, Sears Upper, Eddy Rock & Essex Shoals	278,246 cy
July 1939	Maintenance Dredging of 15-Foot MLLW Channel above Middletown at Glastonbury Upper Bar, Two Piers & Pistol Rock Shoals	94,366 cy
July 1939 - Nov 1939	Maintenance Dredging of 15-Foot MLLW Bar Channels above Middletown at Hartford, Clay Banks, Cys Hollow, Naubec, Press Barn, Two Piers, Glastonbury Upper, Dividend, Pistol Point, Wethersfield, Portland and Gildersleeve Island Reaches.	342,742 cy
Aug 1939 - Sept 1939	Repairs to West Jetty at Saybrook with Capstone Reset and New Capstone, Armor and Chip Stone Added	1,828 Long Tons Stone
Aug 1939 - Dec 1939	Construction of 2,470 LF of Stone Dike at Cys Hollow Bar - Submerged Revetment on Mat	1,372.4 Long Tons Riprap
Sept 1939 - Dec 1939	Repairs to Dikes and Revetments at Clay Banks, Cys Hollow, Naubec, Press Barn, Glastonbury Upper, Two Piers & Gildersleeve Reaches	Unknown
Oct 1939 - Jan 1940	Construction of Three New Stone and Timber Crib Dikes at Press Barn Reach	617 Long Tons Stone and 14,401 LF of Pilings
May 1940 - July 1940	Maintenance Dredging of 15-Foot MLLW Bar Channel below Middletown at Calves Island, Potash, Haddam Island, Scovil Rock, Mouse Island, Paper Rock, Mill Creek, Cobalt, Sears Upper, Sears Lower, Rock Landing, & Essex Shoals.	255,420 cy

Sept 1940 - Nov 1940	Repairs to Revetments at Clay Banks, Press Barn, Glastonbury Upper & Two Piers Reaches	1,370 Long Tons Stone
Oct 1940 - Nov 1940	Maintenance Dredging of 15-Foot MLLW Bar Channels above Middletown to Hartford at Clay Banks, Hartford, Cys Hollow, Naubec, Two Piers, Glastonbury Upper, Dividend, Pistol Point, Portland, Whethersfield & Gildersleeve Bars.	191,909 cy
May 1941	Maintenance Dredging of 15-Foot MLLW Channel at Calves Island & Brockway Bars	40,210 cy
July 1941 - Sept 1941	Maintenance Dredging of 15-Foot MLLW Channel below Middletown at Warners Quarry, Haddam Island, Rock Landing, Scovil Rock, Sears Upper, Eddy Rock & Sears Lower Bars	187,440 cy
Sept 1941 - Oct 1941	Maintenance Dredging of 15-Foot MLLW Channel above Middletown at Gildersleeve Island, Cromwell, Pistol Point, Naubuc, Cys Hollow, and Clay Banks Bars	220,851 cy
Oct 1941 - Nov 1941	Repairs to Revetments at Clay Banks, Naubec, Press Barn, Glastonbury Upper & Gildersleeve	702 Long Tons Stone
FY 1942	Emergency Maintenance Dredging of 15-Foot MLLW Channel at Hartford Following Bridge Collapse	Unknown
Aug 1942 - March 1943	Construction of New Stone & Timber Training Dikes at Glastonbury Bend	1,036 Long Tons Stone and 10,420 LF Piles Driven
Nov 1942 - Dec 1942	Maintenance Dredging of 15-Foot MLLW Channel above Middletown at Press Barn and Glastonbury Upper Bars	11,570 cy
July 1943 - Aug 1943	Continue and Complete Construction of New Stone & Timber Training Dikes at Glastonbury Bend	2,328 LF Dikes
July 1943 - Sept 1943	Maintenance Dredging of 15-Foot MLLW Channel above Middletown at Hartford, Clay Banks, Press Barn, Naubuc, Glastonbury Upper, Two Piers, Dividend, Pistol Point, Gildersleeve and Portland Bars	231,316 cy
December 1943	Maintenance Dredging of 15-Foot MLLW Channel at Cobalt Shoal	14,036 cy

June 1944	Maintenance Dredging of 15-Foot MLLW Channel below Middletown at Calves Island, Haddam Island, Rock Landing & Higganum Creek Bars	90,420 cy
Aug 1943 - Sept 1943	Repairs to Timber Dikes at Press Barn	Unknown
September 1943	Debris Removal from Clay Banks Bar Channel	Unknown
Sept 1943 - Nov 1943	Repairs to Revetments at Cys Hollow, Naubec, Crow Point, Press Barn, Glastonbury Upper, and Gildersleeve Reaches	1,000 Long Tons Stone
July 1944 - Sept 1944	Maintenance Dredging of 15-Foot MLLW Channel below Middletown at Mouse Island, Paper Rock, Cobalt, Sears Upper, Sears Shoal, Scovil Rock, Higganum Creek. & Saybrook Outer Bars	391,100 cy
July 1944 - Sept 1944	Maintenance Dredging of 15-Foot MLLW Channel above Middletown at Cys Hollow, Press Barn, Glastonbury Upper, Two Piers, Dividend and Pistol Point Bars	149,770 cy
Sept 1944 - Nov 1944	Emergency Construction of 17 Stone Dikes on Left Bank at Glastonbury Bend	3,174 Long Tons Stone
Nov 1944 - Dec 1944	Repairs to Revetments at Glastonbury, Press Barn and Crow Point Reaches	505 Long Tons Stone
May 1945 - July 1945	Maintenance Dredging of 15-Foot MLLW Channel below Middletown at Mouse Island, Cromwell, Portland, Paper Rock, Cobalt, Sears Upper, Sears, Haddam Island, Warners Quarry, Potash, Essex, Calves Island & Saybrook Shoals, and Saybrook Outer Bars	402,600 cy
Sept 1945 - Nov 1945	Maintenance Dredging of 15-Foot MLLW Channel above Middletown at Whethersfield, Cys Hollow, Naubec, Press Barn, Glastonbury Upper, Two Piers, Dividend, Brownstone, Pistol Point and Gildersleeve Island Bars	340,422 cy
July 1947 - Nov 1947	Construction of New Timber Pile Training Dikes at Whethersfield	Unknown
August 1947	Construction of New Stone Bank Revetment on the Left Bank at Glastonbury Bend	Unknown
July 1947 - Sept 1947	Repairs to Dikes & Revetments at Glastonbury	Unknown

FY 1949	Maintenance Dredging of 15-Foot MLLW Channel from Saybrook to Hartford	64,226 cy
July 1949 - Sept 1949	Maintenance Dredging of 15-Foot MLLW Channel from Saybrook to Hartford	381,547 cy
Oct 1951 - April 1952	Maintenance Dredging of 15-Foot MLLW Channel from Saybrook to Hartford	155,684 cy
Sept 1953 - Dec 1953	Maintenance Dredging of 15-Foot MLLW Channel from Saybrook to Hartford	356,495 cy
Oct 1955 - Dec 1955	Maintenance Dredging of 15-Foot MLLW Channel from Saybrook to Hartford	69,165 cy
July 1956 - Sept 1956	Maintenance Dredging of 15-Foot MLLW Channel from Saybrook to Hartford	232,125 cy
Nov 1957 - June 1958	Maintenance Dredging of 15-Foot MLLW Channel from Saybrook to Hartford	44,000 cy
July 1958 - Nov 1958	Maintenance Dredging of 15-Foot MLLW Channel at Various Unspecified Bars from Saybrook to Hartford	100,688 cy
Oct 1959 - Nov 1959	Maintenance Dredging of 15-Foot MLLW Channel at Various Unspecified Bars from Saybrook to Hartford	140,383 cy
July 1960 – Nov 1960	Repairs to Both Stone Jetties at Saybrook	6,600 Tons Stone
Aug 1960 – Dec 1960	Repairs to Revetments at Glastonbury Bend	7,650 Tons Stone
Oct 1961 - Dec 1961	Maintenance Dredging of 15-Foot MLLW Channel at Various Unspecified Bars from Saybrook to Hartford	204,340 cy
November 1962	Maintenance Dredging of 15-Foot MLLW Channel at Haddam Island Bar & Sears Shoal	42,800 cy
Nov 1962 - Jan 1963	Improvement Dredging of 10-Foot and 8-Foot MLLW Essex Cove Anchorages & Channel	64,382 cy
Nov 1962 - Jan 1963	Improvement Dredging of 6-Foot MLLW Whethersfield Cove Channel and Anchorage	45,000 cy Estimated
June 1964	Maintenance Dredging of 15-Foot MLLW Channel at Saybrook Shoals & Outer Bar	70,900 cy
Aug 1964 - Oct 1964	Maintenance Dredging of 15-Foot MLLW Channel at Essex, Cobalt and Paper Rock Shoals and at Dividend, Naubuc, Pistol Point,	164,275 cy

	Sears Upper and Rock Landing Bars	
June 1965 – Sept 1965	Improvement Dredging of 11-Foot Channel and Anchorage and 8-Foot Anchorage at Saybrook North Cove	536,340 cy
July 1968 - Sept 1968	Maintenance Dredging of 15-Foot MLLW Channel at Glastonbury Upper, Two Piers, Brockway, Eddy Rock, Potash and Saybrook Outer Bars	128,919 cy
Aug 1968 - Oct 1968	Maintenance Dredging of 6-Foot MLLW Channel at Wethersfield Cove	18,233 cy
Aug 1970 - Jan 1971	Maintenance Dredging of 15-Foot MLLW Channel at Glastonbury Upper, Two Piers, Naubuc, Pistol Point, Haddam Island, Higganum Creek, Potash, Calves Island, Brockway, Saybrook Shoals and Saybrook Outer Bar	288,211 cy
Aug 1972 - Oct 1973	Maintenance Dredging of 15-Foot MLLW Channel at Sears, Sears Upper, Cobalt, Paper Rock, Mouse Island, Dividend, Press Barn Claybanks and Claybanks Upper Bars	140,300 cy
September 1973	Maintenance Hopper Dredging of 15-Foot MLLW Channel at Saybrook Shoals and Saybrook Outer Bar	84,850 cy
March 1975	Maintenance Dredging of 15-Foot Essex Shoal Channel and the 10-Foot MLLW Channel at Essex Cove Harbor with Disposal at Nott Island	15,000 cy
Oct 1975 - March 1976	Maintenance Dredging of 15-Foot Essex Shoal Channel and 10-Foot Essex Cove Channel with Disposal at Nott Island	36,500 cy
June 1976 - Sept 1976	Maintenance Dredging of 15-Foot MLLW Channel at Sears Upper, Glastonbury Upper, Two Piers, Pistol Point, Higganum Creek, Haddam Island & Potash Bars	198,350 cy
Oct 1976 - Mar 1977	Maintenance Dredging of 15-Foot MLLW Channel at Essex Shoal and Brockway Bar	3,800 cy
Nov 1976 - Mar 1977	Maintenance Dredging at Saybrook North Cove including the 6-Foot MLLW Anchorage, and the 11-Foot Channel and Anchorage but to only 8 Feet MLLW	158,200 cy

Sept 1977 - April 1978	Maintenance Dredging of 15-Foot MLLW Channel at Calves Island, Saybrook Shoals, and Saybrook Outer Bars	132,900 cy
June 1979 - July 1979	Maintenance Dredging of 15-Foot MLLW Channel at Various Unspecified Bars from Saybrook to Hartford	190,000 cy
Aug 1981 - Sept 1981	Maintenance Dredging of 15-Foot MLLW Channel at Various Unspecified Bars from Saybrook to Hartford	150,100 cy
Oct 1981 - FY 1981	Maintenance Dredging of 15-Foot MLLW Channel at Various Unspecified Bars from Saybrook to Hartford	99,900 cy
Aug 1982 - Sept 1982	Maintenance Dredging of 15-Foot MLLW Channel at Various Unspecified Bars from Saybrook to Hartford	100,000 cy
Sept 1983 - Dec 1983	Maintenance Dredging of 15-Foot MLLW Channel - Bars above Middletown	123,053 cy
Sept 1983 - Jan 1984	Maintenance Dredging of 15-Foot MLLW Channel - Bars below Middletown	167,800 cy
March 1984 – June 1984	Maintenance Dredging of the North Cove Channel and Anchorage Areas	65,000 cy
July 1984 - Sept 1984	Maintenance Dredging of 15-Foot MLLW Channel - Naubuc, Claybanks, Glastonbury, Two Piers, Dividend, Pistol Pt., Portland, Mouse Is., Cobalt, Paper Rock, Sears, Sears Upper, Higganum Ck., Rock Landing, Salmon River, Warners Quarry, Potash, Brockway, Calves Is., Railroad Reach & Saybrook Shoals Bars	459,727 cy
July 1987	Maintenance Dredging of 15-Foot MLLW River Channel at Calves Island, Brockway, Glastonbury, Two Piers and Pistol Point Bars with In-River Disposal	57,000 cy
November 1987	Maintenance Dredging of the 6-Foot Entrance Channel at Whethersfield Cove with In-river Disposal	200 cy
Aug 1988 – Sept 1988	Maintenance Dredging by the *Currictuck* of the 15-Foot MLLW River Channel at Pistol Point Sears Shoal and Higganum Creek Bars	51,955 cy

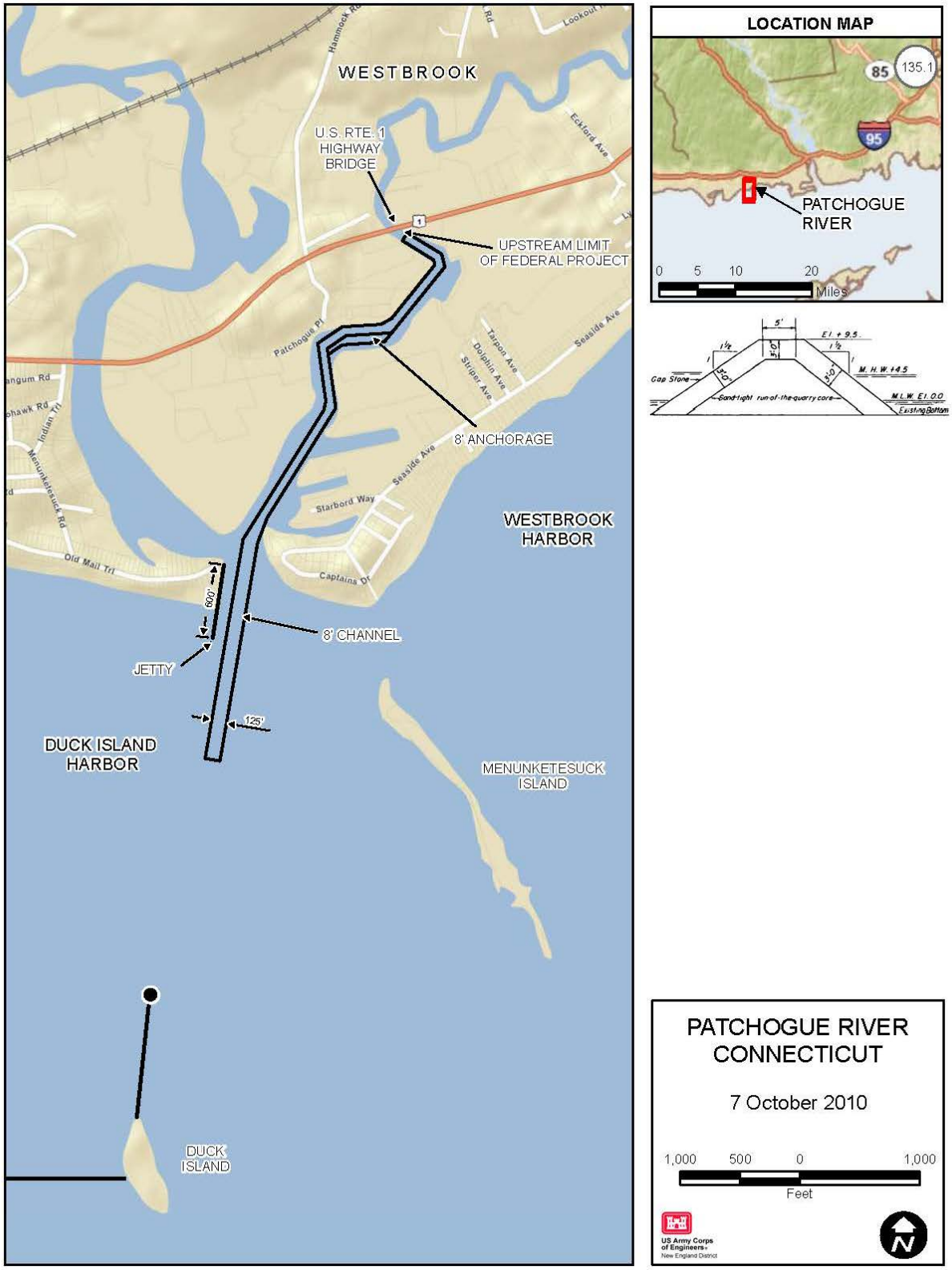
May 1991 – Oct 1991	Maintenance Dredging of 15-Foot MLLW River Channel at Calves Island Bar, Essex Shoals and Saybrook Outer Bars	75,103 cy
Oct 1991 – April 1992	Maintenance Dredging of the North Cove Channel and Anchorage Areas	80,993 cy
Oct 1992 – Dec 1992	Continue Maintenance Dredging of the North Cove Channel and Anchorage Areas	71,300 cy
Dec 1993 – January 1994 and in Aug 1994	Maintenance Dredging of the 15-Foot MLLW River Channel at Pistol Point Sears Shoal and Higganum Creek Bars	117,300 cy
August 2002 – Sept 2002	Maintenance Dredging by the *Currictuck* of the 15-Foot MLLW River Channel at Pistol Point Bar with In-river Disposal	49,600 cy
Nov 2008 – May 2009	Continue Maintenance Dredging of the North Cove Channel and Anchorage Areas with Disposal Split between CSDS and CLIS (as Cap for Norwalk Harbor Material)	97,785 cy to CSDS and 75,000 cy to CLIS
2014	Mechanical Maintenance Dredging of the 6-Foot Entrance Channel to the Cove with In-River Disposal South of Gildersleeve Island	10,407 cy

Clinton/Westbrook Dredging Center

Patchogue River FNP, Westbrook, CT

The Patchogue River FNP in Westbrook, Connecticut was originally comprised of an 8-foot deep channel, 75 feet wide running 5,100 linear feet from deep water in Long Island Sound to the U.S. Route 1 Bride; a stone jetty 600 feet long on the west side of the inlet; and an anchorage area, 8 feet deep by 75 feet wide by 500 feet long opposite the Town Wharf. That initial configuration was defined by the authorization in the River and Harbor Act of 3 September 1954. In 1983, the Chief of Engineers under authority of Section 107 of the River and Harbor Act of 1960 permitted that the channel be widened to 125 feet from the Sound for 1,800 linear feet upstream to the confluence of the Patchogue and Menunketesuck Rivers. The Water Resources Development Act in 1996 deauthorized a portion of the 8-foot Federal channel downstream of the Town Wharf and redesignated a portion of the 8-foot Federal anchorage as part of the 8-foot channel. See Project Map 135.1.

Project Map 135.1: Patchogue River FNP



Patchogue River List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 3 September 1954	Channel -8 Feet MLLW by 75 Feet Wide from Deep Water in the Sound 5,100 LF to the US Rt. 1 Bridge, a Stone Jetty 600 Feet Long on the West Side of the Inlet, and an Anchorage Area -8 Feet MLLW by 75 Feet Wide by 500 Feet Long Opposite the Town Wharf	Jetty – April 1956 – July 1956 Channel & Anchorage – Sept 1956 – Nov 1956
Chief of Engineers, 12 April 1983, under Authority of Section 107 of the River and Harbor Act of 1960	Widening the 8-Foot Entrance Channel to 125 Feet from the Sound 1,800 LF Upstream to the Confluence of the Patchogue & Menunketesuck Rivers	Oct 1983 – Dec 1983
Water Resources Development Act of 25 September 1996	Deauthorized a Portion of the 8-Foot Federal Channel Downstream of the Town Wharf, as Authorized by the Act of 1954, and Redesignated a Portion of the 8-Foot Federal Anchorage as Part of the 8-Foot Channel as Compensation.	Deauthorization

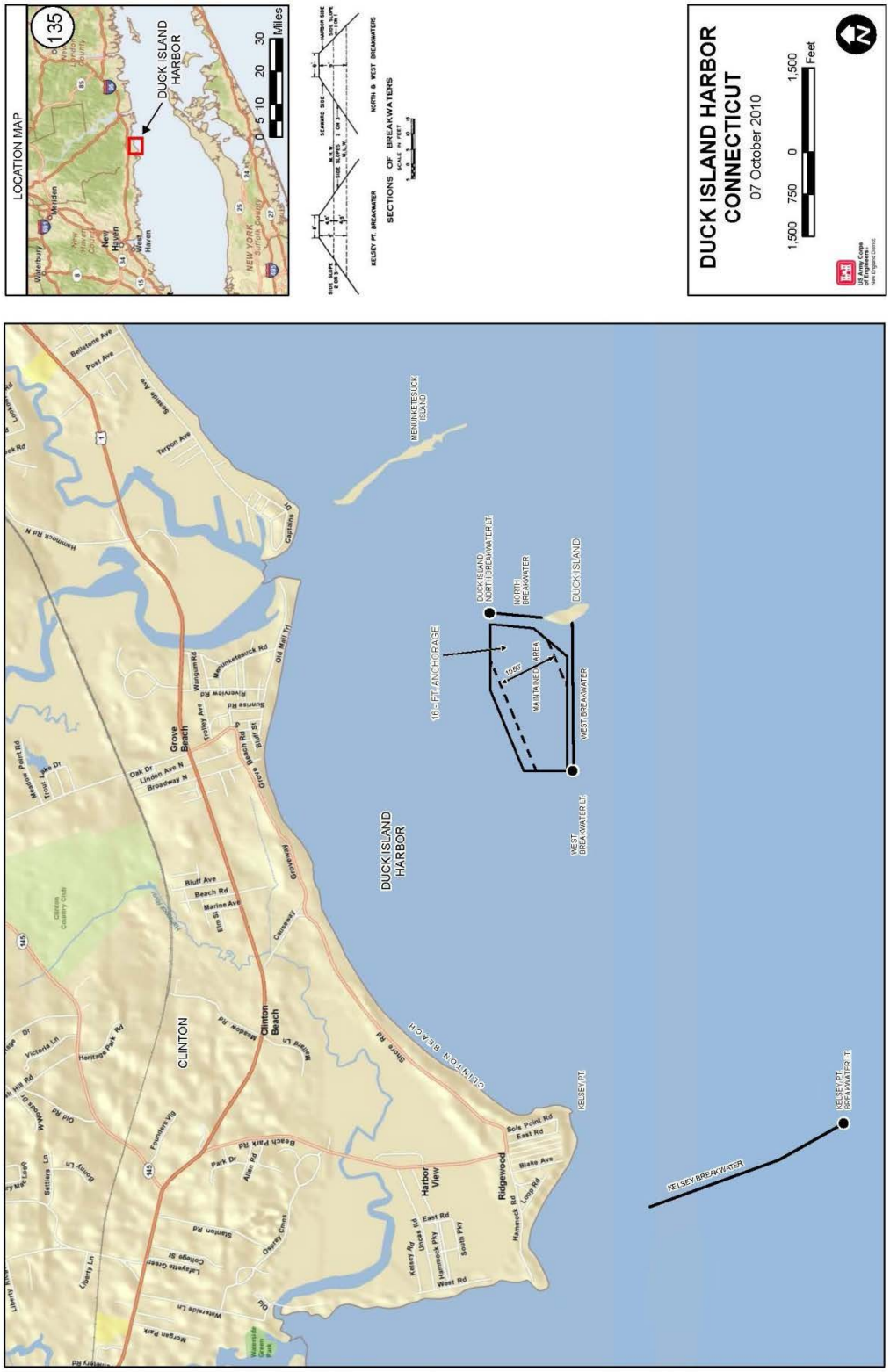
Patchogue River Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
April 1956 – July 1956	Construction of Rubble-Stone West Jetty	6,467 Tons Stone Placed
Sept 1956 – Nov 1956	Improvement Dredging of the 8-Foot Channel and Anchorage by Hydraulic Dredge with Upland Disposal in Diked Area	193,725 cy
Oct 1962 – Dec 1962	Maintenance Dredging of the 8-Foot Channel and Anchorage	42,400 cy
Aug 1972 – Sept 1972	Maintenance Dredging of the 8-Foot Channel and Anchorage by Hydraulic Dredge with Upland Disposal in Diked Area	42,590 cy
May 1976 – June 1976	Maintenance Dredging of the 8-Foot Entrance Channel Seaward of the Jetty by US Sidecast Dredge	10,865 cy

March 1977 – May 1977	Maintenance Dredging of the 8-Foot Channel and Anchorage by Hydraulic Dredge with Upland Disposal in Diked Area	36,500 cy
Oct 1983 - Dec 1983	Improvement and Maintenance Dredging to Widen the 8-Foot Entrance Channel	8,000 cy Improv. Plus 12,000 cy O&M
Oct 1997 – Feb 1998	Maintenance Dredging of the 8-Foot Channel and Anchorage	29,000 cy
May 2010	Maintenance Dredging of the 8-Foot Entrance Channel by the U.S. Hopper Dredge *Currituck* with Nearshore Bar Placement off Hammonasset State Beach.	7,345 cy
May 2011	Maintenance Dredging of the 8-Foot Entrance Channel by the U.S. Hopper Dredge *Currituck* with Nearshore Bar Placement off Hammonasset State Beach.	15,000 cy
October 2012 – December 2012	Mechanical Maintenance Dredging of the 8-Foot Entrance Channel and Anchorage with Disposal at the CSDS.	34,090 cy

Duck Island Harbor of Refuge FNP, Westbrook, CT

Duck Island Harbor is a harbor of refuge consisting of three stone breakwaters and an anchorage area. The project was originally authorized by the River and Harbor Act of 1890 which provided for the three stone breakwaters, one extending 3,000 linear feet west from Duck Island, the second extending northeast 1,750 linear feet from Duck Island, and the third extending 1,130 linear feet west from Menunketesuck Point. All three breakwaters were to have a top elevation of +10 feet and 10-foot top width. The West breakwater was built to a lesser section and length and the other two breakwaters (East and Menunksetesuck) were never built. In 1910, adjustments were made to the breakwater configuration under authority of the R&H Act of that year. The West breakwater was permitted to extend 2,700 linear feet and two additional breakwaters, one extending 1,100 feet north from Duck Island and the other extending 3,750 feet southerly from Kelsey Point were authorized. The 16-foot anchorage in the lee of the Duck Island breakwaters was authorized in the R&H Act of 1916 which completed the harbor of refuge that still stands today. See Project Map 135 for visual.

Project Map 135: Duck Island Harbor of Refuge FNP



Duck Island Harbor of Refuge List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 19 September 1890	3 Stone Breakwaters, One Extending 3,000 Feet West from Duck Island, the Second Extending Northeast 1,750 LF from Duck Island, and the Third Extending 1,130 LF West from Menunketesuck Point, Enclosing the Passage between the Island and Menunketesuck Point and Leaving a Navigation Opening about 750 Feet Wide. All Three Breakwaters to have a Top Elevation of +10 Feet MLLW, 10-Foot Top Width.	West Breakwater – May 1891 – Aug 1898 to Lesser Section and Length East Breakwater and Menunketesuck Breakwater were Never Built
River & Harbor Act of 25 June 1910	Completion of West Breakwater to 2,700 LF and Two Additional Breakwaters, One Extending 1,100 Feet North from Duck Island and the other Extending 3,750 Feet Southerly from Kelsey Point. All Three to be +9 Feet MLLW Top Elevation, 8-Foot Top Width.	Kelsey Point Breakwater – Sept 1910 – March 1914 North Breakwater – Sept 1911 – Aug 1912 West Breakwater Completion – June 1914 – Sept 1914
River & Harbor Act of 27 July 1916	16-Foot Anchorage in the Lee of the Duck Island Breakwaters in Duck Island Roads	Oct 1916 – Nov 1916

Duck Island Harbor of Refuge Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
May 1891 - Oct 1891	Begin Construction of West Duck Island Breakwater	23,462 Tons Stone
April 1893 - Nov 1893	Continue Construction of West Duck Island Breakwater	34,012 Tons Stone
Jan 1896 - June 1896	Continue Construction of West Duck Island Breakwater	39,414 Tons Stone
Nov 1897 - Aug 1898	Continue Construction of West Duck Island Breakwater	25,000 Tons Stone
January 1901	Repairs to West Duck Island Breakwater	200 Tons Stone

Sept 1905 - Dec 1905	Repairs to West Duck Island Breakwater	3,700 Tons Stone
July 1909 - Aug 1909	Repairs to West Duck Island Breakwater	3,278 Long Tons Stone
Sept 1910 - Nov 1911	Begin Construction of Kelsey Point Breakwater	54,340 Long Tons Stone
June 1912 - Mar 1914	Complete Construction of Kelsey Point Breakwater	163,858 Long Tons Stone
Sept 1911 - Aug 1912	Begin Construction of North Duck Island Breakwater	23,329 Long Tons Stone
June 1914 - Sept 1914	Continue Construction of West Duck Island Breakwater	15,722 Long Tons Stone
September 1914	Repairs to Head and Slopes of North Duck Island Breakwater	1,097 Long Tons Stone
Oct 1914 - Nov 1914	Continue Repairs to Head and Slopes of North Duck Island Breakwater	9,334 Long Tons Stone
Aug 1915 - Oct 1915	Repairs to Head of Kelsey Point Breakwater	412 Long Tons Stone
Aug 1915 - Oct 1915	Repairs to South Face of West Duck Island Breakwater	2,347 Long Tons Stone
Nov 1916 - Dec 1916	Repairs to Head of Kelsey Point Breakwater	232 Long Tons Stone
Oct 1916 - Nov 1917	Initiate and Complete Improvement Dredging of the 16-Foot MLLW Refuge Anchorage	704,228 cy
FY 1924	Maintenance Dredging of 16-Foot MLLW Refuge Anchorage	208,000 cy Estimated
Late 1927 - Aug 1928	Repairs to the Kelsey Point and West Duck Island Breakwaters	3,547 Long Tons Stone
June 1931 - Aug 1931	Maintenance Dredging of 16-Foot MLLW Refuge Anchorage	515,381 cy
July 1935 - Sept 1935	Repairs to the Kelsey Point and West Duck Island Breakwaters	689 Long Tons Kelsey 1,815 Long Tons West
Sept 1935 - Oct 1935	Maintenance Dredging of 16-Foot MLLW	379,556 cy Plus

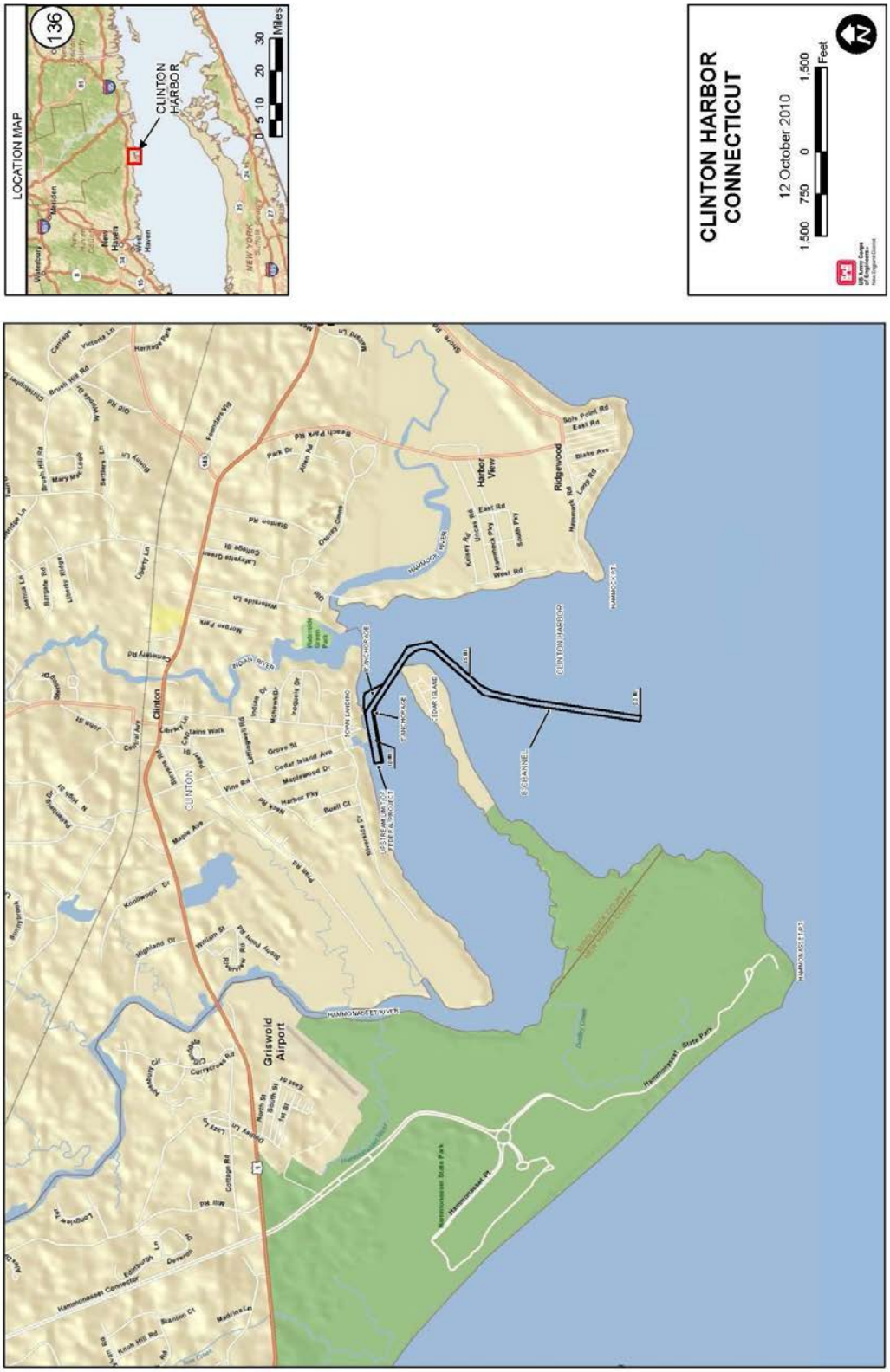
	Refuge Anchorage	26 cy Boulders
Mar 1938 - May 1938	Maintenance Dredging of 16-Foot MLLW Refuge Anchorage	254,155 cy Roberts is Taken
June 1939 - Aug 1939	Repairs to the Kelsey Point and West Duck Island Breakwaters	5,380 Long Tons Stone
FY 1949	Maintenance Dredging of 16-Foot MLLW Refuge Anchorage	132,540 cy

Clinton Harbor FNP, Clinton, CT

The Federal navigation project at Clinton Harbor was initially authorized by the River and Harbor Act of 1882. At that time, a stone dike to close a breach in the beach and a 6-foot deep by 100-foot wide channel into the harbor was permitted. In 1945, the R&H Act deepened the channel to 8 feet, widened the section of the channel at the approach to the Town Wharf to 150 feet, and added an anchorage 8 feet deep by 50 to 250 feet wide by 600 feet long south of the channel at the Town Landing. The 1999 Water Resources Development Act redesignated a portion of the inner channel as anchorage area to bring about the current project as seen today. See Project Map 136.

Clinton Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 2 August 1882	Stone Dike to Close Breach in the Beach, with Dredging of a 6-Foot MLLW by 100-Foot Wide Channel into the Harbor should the Dike Prove Ineffective at Slowing Shoaling in the Harbor Entrance.	Stone Dike – Sept 1882 – Dec 1883 Channel – March 1893 – May 1893 to a Reduced Width
River & Harbor Act of 2 March 1945	Channel -8 Feet MLLW by 100 Feet Wide, 150 Feet in the Approach to the Town Wharf, with an Anchorage -8 Feet, 50 to 250 Feet Wide by 600 Feet South of and above the Channel.	Oct 1949 – Jan 1951
Water Resources Development Act of 17 August 1999	Redesignated a Portion of the Inner Channel as Anchorage	Redesignation

Project Map 136: Clinton Harbor FNP



Clinton Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Sept 1883 – Dec 1883	Construct 375 LF Stone Dike across Breach in Barrier Spit	1,574 Tons Stone
May 1891 – June 1891	Repair, Widen, Raise and Extend Stone Dike on Barrier 16 LF to West	836 Tons Stone
March 1893 – May 1893	Improvement Dredging of the 6-Foot Entrance and Inner Channel	10,500 cy
Oct 1949 – Nov 1949	Improvement Dredging of the 8-Foot Channel and Anchorage	5,777 cy
May 1950 – Jan 1951	Continue Improvement Dredging of the 8-Foot Channel and Anchorage	123,529 cy
May 1957 – Aug 1957	Maintenance Dredging of 8-Foot Channel and Anchorage	75,000 cy
Feb 1965 – April 1965	Maintenance Dredging of 8-Foot Channel	27,600 cy
August 1972	Maintenance Dredging of 8-Foot Channel and Anchorage	31,000 cy
May 1976	Sidecast Maintenance Dredging of 8-Foot Channel	8,250 cy
Dec 1981 – March 1982	Maintenance Dredging of 8-Foot Channel and Anchorage	27,000 cy
Sept 1984 – Nov 1984	Maintenance Dredging of 8-Foot Channel	19,125 cy
June 2000	Maintenance Dredging of 8-Foot Entrance Channel by the U.S. Hopper Dredge *Currituck*	20,000 cy
June 2010	Maintenance Dredging of 8-Foot Entrance Channel by the U.S. Hopper Dredge *Currituck* with Nearshore Bar Disposal off Hammonasset State Beach	16,085 cy
June 2011	Maintenance Dredging of 8-Foot Entrance Channel by the U.S. Hopper Dredge *Currituck* with Nearshore Bar Disposal off Hammonasset State Beach	9,000 cy
October 2012 – April 2013	Hydraulic Pipeline Maintenance Dredging of the 8-Foot Entrance Channel with Disposal on Hammonasset State Beach	49,900 CY

Guilford/Branford Dredging Center

Guilford Harbor FNP, Guilford, CT

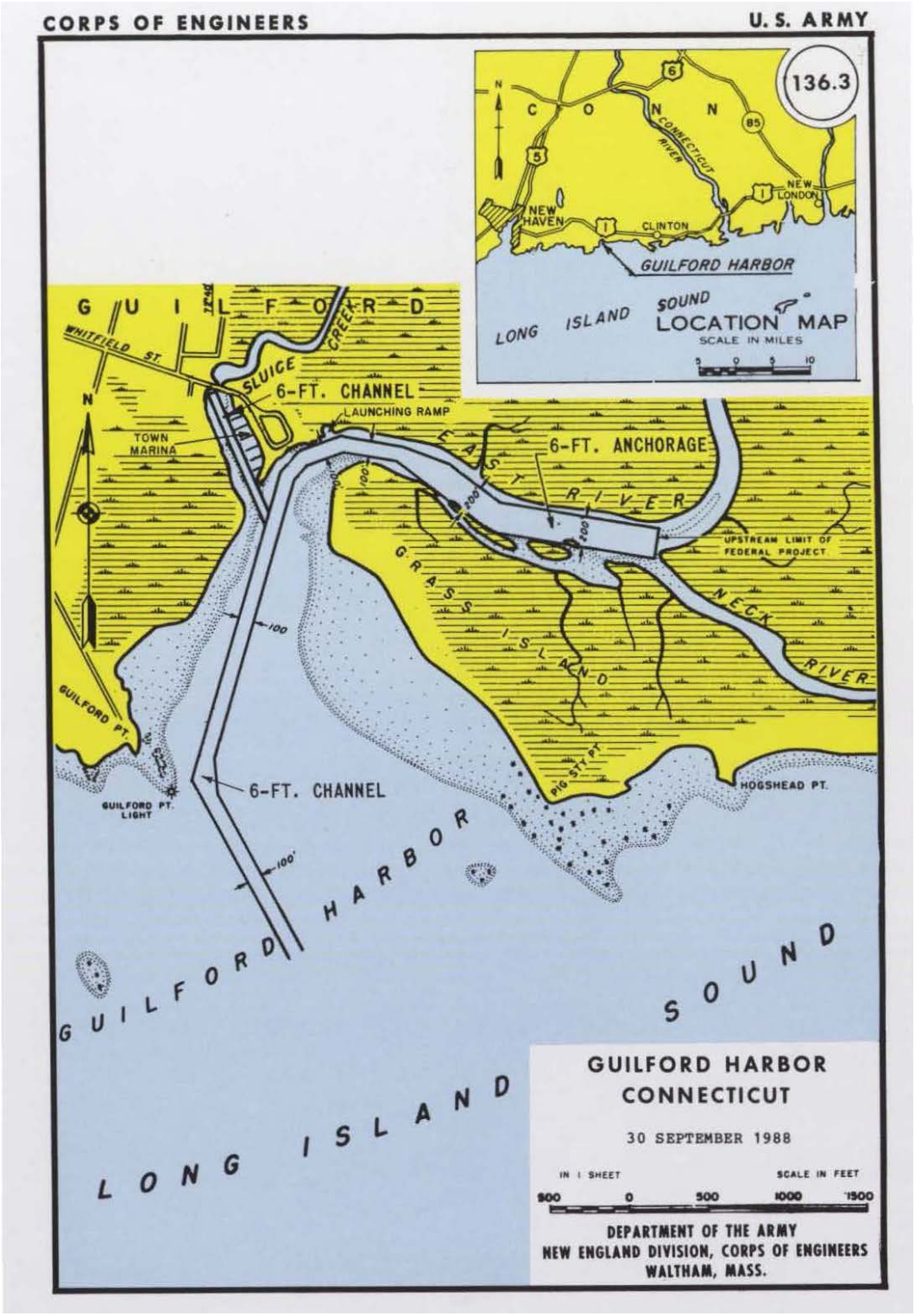
Guilford Harbor has not changed much since its initial authorization in 1945 by the River and Harbor Act of that year. Authorization in 1945 allowed for construction of an entrance channel 6 feet deep by 100 feet wide from the outer harbor into the East River to a 6-foot anchorage, 200 feet wide by 1,500 feet long, at its head and a spur channel 6 feet deep by 600 feet wide into Sluice Creek. In 1996, the Water Resources Development Act deauthorized a portion of the channel into Sluice Creek and realigned the remaining channel within the project footprint. See Project Map 136.3 for visual.

Guilford Harbor
List of Authorizations

Authorization	Work Authorized & Constructed	Construction Dates
River & Harbor Act of 2 March 1945	Entrance Channel -6 Feet MLLW by 100 Feet Wide from the Outer Harbor into the East River to an Anchorage at its Head 200 Feet Wide by 1,500 Feet Long, and a Spur Channel -6 Feet MLLW by 60 Feet Wide into Sluice Creek	Feb 1957 – July 1958
Water Resources Development Act of 25 September 1996	Deauthorized the a Portion of the 6-Foot Sluice Creek Channel and Realigned the Remaining Channel, from the Act of 1945	Deauthorization

Project Map 136.3: Guilford Harbor FNP.

*Note: A portion of the 6-foot Sluice Creek channel was deauthorized by WRDA 1996. The remaining channel was realigned under the same authority.



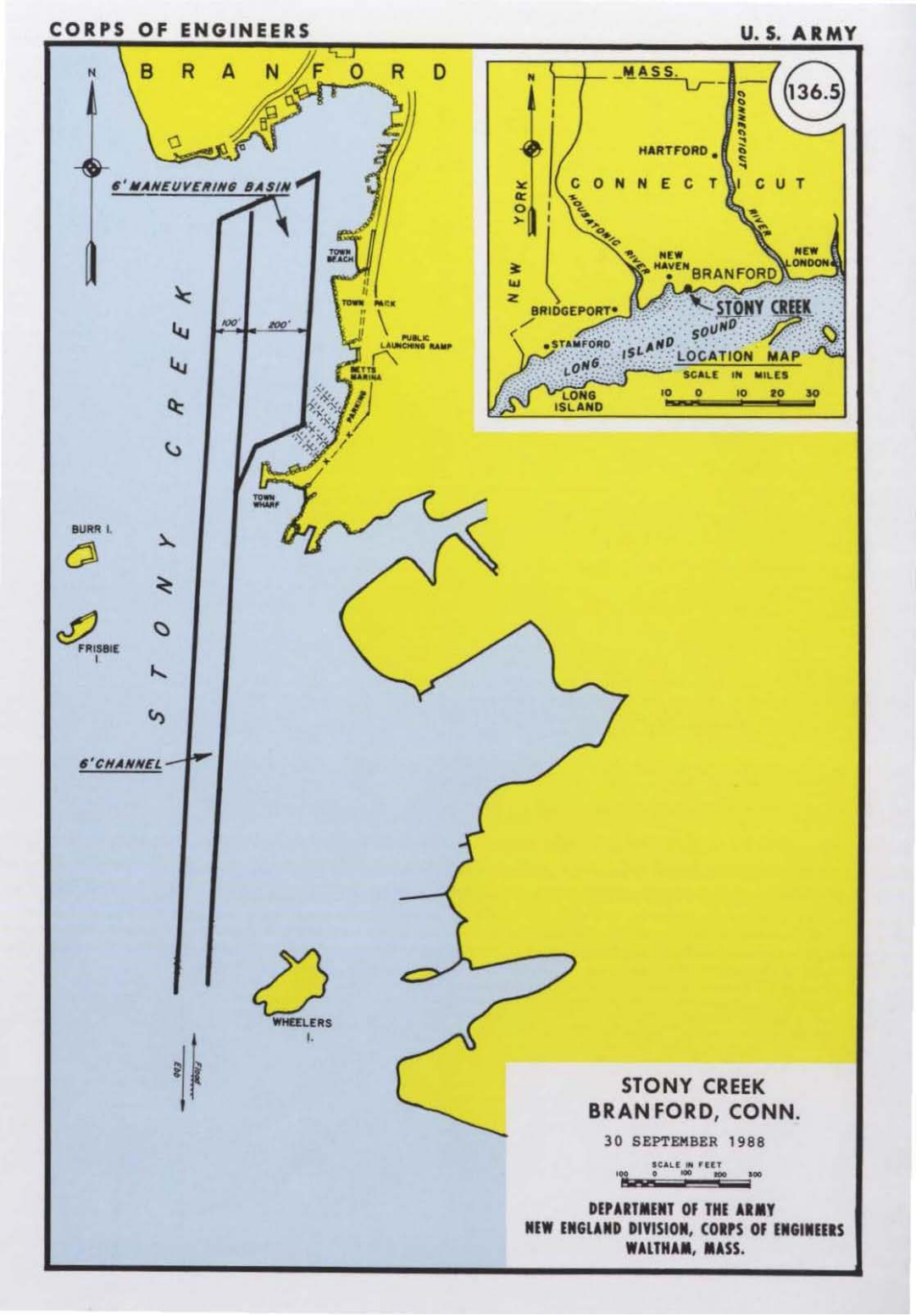
Guilford Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Feb 1957 - April 1957	Improvement Dredging of 6-Foot MLLW Channels and Anchorage and Wreck Removal	109,676 cy Plus 700 cy Boulders
June 1958 - July 1958	Improvement – Boulder Removal from 6-Foot Channels and Anchorage	Unknown
May 1964 - June 1964	Maintenance Dredging of 6-Foot Main Channel, Sluice Creek Channel and Anchorage	73,000 cy
Oct 1973 - Mar 1974	Maintenance Dredging of 6-Foot Main Channel	71,800 cy
Oct 1982 - Dec 1982	Maintenance Dredging of 6-Foot Channels and Anchorage Area	72,000 cy
FY 1983	Maintenance – Removal of Unclassified Obstruction and Overburden from 6-Foot Channel	Unknown cy Rock Plus 200 cy Overburden Est.
Nov 1992 - Feb 1993	Maintenance Dredging of 6-Foot Main Channel	10,000 cy
Oct 1993 - Feb 1994	Maintenance Dredging of 6-Foot Main Channel	31,938 cy

Stony Creek Harbor FNP, Branford, CT

In 1967, the Chief of Engineers under authority of Section 107 of the River and Harbor Act of 1960 created the Stony Creek Harbor FNP. The Federal project would be a channel, 6 feet deep by 100 feet wide from Long Island Sound to the Stony Creek town dock with an anchorage, 6 feet deep by 3.5-acres above the head of the channel. The Water Resources Development Act of 1996 deauthorized a triangular portion of the 6-foot anchorage at the southwestern edge of the anchorage adjacent to the channel. The old configuration can be seen on Project Map 136.5.

Project Map 136.5: Stony Creek FNP.

*Note: A triangular portion of the 6-foot anchorage at the southwestern edge of the anchorage adjacent to the channel was deauthorized by WRDA 1996.



Stony Creek List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
Chief of Engineers, 4 December 1967 under Authority of Section 107 of the River & Harbor Act of 1960	Channel -6 Feet MLLW by 100 Feet Wide from Long Island Sound to the Town Dock at Stony Creek, with an Anchorage -6 Feet MLLW by 3.5 Acres above the Head of the Channel.	Sept 1969 – Jan 1970
Water Resources Development Act of 25 September 1996	Deauthorized a Triangular Portion of the 6-Foot Anchorage as Authorized under Section 107 of the Act of 1960	Deauthorization

Stony Creek Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Sep 1969 - Jan 1970	Improvement Dredging of the 6-Foot Channel and Anchorage Basin	76,000 cy
Sep 1977 - Dec 1977	Maintenance Dredging of the 6-Foot Channel and Anchorage Basin	36,000 cy
Mar 1995 - May 1995	Maintenance Dredging of the 6-Foot Channel and Anchorage Basin	45,792 cy

Branford Harbor FNP, Branford, CT

The FNP at Branford Harbor was authorized by the River and Harbor Act of 1902 which allowed for a channel 8.5 feet deep by 100 feet wide from deep water into the inner harbor upstream to the upper docks. In 1907, the R&H Act of that year extended the channel 2,900 feet seaward from the inner harbor to deep water in the outer harbor with the same dimensions as the inner channel. In 1916, it was recommended and approved that the channel through the inner harbor be reduced in depth to 7.5 feet for future maintenance. The Water Resources Development Act of 1996 deauthorized a portion of the channel lying shoreward to create the current FNP at Branford. See Project Map 137.

Project Map 137: Branford Harbor FNP

BRIDGE CLEARANCES
HIGHWAY BRIDGE (FIXED)
HORIZONTAL 53.5 ft.
VERTICAL 9 ft M.H.W.

BRANFORD HARBOR
CONNECTICUT

23 July 2010

1,500 750 0 1,500
Feet

US Army Corps of Engineers
New England District

Branford Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 13 June 1902	Channel -8.5 Feet MLLW by 100 Feet Wide, from Deep Water in Inner Harbor Upstream to the Upper Docks	Sept 1904 – July 1907
River & Harbor Act of 2 March 1907	Extend the Channel 2,900 Feet Seaward from the Inner Harbor -8.5 Feet MLLW by 100 Feet Wide to Deep Water in the Outer Harbor	July 1907
House Doc. #1292, 64th Congress, 1st Session, 22 July 1916	Recommended that the Channel Maintained through the Inner Harbor be Reduced in Depth to -7.5 Feet MLLW	NA
Water Resources Development Act of 25 September 1996	Deauthorized a Portion of the Channel Lying Shoreward of a Line Across the Channel, as Authorized by the River & Harbor Act of 13 June 1902	Deauthorization

Branford Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
September 1904 and May 1905	Improvement Dredging of Channel -8.5 Feet by 75 to 100 Feet Wide from the Inner Harbor Upstream to the Upper Docks at Branford	35,395 cy Plus 1 Large Boulder
June 1907 – July 1907	Continue Improvement Dredging and Seaward Extension of the 8.5 Foot Channel	37,013 cy
June 1913 – July 1913	Maintenance Dredging of 8.5 Foot Channel	34,150 cy
FY 1923	Maintenance Dredging of 8.5 Foot Channel	19,028 cy
Aug 1929 – Sept 1929	Maintenance Dredging of 8.5 Foot Outer Harbor Channel	30,821 cy
FY 1930	Maintenance Dredging of 8.5 Foot Upper River Channel	49,949 cy
August 1933	Maintenance Dredging of 8.5 Foot Outer Harbor Channel	46,220 cy

Dec 1937 – Feb 1938	Maintenance Dredging of 8.5 Foot Channels	88,078 cy
Jan 1946 – April 1946	Maintenance Dredging of 8.5 Foot Channels	71,119 cy
Mar 1956 – May 1956	Maintenance Dredging of 8.5 Foot Channels	83,223 cy Hydr. 19,000 cy Bucket
July 1965 – Oct 1965	Maintenance Dredging of 8.5 Foot Channels	93,236 cy
Oct 1976 – Nov 1976	Maintenance Dredging of 8.5 Foot Channels	60,000 cy
Nov 1989 – March 1990	Maintenance Dredging of 8.5 Foot Channels	76,270 cy
July 1990	Improvement – Removal of Boulders from North Slope of 8.5 Foot Channels	660 cy

New Haven Dredging Center

New Haven Harbor FNP- Main Entrance Channel, New Haven, CT

The New Haven Harbor FNP dates back to August 1852 when the Act of 1852 permitted the removal of middle rock from the eastern entrance to New Haven Harbor to bring the channel to a 17-foot depth. Many modifications were made to the FNP over time with major modifications being: the creation of a channel 200 feet wide by 14 feet deep across the middle bar up to the wharves at New Haven in 1871; the addition of a channel 5,000 linear feet across the bar at Fort Hale by 16 feet deep and 200 feet wide in 1872; a stone jetty at the beach south of Fort Hale extending from the Mean High Water line seaward in 1873; deepening the channel across the Fort Hale Bar and up to Long Wharf to a 16-foot depth and widening it to 400 to 500 feet wide in 1878; two stone breakwaters across the outer harbor, the southwest ledge breakwater at 3,300 linear feet long, and the Luddingtons rock breakwater at 4,200 linear feet long in 1879; redesign of the Luddingtons rock breakwater to 5,000 linear feet and adding a new West breakwater at 4,200 linear feet in 1890; in 1899, the addition of a channel 20 feet deep by 400 feet wide from Long Island Sound to Fort Hale then 300 feet wide to Tomlinsons Bridge with three inner harbor anchorage areas- (1) 12-foot anchorage west of the channel below the bridge, (2) 16 feet deep by 300 feet wide by 1,000 feet long anchorage west of the channel between Long Wharf and Sandy Point, and (3) 20 feet deep by 1,000 feet long by 300 feet wide anchorage east of the channel between Fort Hale and Cranes Bar Point; in 1933 and 1935, deepening the main channel to a 25-foot depth up to Tomlinsons Bridge at 400 feet wide in the outer reaches and 500 feet wide at the bend through the inner reaches; deepening the main channel below Tomlinsons bridge to 35 feet deep by 300 feet wide through the River and Harbor Act of 1946.

The channels were widened multiple times throughout history to make the final configuration of the FNP seen today which includes the West, Middle (Luddingtons Rock), and East breakwaters at lengths described above; a channel 500 feet wide by 35 feet deep running for about a mile from the Sound then decreasing to a 400-foot width for approximately 3.75 miles to Sandy Point and increasing again to 500 feet wide from Sandy Point to Tomlinsons Bridge; an anchorage

along the western edge of the inner channel 16 feet deep by 300 feet wide by 1,000 feet long; a 15-foot deep anchorage west of the channel below the bridge; and two pile and riprap dikes, one 2,160 linear feet from the west shore along Sandy Point Bar, with a second 3,200 linear foot "T" leg parallel to the bar channel. See Project Map 139 for details.

West River FNP - New Haven Harbor, New Haven, CT

The West River section of the New Haven Harbor FNP was initially authorized in 1905 to be a 9-foot deep by 100-foot wide channel from the west limit of the 16-foot anchorage in New Haven Harbor westward to Oyster Point, then along the Oyster Point wharves and upstream in the West River to Kimberly Avenue. The FNP in West River was modified several times throughout history with major modifications including: widening the entrance channel in 1907; deepening the channel to a 12-foot depth, extending it past Kimberly Ave to the railroad bridge, widening portions of the channel, and adding a 6-foot deep by 1.3-acre wide anchorage basin on the south channel limit in 1912 to create the existing Federal project viewed today. See Project Map 139.

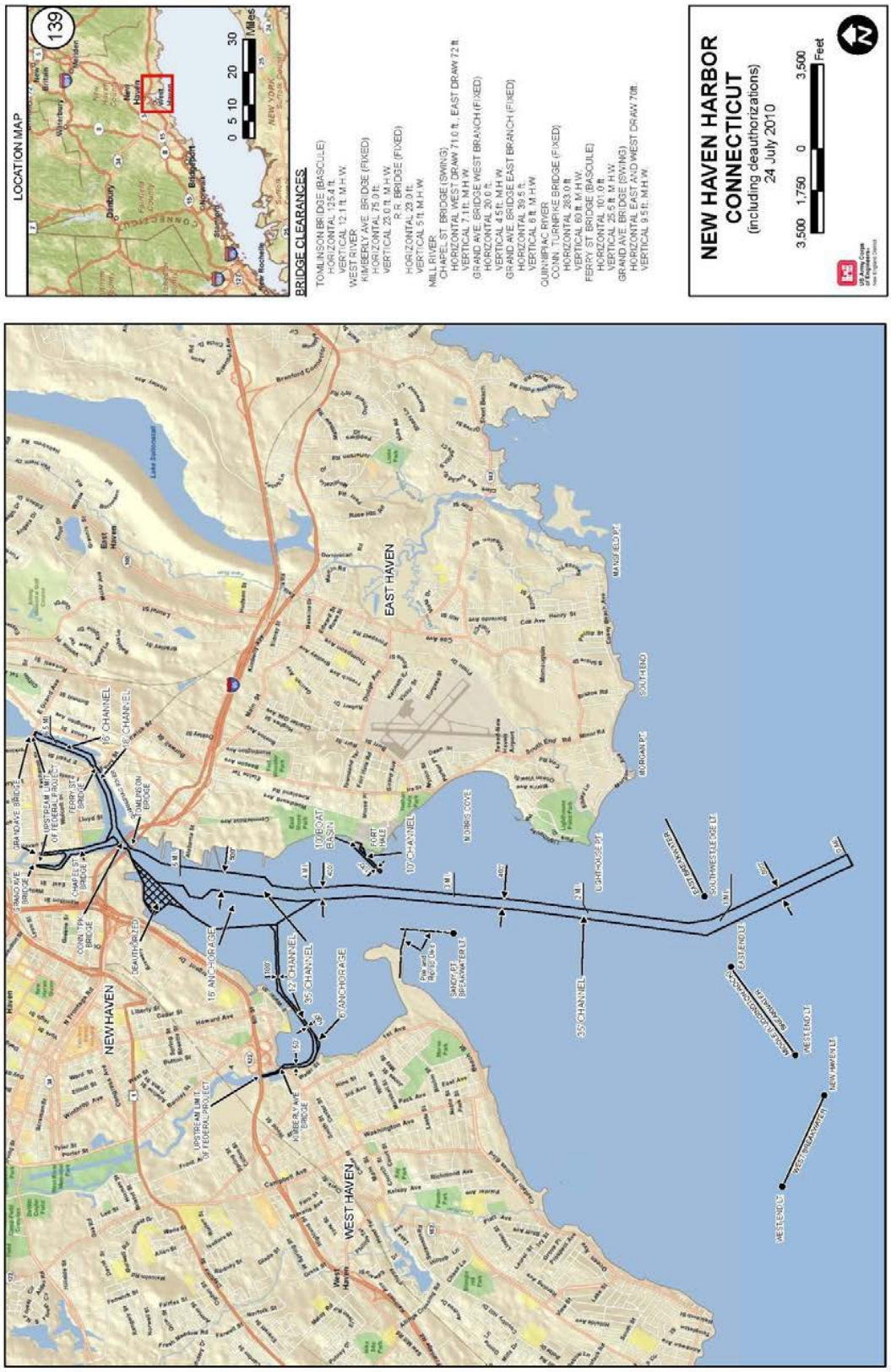
Mill River FNP - New Haven Harbor, New Haven, CT

In 1902 the River and Harbor Act authorized a channel, 12 feet deep by 200 feet wide up the Mill River to above East Chapel Street, then further upstream in two branches each at 75 feet wide to Grand Avenue. The FNP at Mill River was changed to include widening the confluence of the two 12-foot branch channels and widening the East Branch channel to 100 feet and the West Branch channel to 125 feet up to 375 feet through its upstream end under authority of the River and Harbor Act of 1912. See Project Map 139.

Quinnipiac River FNP - New Haven Harbor, New Haven, CT

The Quinnipiac River FNP was originally authorized as a 12-foot deep channel, 200 feet wide up the Quinnipiac River to Grand Avenue but the section above Ferry Street was only built to 8 feet deep by 75 to 100 feet wide under the authority of the River and Harbor Act of 1910. The R&H Act of 1930 deepened the channel to 18 feet up to Ferry Street, beyond Ferry Street to Grand Avenue the channel was deepened to 16 feet and widened to 200 feet. See Project Map 139 for visual.

Project Map 139: New Haven Harbor FNP



New Haven Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
Act of 30 August 1852	Removal of Middle Rock from the Eastern Entrance to New Haven Harbor to -17 Feet MLLW	July 1953 – Sept 1867 To –14 to –15 Feet
River & Harbor Act of 11 July 1870	Completion of the Removal of Middle Rock and for the Removal of Southwest Ledge and Two Intermediate Rocks to –17 Feet MLLW.	Middle Rock – Sept 1870 – Oct 1870 (Removed in Part)
Act of 9 March 1871	Channel 200 Feet Wide by -14 Feet MLLW Across the Middle Bar Up to the Wharves at New Haven, and Removal of Luddington's Rock in the Western Approach to –17 Feet	13-Ft Channel – July 1871 – Sept 1873 Luddington Rock – Aug 1871 – Oct 1874
House Ex. Doc. #137, 42nd Cong., 2nd Session, 14 February 1872	Dredging a Channel for 5,000 LF Across the Bar at Fort Hale to -16 Feet MLLW by 200 Feet Wide, and the Removal of the Big Boil Rock	Bar Channel – Aug 1872 -
Act of 3 March 1873	Construction of a Stone Jetty at the Beach South of Fort Hale, Extending from the MHW Line Seaward	Aug 1873 – FY 1875
River & Harbor Act of 3 March 1875	Widen the Upper 13-Foot Channel to 250 and 415 Feet.	March 1876 – Aug 1876
River & Harbor Act of 18 June 1878	16-Foot Channel across the Fort Hale Bar and up to Long Wharf, 400 to 500 Ft Wide	Aug 1878 – Nov 1878 Aug 1897 – Oct 1897
River & Harbor Act of 3 March 1879	Two Stone Breakwaters across the Outer Harbor to Create a Harbor of Refuge. Southwest Ledge Breakwater – 3,300 LF and Luddingtons Rock Breakwater – 4,200 LF (Not Built under this Authority)	Southwest Ledge Breakwater - April 1880 – Feb 1890 To 3,450 LF
River & Harbor Act of 2 August 1882	Stone & Timber Crib Dike 2,160 LF from the West Shore along Sandy Point Bar, with a Second 3,200 LF Stone “T” Leg Parallel to the Bar Channel.	May 1883 – Aug 1889
Annual Reports for 1880, App. C-3, Page 444, and 1891, App. D-7, Page 761	Extend and Widen the 16-Foot Channel above Long Wharf to Steamboat Wharf at 400 to 600 Feet Wide.	March 1880 – June 1891

Annual Report for 1886, Appendix D-5, Page 636	Widen the 13-Foot Channel between Long Wharf and Sewer Dock and Dredging an 8-Foot Anchorage 400 by 200 Feet between the Sewer and Railroad Docks	Aug 1885 – Oct 1885 Nov 1892 – April 1893
River & Harbor Act of 19 September 1890	Redesign of Luddingtons Rock Breakwater – 5,000 LF, Addition of a New West Breakwater – 4,200 LF, and New Northeast Shore Arm Breakwater – 1,200 LF (Northeast Breakwater Never Constructed)	Luddingtons Rock Breakwater – Feb 1891 – Feb 1915 West Breakwater – FY 1896 – Feb 1915
River & Harbor Act of 3 March 1899	Channel -20 Feet MLLW by 400 Feet Wide from the Sound to Fort Hale, then 300 Feet Wide to Tomlinsons Bridge, with Three Inner Harbor Anchorage Areas, 1) 12-Ft Anchorage West of the Channel below the Bridge, 2) 16-Ft by 300-Ft Wide by 1,000-Ft Long Anchorage West of the Channel between Long Wharf and Sandy Point, and 3) East of the Channel at -20 Ft by 1,000 Ft Long by 300 Ft Wide between Fort Hale and Cranes Bar Point	20-Ft Channel and Anchorage – Dec 1899 – Mar 1903 - 1904 12-Ft Anchorage – FY 1901 – Mar 1903 16-Ft Anchorage – FY 1902 - Mar 1903
River & Harbor Act of 13 June 1902	Channels -12 Feet MLLW, 200 Feet Wide Up the Quinnipiac River to Grand Avenue (Built to 8 Feet by 50 Feet above Ferry Street), and 200 Feet Wide Up the Mill River to above East Chapel Street, then Further Upstream in Two Branches Each at 75 Feet Wide Up to Grand Avenue	Mill River – May 1903 – April 1904 Quinnipiac River – FY 1903 – Oct 1904
River & Harbor Act of 3 March 1905	West River: Channel -9 Feet MLLW by 100 Feet Wide from the West Limit of the -16-Foot Anchorage in New Haven Harbor Westward to Oyster Point, along the Oyster Point Wharves and Upstream in the West River to Kimberly Avenue.	May 1906 – Sept 1906
River & Harbor Act of 2 March 1907	Widen the 9-Foot West River Entrance Channel	May 1907
River & Harbor Act of 25 June 1910	Widen the 20-Foot Channel along East Limit for about 6,000 LF between the Upper Bend and Tomlinson Bridge, Deepen the Existing 12-Foot Upper Anchorage to 15 Feet, and Provide a Channel 12 Feet MLLW by 100 Ft Wide Leading Off the Northwest Limit of the Upper Anchorage East of the	20-Ft Channel Widening – June 1912 15-Ft Anchorage – March 1911 – June 1912 12-Ft Brewery St Channel – March 1911

	Canal Dock to Brewery Street, and the Removal of Several Rocks in Morris Cove.	– FY 1911 Morris Cove – Jan 1911
April 21, 1910, by the Chief of Engineers	Project Modification to Eliminate the Morgan Point (Northeasterly) Shore Arm Breakwater from the Project, the Omission of any Further Extension of the Middle Breakwater	Deauthorization Annual Report for 1910, Page 122
River & Harbor Act of 25 July 1912	Quinnipiac River - Abandon Unconstructed 12-Foot Channel of 1904 above Ferry Street, Replaced by Channel -8 Feet by 75 to 100 Feet Wide from Ferry Street up to Grand Avenue Mill River - Widen the Confluence of the Two -12-Foot MLLW Branch Channels, Widen the East Branch Channel to 100 Feet and Widen the West Branch Channel to 125 Feet up to 375 Feet from its Upstream End and 150 Feet Wide through the Turn	Quinnicpiac River – April 1913 – May 1913 Mill River – May 1913 – July 1913
River & Harbor Act of 25 July 1912	West River - 12-Foot Channel, Widen Bend at Oyster Point, Widen Channel to 125 Feet from Oyster Point to Kimberly Ave, to 150 Feet in the Turn at Mars Shipyard and the Approach to Kimberly Ave Bridge, and Extend the Channel at 75 Feet Wide above Kimberly Ave. to the Railroad Bridge, Widen through the Upper Turn to 100 Feet, and Adding a 6-Foot by 1.3 Acre Anchorage Basin on the South Channel Limit below the Mars Dock.	June 1913 – Dec 1913
River & Harbor Act of 4 March 1913	Widen the Upper Portion of the 20-Foot Main Channel by a Width Varying from 200 to 500 Feet	Sept 1913 – Oct 1915
River & Harbor Act of 3 July 1930	Quinnipiac River - 18-Foot by 200-Foot Wide Channel below Ferry Street and a 16-Foot by 200 Feet Wide Channel above Ferry Street to Grand Avenue.	Summer 1930 – July 1931
National Industrial Recovery Act of 6 September 1933 & River & Harbor Act of 30 August 1935	Deepening of the Main Channel to -25 Feet MLLW up to Tomlinson Bridge at 400 Feet Wide in the Outer Reaches and 500 Feet Wide, Widened at the Bend through the Inner Reaches	Nov 1933 – July 1935

River & Harbor Act of 2 March 1945	Deepen Main Channel to -30 Feet MLLW by 400 Feet Wide from the Sound to Fort Hale Park, then 500 Feet Wide, Widened at the Bend to 1,111 Feet, up to the Tomlinson Bridge. Also Two Anchorages West of the Channel below Long Wharf, -30 Feet by 1,100 Feet Wide by 4,900 to 2,700 Feet Long, and -16 Feet by 600 Feet Wide by 2,700 Feet Long	Never Constructed - Anchorage Areas Authorization Eliminated by Act of 1946
River & Harbor Act of 24 July 1946	Main Channel - Abandon the 30-Foot and Realigned 16-Foot West Anchorages, Deepen the Main Channel to -35 Feet to 300 Feet below Tomlinson Bridge, Relocate Upper Reach of Main Channel Eastward at 800 Feet Wide above New Haven Terminal Co. & 500 Feet between the Sound and the First Turn Inside the Breakwaters, and Enlarge the 16-Foot Anchorage to Incorporate Former Channel Areas. Quinnipiac River - Channel 22 Feet MLLW by 250 Ft Wide Upriver to Ferry Street, then 250 to 400 Ft Wide to 1,000 above Ferry Street, with a 22-Foot Turning Basin at the Mill & Quinnipiac Confluence.	Main Ship Channel Sept 1947 – May 1950 Quinnipiac River – Never Constructed
Act of 16 August 1949, P.L. 234, 81st Congress, 1st Sess.	Declares as Non-Navigable the -12-Foot MLLW by 100-Foot Wide Brewery Street Channel	Deauthorization
Act of 9 August 1955, P.L. 84-289, 84th Congress, 1st S, Ch. 649,	West River - Declares as Non-Navigable the Upper Portion of the West River Channel, above a Point 600 Feet Upstream of the Kimberly Avenue Bridge.	Abandonment
	1958 Groin Constructed at Lighthouse Point Beach by State and Corps	
Water Resources Development Act of 17 October 1986 §202(a)	Deepen the Main Channel to -40 Feet MLLW by 500 Feet Wide Over its Entire 36,600 LF Length (Widening the Lower 20,900 LF From 400 to 500 Feet), Realigning 9,700 LF of the Channel Slightly Eastward in the Upper Harbor to Ease a Bend, Widening the Channel at the Outer Bend at Southwest Ledge from 560 Feet to 780 Feet, and Providing a Common Turning Basin -40 Feet MLLW in the	Never Constructed

	Upper Harbor in a 1,200-Foot Wide Irregular Octagon	
Water Resources Development Act of 17 November 1986 §1002	Deauthorized the Unconstructed Deepening and Widening of the Lower Quinnipiac River Channel to above Ferry Street to 22 Feet, as Adopted by the Act of 1946. Also Deauthorizes Improvements Adopted by the River & Harbor Act of 25 June 1910, Including the 12-Foot Brewery Street Channel and the Deepening of the Upper Anchorage to -15 Feet MLLW	Deauthorization
Chief of Engineers, 17 January 1995, under Authority of Section 103, River and Harbor and Flood Control Act of 23 October 1962	Stone Revetment Protection for the City Sewer Outfall Line along the Shoreward End of the Sandy Point Dike.	Sept 1995 – Dec 1995
16 April 2002 Fed Register Vol. 68 #123, 26 June 2003	Deauthorized the Unconstructed Project for Deepening the Main Channel to 40 Feet as Authorized by the Water Resources Development Act of 17 November 1986	Deauthorization

New Haven Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
July 1853 - Aug 1853	Begin Removal of Middle Rock from Eastern Entrance to -17 Feet MLLW – Blasting Methods Unsuccessful	Unknown
Nov 1862 - 1863	Second Unsuccessful Attempt to Remove Middle Rock to -17 Feet MLLW	Unknown
July 1867 - Sept 1867	Continue Attempts to Remove Middle Rock – Top Elevation Reduced to -14 Feet MLLW	Unknown Quantity Sidecast
Sept 1870 - Oct 1870	Continue Attempts to Remove Middle Rock to -17 Feet MLLW	23 cy Rock
July 1871 - Oct 1871	Improvement Dredging of the 13-Foot Main Channel to Long Wharf	153,718 cy
Aug 1871 - Sept 1871	Blasting and Removal of Luddingtons Rock to	127 cy Rock

	–17 Feet MLLW	
June 1872 - Aug 1872	Continue Removal of Luddingtons Rock to –17 Feet MLLW	422 cy Rock
Aug 1872 - Sept 1873	Improvement Dredging of the 16-Foot MLLW Main (Fort Hale) Bar Channel	200,902 cy
Aug 1873 - Sept 1873	Continue Removal of Luddingtons Rock to –17 Feet MLLW	Drilling Only
Sept 1873 - Fall 1873	Improvement Dredging to Widen 13-Foot MLLW Upper Main Channel to 110 Feet	11,193 cy
June 1874 - Oct 1874	Construct Stone & Pile Jetty at Fort Hale using Rock Removed from Luddingtons Rock	523 cy Stone
June 1874 - Oct 1874	Continue and Complete Removal of Luddingtons Rock to -17 Feet MLLW	275 cy Rock
Mar 1876 - Aug 1876	Improvement Dredging to Widen the 13-Foot Upper Main Channel to 400 Feet	89,331 cy
Aug 1878 - Nov 1878	Improvement Dredging to Widen the 16-Foot Channel Cut from Fort Hale to Long Wharf to 300 to 400 Feet Wide	250,000 cy
Mar 1880 - July 1880	Improvement Dredging to Extend the 16-Foot Channel at Reduced Cut from Long Wharf Upharbor to Steamboat Wharf	145,000 cy
Apr 1880 – May 1881	Begin Construction of East Breakwater Easterly from Southwest Ledge	70,368 Tons Stone
Aug 1880 - Oct 1880	Improvement Dredging to Widen the 16-Foot Channel Cut above Long Wharf at Widths of 300 to 580 Feet	110,000
Aug 1881 - Oct 1881	Improvement Dredging to Widen the 16-Foot Channel above Long Wharf to 400 Feet, 600 Feet Wide in the Bend and 440 Feet below Long Wharf	117,400
Aug 1881 - Apr 1882	Continue Construction of the East Breakwater from Southwest Ledge	51,500 Tons Stone
May 1883 - Sept 1883	Begin and Complete Construction of 1,294 LF Riprap Sections of Shore Arm of Sandy Point Dike	3,669 Tons Stone
June 1883 - Aug 1883	Begin Construction of Timber Crib Sections of	1,100 LF of

	Shore & Channel Arms of Sandy Point Dike - 846 LF of Double Pile Crib Shore Arm and 254 LF of Channel Arm	Double Pile Timber Crib
Nov 1882 - Dec 1883	Continue Construction of the East Breakwater from Southwest Ledge	48,000 Tons Stone Placed
September 1883 and May 1884	Repairs to Channel Arm of Sandy Point Dike and Placement of Barrel Beacons on Arm	Unstated
Sept 1884 - May 1885	Continue Construction of the East Breakwater Easterly from Southwest Ledge	28,006 Tons Stone Placed
August 1885	Removal of Stone & Timber Piers and Abutments from Channel to –18 Feet as Part of Reconstruction of Tomlinson Bridge	3,116 cy Stone, Timber and Mud
August 1885	Improvement Dredging to Widen the Upper Channel between the Bridge & Sewer Dock to –12 Feet for Width of 40 to 120 Feet	20,000 cy
Sept 1885 - Oct 1885	Improvement Dredging of Upper Harbor above Long Wharf to Sewer Dock. Channel Widened Eastward 80 Feet Wide by –13 Feet, and an Anchorage –8 Feet by 200 Feet Wide by 400 Feet Long to East below Sewer Dock	44,192 cy
Nov 1886 - May 1887	Continue Construction of Sandy Point Dike to Add Rubblemound Channel Arm Extensions both North and South on Timber Foundations	7,627 Tons Stone Placed
Dec 1886 - Aug 1888	Continue Construction of the East Breakwater from Southwest Ledge	61,300 Tons Stone Placed
Aug 1887 - Jan 1888	Continue Construction of Sandy Point Dike Rubblemound Channel Arm Extensions	4,951 Tons Stone Placed
Mar 1889 - Aug 1889	Continue Construction of Sandy Point Dike Rubblemound Channel Arm Extensions	5,379 Tons Stone Placed
Jan 1889 - Oct 1889	Continue Construction of the East Breakwater	30,464 Tons Stone Placed
Nov 1889 - Feb 1890	Complete Construction of the East Breakwater from Southwest Ledge to the Channel	12,115 Tons Stone Placed
December 1889	Improvement Dredging to Widen the 16-Foot Upper Channel to Northwest by 80 Feet for use as Anchorage	11,308 cy
April 1891 - June	Continue Improvement Dredging to Widen the	139,806 cy

1891	16-Foot Upper Channel above Long Wharf for use as Anchorage	
Feb 1891 - Dec 1892	Begin Construction of the Middle Breakwater at Luddington's Rock	110,026 Tons Stone Placed
Sept 1892 - Dec 1893	Continue Construction of Middle Breakwater at Luddington's Rock	110,028 Tons Stone Placed
Nov 1892 - Apr 1893	Maintenance and Improvement Dredging of the 16-Foot Channel & East Anchorage above Long Wharf	117,908 cy
Dec 1894 - May 1895	Continue Construction of Middle Breakwater at Luddington's Rock	51,048 Tons Stone Placed
Oct 1895 - Nov 1895	Maintenance and Improvement Dredging of the 16-Foot by 400-Foot Wide Channel across Fort Hale Bar	93,501 cy
Oct 1895 - Feb 1896	Complete Construction of the Middle Breakwater	67,858 Long Tons Stone
Jan 1896 - Feb 1896	Begin Construction of the West Breakwater at the Southeastern End	38,220 Long Tons Stone
Nov 1896 - Feb 1897	Continue Construction of West Breakwater	100,676 Tons Stone Placed
Aug 1897 - Oct 1897	Maintenance and Improvement Dredging to Widen the 16-Foot Channel across Fort Hale Bar to 400 Feet Wide	98,000 cy
Dec 1899 - July 1900	Begin Improvement Dredging of the 20-Foot Main Channel up to Sandy Point Dike	474,304 cy
July 1900 – June 1903	Continue Improvement Dredging of the 20 Foot Main Channel and 20-Foot Anchorage Area	2,199,315 cy
August 1900 – July 1902	Improvement Dredging to Complete the 12-Foot West Anchorage Area	221,912 cy
August 1901 – June 1903	Improvement Dredging to Complete the 16-Foot West Anchorage Area	352,157 cy
FY 1903	Maintenance Dredging to Complete the 12-Foot West Anchorage Area	17,944 cy
May 1903 - Apr 1904	Improvement Dredging of the 12-Foot Mill River Channel	277,540 cy
July 1903 - Apr 1904	Improvement Dredging of the 12-Foot	52,588 cy

	Quinnipiac River Channel	
Dec 1903 - Mar 1904	Continue Improvement Dredging of the 12-Foot Quinnipiac River Channel above Ferry St.	7,417 cy
Aug 1903 - June 1904	Repair and Filling-Out of Middle Breakwater	251 Tons Stone
Aug 1903 - June 1904	Repair and Continuing Construction of the West Breakwater	33,846 Tons Stone Placed
October 1904	Improvement to Remove Boulders from 8-Foot Section of Quinnipiac River Channel above Ferry Street	Unknown
Dec 1904 - Mar 1905	Maintenance Dredging of the 20-Foot Upper Main Channel above Long Wharf	70,352 cy
Dec 1904 - Mar 1905	Maintenance Dredging of the 12-Foot West Anchorage Area	58,713 cy
May 1907 - July 1907	Maintenance Dredging of the 12-Foot Mill River Channel	66,724 cy
Sept 1907 - June 1908	Continue Construction of the West Breakwater with Repair and Filling-Out	99,303 Tons Stone Placed
Aug 1908 - June 1910	Continue Construction of the West Breakwater	137,258 Tons Stone Placed
July 1909	Maintenance Dredging of the 12-Foot West Anchorage Basin	61,558 cy
July 1909 - Sept 1909	Maintenance Dredging of the 12-Foot Mill River Channel	71,366 cy
October 1909	Maintenance Dredging of the 20-Foot Upper Main Channel above the 16-Foot Anchorage	49,560 cy
Mar 1911 - June 1911	Improvement Dredging of the 12-Foot Brewery Street Channel	59,521 cy
Mar 1911 - June 1912	Improvement Dredging to Deepen the 12-Foot Anchorage to -15 Feet	122,775 cy
January 1911	Removal of Boulders from Morris Cove	50 Tons Boulders Removed
Apr 1911 - June 1911	Repairs to East Breakwater	2,915 Tons Stone
June 1911 - Dec 1911	Continue Construction and Repairs to the West Breakwater	71,993 Tons Stone Placed

July 1911 - June 1912	Maintenance and Improvement Dredging to Widen the 20-Foot Upper Main Channel	523,807 cy
July 1911 - Dec 1911	Continue Construction to Fill-Out Sections of Middle Breakwater	10,557 Tons Stone Placed
Apr 1913 - May 1913	Improvement Dredging of the 8-Foot Upper Quinnipiac River Channel above Ferry Street	22,210 cy Plus 3 cy Boulders
May 1913 - July 1913	Maintenance and Improvement Dredging to Widen the 12-Foot Mill River Upper Channel Branches	98,105 cy
Sept 1913 - Oct 1913	Maintenance Dredging of the 12-Foot Lower Mill River Channel	39,548 cy
Sept 1913 - July 1914	Maintenance and Improvement Dredging to Widen the 20-Foot Upper Main Channel 200 to 500 Feet Wide	98,646 cy O&M 758,295 cy Improvement
Sept 1914 - Feb 1915	Repair and Improvement to Fill-Out Sections of the Middle Breakwater	12,015 Tons Stone
Sept 1914 - Feb 1915	Repair and Improvement to Fill-Out Sections of the West Breakwater	14,281 Tons Stone Placed
July 1915 - Oct 1915	Maintenance and Improvement Dredging to Complete Widening of the 20-Foot Upper Main Channel to 500 Feet Wide	91,505 cy O&M 714,613 cy Improvement
January 1917 - March 1917	Maintenance Dredging of the 12-Foot Mill River Channel	38,635 cy
Sept 1919 - Dec 1919	Maintenance Dredging of the 12-Foot Brewery Street Channel	27,763 cy
Sept 1919 - Dec 1919	Maintenance Dredging of the 15-Foot Anchorage Basin	42,543 cy
Sept 1921 - Dec 1921	Maintenance Dredging of the 12-Foot Mill River Channel - West Branch	40,000 cy Est.
Nov 1922 - Mar 1923	Maintenance Dredging of the 15-Foot West Anchorage Basin	76,000 cy Est.
Sept 1925 - June 1926	Maintenance Dredging of the 16-Foot Anchorage	520,000 cy Est.
Aug 1926 - Sept 1927	Maintenance Dredging of the 20-Foot Upper Main Channel	1,100,000 cy Est.
Fall 1927 - Winter	Maintenance Dredging of the 12-Foot Mill	225,000 cy Est.

1928	River Channel	
FY 1929	Maintenance Dredging of the Outer 20-Foot Main Channel	377,529 cy
Aug 1929 - August 1930	Maintenance Dredging of the 20-Foot Main Channel (Outer and Upper Reaches)	541,491 cy
Aug 1929 - July 1930	Maintenance Dredging of the 20-Foot Anchorage	377,251 cy
FY 1931	Improvement Dredging of the 18-Foot Lower Quinnipiac River Channel below Ferry Street	188,141 cy
FY 1931 - July 1932	Improvement Dredging of the 16-Foot Upper Quinnipiac River above Ferry St.	318,092 cy
Aug 1931 - Dec 1931	Maintenance Dredging of the 12-Foot Brewery Street Channel	19,179 cy
Aug 1931 - Dec 1931	Maintenance Dredging of the 15-Foot Waterfront Anchorage	124,260 cy
July 1932	Maintenance Dredging of the 12-Foot Mill River Channel	91,551 cy
Nov 1933 - June 1935	Improvement Dredging of the 25-Foot Main Channel, 400 to 500 Feet Wide, by US Hopper Dredge	2,917,276 cy
Sept 1934 - July 1935	Improvement Dredging of the 25-Foot Channel at Southwest Ledge	344 cy Ledge Removed Est.
Aug 1935 - Oct 1935	Repairs to the Three Outer Harbor Refuge Breakwaters	6,000 Long Tons Stone Placed
Apr 1937 - Sept 1937	Hydraulic Maintenance Dredging of the 16-Foot Anchorage	352,974 cy
July 1937 - Oct 1937	Maintenance Dredging of the 12-Foot Mill River Channel	100,767 cy
Dec 1938 - July 1939	Hydraulic Maintenance Dredging of the 25-Foot Main Channel with Diked Disposal	453,656 cy
July 1939	Maintenance Dredging of the 25-Foot Main Channel with Disposal in LIS	1,897 cy
July 1940 - Aug 1940	Maintenance Dredging of the 15-Foot Upper Anchorage & 12-Foot Brewery Street Channel	129,437 cy
Nov 1940 - Jan 1941	Maintenance Dredging of the 18-Foot	122,011 cy

	Quinnipiac Channel below Ferry Street	
June 1941 - July 1941	Ledge Removal from the 25-Foot Entrance Channel at Southwest Ledge by US Lighter	140 cy Ledge Removed
Jan 1942 - Mar 1943	Maintenance Dredging of the 12-Foot Mill River Channel	80,325 cy
May 1944 - Jan 1946	Maintenance Dredging of the 25-Foot Main Channel (Contractor Defaulted)	513,627 cy
July 1946 - Sept 1946	Maintenance Dredging of the 25-Foot Main Channel (Default Cured)	78,800 cy Est.
Sept 1947 - May 1949	Improvement Dredging of the 35-Foot Main Channel - Inner Harbor Widening	3,028,069 cy
July 1948 - Dec 1949	Hydraulic Improvement Dredging of the 35-Foot Entrance and Lower Main Channel	4,834,662 cy
Aug 1949 - Jan 1950	Maintenance Dredging of the 12-Foot Mill River Channel	47,473 cy
Aug 1949 - May 1950	Ledge Removal for Improvement of the 35-Foot Entrance Channel	10,000 cy Plus 3,295 cy Ledge
Nov 1949 - Jan 1950	Continued Improvement Dredging of the 35-Foot Upper Main Channel	281,351 cy
April 1955 - Oct 1955	Maintenance Dredging of the 18-Foot & 16-Foot Quinnipiac River Channels	153,581 cy
June 1957 - Nov 1957	Maintenance Dredging of the 35-Foot Upper Main Channel	201,900 cy
May 1957	Maintenance Dredging of the 35-Foot Entrance Channel by US Hopper Dredge	141,953 cy
Oct 1957 - Dec 1957	Maintenance Dredging of the 35-Foot Entrance Channel by US Hopper Dredge	690,000 cy
Jan 1960 - Feb 1960	Maintenance Dredging of the 12-Foot Mill River Channel	29,000 cy
May 1961	Maintenance Dredging of the 35-Foot Upper Main Channel	95,000 cy
May 1964 - July 1964	Maintenance Dredging of the 35-Foot Upper Main Channel	262,000 cy
December 1966	Maintenance Dredging of the 16-Foot Quinnipiac River Channel to Grand Avenue	54,453 cy

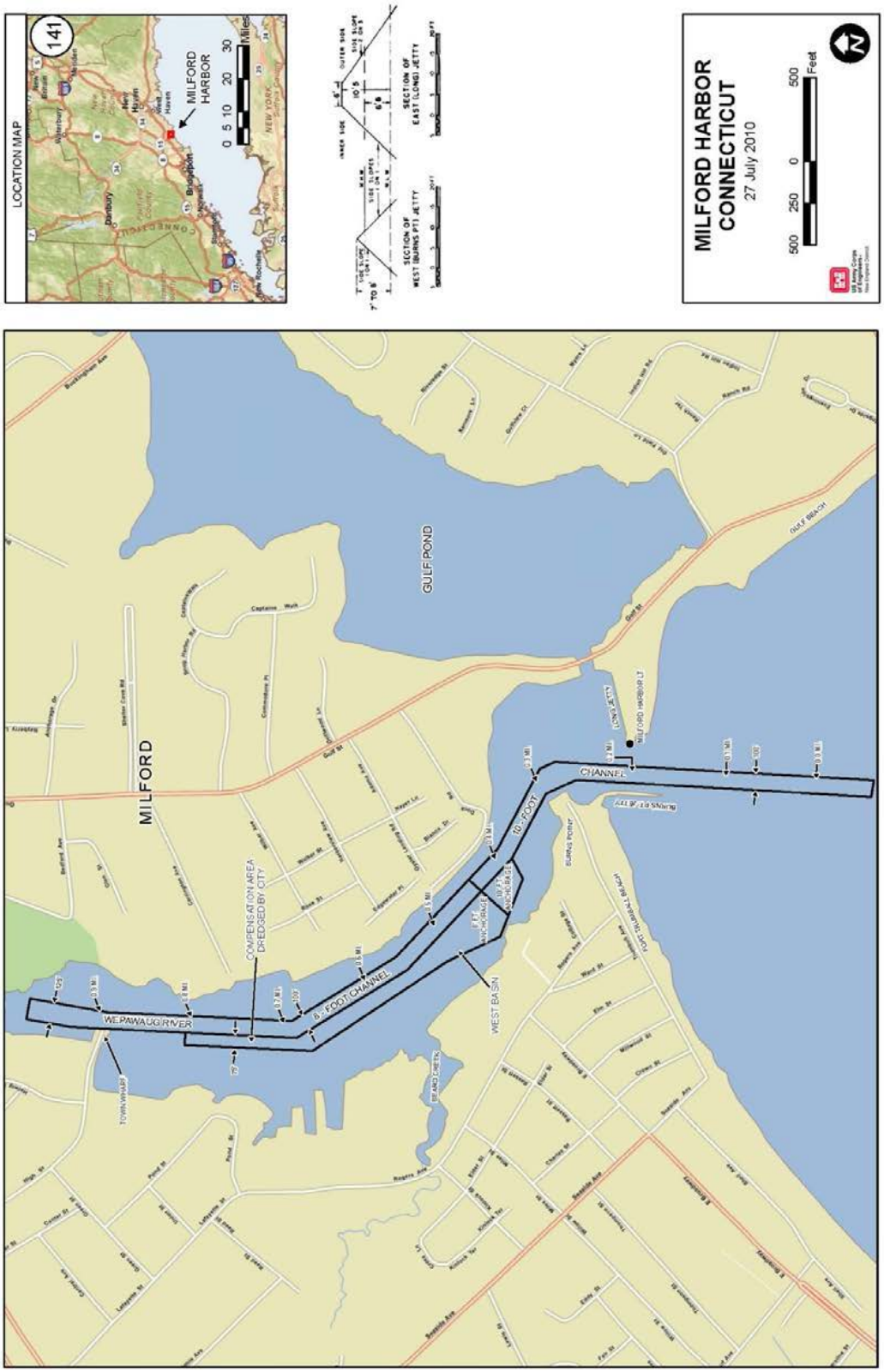
Dec 1966 - March 1967	Maintenance Dredging of the 12-Foot Mill River Channel	93,408 cy
April 1968	Rock Removal as Maintenance of the 35-Foot Main Ship Channel	2,150 cy Unclassified
Nov 1973 - Mar 1974	Maintenance Dredging of the 35-Foot Main Ship Channel	945,000 cy
Mar 1975 - Apr 1975	Rock Removal as Maintenance of the 35-Foot Main Ship Channel	100 cy Unclassified
Mar 1979 - Fall 79	Maintenance Dredging of the 35-Foot Main Ship Channel	200,000 cy
FY 1979	Maintenance Dredging of the 35-Foot Entrance Channel by US Hopper Dredge	84,000 cy
Mar 1982 - Spring 1982	Maintenance Dredging of the 12-Foot Mill River Channels	51,307 cy
Mar 1982 - Spring 1982	Maintenance Dredging of the 18-Foot Lower & 16-Foot Upper Quinnipiac River Channels	141,093 cy
Jan 1983 - Sept 1983	Maintenance Dredging of the 35-Foot Main Ship Channel	465,000 cy
Sept 1983 - Dec 1983	Maintenance Dredging of the 35-Foot Main Ship Channel (Diked Disposal at Part of the FVP at Burr Creek in Bridgeport)	229,228 cy
Oct 1993 - Jan 1994	Maintenance Dredging of the 35-Foot Main Ship Channel	837,450 cy
Jan 2003 – March 2003	Begin Maintenance Dredging of the 35-Foot Main Ship Channel and Maneuvering Basin	252,224 cy
Dec 2003 – Feb 2004	Complete Maintenance Dredging of the 35-Foot Main Ship Channel and Maneuvering Basin with Disposal at the CLISDS	378,682 cy
2013	Maintenance Dredging of the 35-Foot Main Ship Channel and Maneuvering Basin in Conjunction with Phase III Maintenance Dredging of Norwalk Harbor with Disposal at the CLDS	352,200 cy

Housatonic River/Milford Dredging Center

Milford Harbor FNP, Milford, CT

The FNP at Milford Harbor was first authorized by the River and Harbor Act of 1874. Authorization provided for a 4-foot deep by 100-foot wide channel across the bar, then at 60 feet wide above Merwin's Wharf to the Town Dock, then at 40 feet wide to the Straw Works at the head of navigation; 20 stone groins on the East beach, 100 to 130 feet long from MHW to MLLW; and two stone jetties: East (Long) Jetty, 510 feet long, and West (Burns Point) Jetty, 250 linear feet. Several River and Harbor Acts modified the project such as in 1882 when the entrance channel was deepened to an 8-foot depth; in 1889, the East jetty was shortened by 60 feet; in 1902, the entrance channel was deepened to 10 feet up to Merwin's Wharf, the channel up to the head of navigation at the Straw Works was deepened to 6 feet and widened to 90 feet, and a lower East anchorage, 10 feet deep by 2.3-acres wide was added; in 1906, a 1.6-acre, 10-foot deep anchorage was added west of the entrance channel; in 1937, a West anchorage 7.8-acres up to 260 feet wide and 2,000 feet long by 10 feet and 8 feet deep was added to the FNP. The 8-foot channel and anchorage were realigned at local expense in 1988 under terms of an agreement with the City of Milford to eliminate encroachments into the Federal project. See Project Map 141 for current configuration visual.

Project Map 141: Milford Harbor FNP



Milford Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 23 June 1874	Channel –4 Feet by 100 Feet across the Bar, then at 60 Feet Wide above Merwins Wharf to the Town Dock, then at 40 Feet Wide to the Straw Works at the Head of Navigation, 20 Stone Groins on the East Beach 100 to 130 Feet Long from MHW to MLLW, and Two Jetties - East Jetty 510 LF & Burns Point Jetty 250 LF	Groins – Sept 1874 – Nov 1874 (12 Groins) East Jetty – Sept 1876 – FY 1879 West Jetty – Nov 1879 – Jan 1880 Channel – Oct 1875 – Sept 1879 (To Town Wharf)
River & Harbor Act of 18 June 1878	Construction of the West Jetty at Burns Point 250 LF	Nov 1879 – Jan 1880
River & Harbor Act of 14 June 1880	Extension of the 4-Foot Channel Upriver from the Town Wharf to the Straw Works	Sept 1880 – June 1881
River & Harbor Act of 2 August 1882	Entrance Channel Depth Increased to -8 Feet MLLW by 100 Feet Wide	June 1883 – July 1883 (65 Feet Wide) May 1889 – June 1889 (Completed to 100 Ft)
Annual Report for 1889, Appendix D-7, Page 685	East Jetty Shortened by 60 Feet and Strengthened to Enable Widening of the Entrance Channel	Spring 1889
River & Harbor Act of 13 June 1902	Entrance Channel -10 Feet MLLW by 100 Feet Wide Up to Merwins Wharf, a Lower East Anchorage -10 Feet MLLW by 6 Acres between the Channel and the East Jetty, a Channel to the Head of Navigation at the Straw Works -6 Feet MLLW by 90 Feet Wide	Channels – Oct 1904 – April 1905 – Upper Extension only 500 LF Anchorage – FY 1905 – Aug 1905 (to 2.3 Acres when Ledge Encountered)
Annual Report for 1906, Appendix D-10, Page 930	Dredging a 1.6-Acre 10-Foot Anchorage West of the Entrance Channel as Substitute for Uncompleted Area of East Anchorage	FY 1906
River & Harbor Act of 26 August 1937	Channel -8 Feet MLLW by 100 Feet Wide Widened at the Bends and at the Upper End, from Merwins Wharf to a Point 400 Feet above the Town Landing, a West Anchorage 7.8 Acres Up to 260 Feet Wide and 2,000 Feet Long, -10 Feet MLLW by 1.9 Acres in the Lower 600 LF and -8 Feet MLLW by	June 1939 – Nov 1939

	5.9 Acres above.	
Authorized by Chief of Engineers, 13 February 1961, under Section 107 of the River & Harbor Act of 1960	Upper West Anchorage -6 Feet MLLW by 8.5 Acres	Never Constructed
Water Resources Development Act of 17 October 1986	Deauthorized the Uncompleted Portions of the -10-Foot MLLW by Lower East Anchorage behind the East Jetty (only 2.3 Acres of the 5 Acres Authorized was ever Built), from Acts of 1902 and 1937	Deauthorization
Annual Report for 1987, New England Division Extract, Page 1-7	Realignment of Channel and Anchorage Limits to Resolve Extensive Encroachment of Docks, Piers and Floats into the Federal Project. The City Contributed Funds to Cover Additional Cost of Realignment Dredging. The 8-Foot by 100-Foot Wide Inner Channel was Shifted about 40 Feet West Except Opposite the Town Landing where it was Shifted to the East. The Upper 8-Foot Anchorage was Narrowed by up to 50 Feet along the West and Extended 970 Feet North at a Width of 75 Feet to Compensate for the Loss of Area.	Jan 1988 – June 1988

Milford Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Sept 1874 – Nov 1874	Construction of 12 Stone Groins along East Shore of Outer Harbor at +9 Feet MLLW and 100 to 130 Feet Long	3,882 Tons Stone
October 1875	Begin Improvement Dredging of –4-Foot MLLW Channel Across the River Bar	622 cy
March 1876 – July 1876	Continue Improvement Dredging of –4-Foot MLLW Channel Across the River Bar	23,610 cy
August 1875	Repair and Raise Top Elevation of 12 Groins on Eastern Shore of Outer Harbor	Unknown – Stone from Shore
Sept 1875 – July 1876	Construction of East Jetty at River Inlet – 550	4,098 Tons Stone

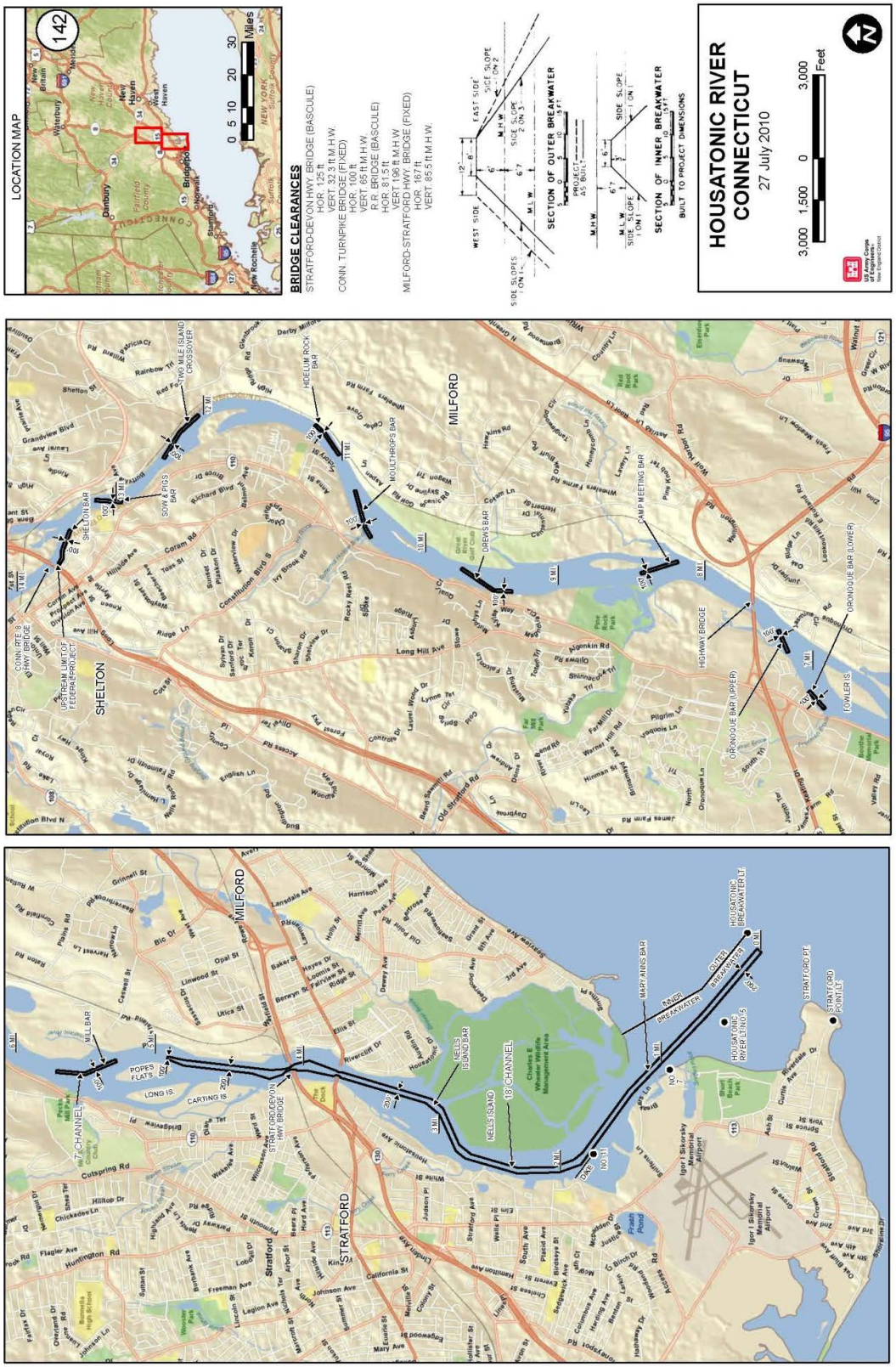
	LF	
FY 1878	Minor Repairs to the Long (East) Jetty	Unknown
Sept 1878 – Sept 1879	Improvement Dredging to Widen and Extend 4-Foot Channel Upriver	62,845 cy
FY 1879	Continue Construction of Long (East) Jetty with Placement of Cap Stone	61 Tons
Nov 1879 – Jan 1880	Construction of West (Burns Point) Jetty	905 Tons Stone
Sept 1880 – June 1881	Maintenance Dredging of 4-Foot MLLW Bar Entrance Channel with Experimental Center Cut –8 Feet MLLW by 25 Feet Wide	12,000 cy
Sept 1880 – June 1881	Improvement Dredging to Extend 4-Foot MLLW by 40-Foot Wide River Channel Upstream to Straw Wharf	15,068 cy
June 1883 – July 1883	Improvement Dredging of 8-Foot MLLW Bar Entrance Channel at 65 Feet Wide	10,819 cy 30,868
May 1889 – June 1889	Improvement Dredging to Widen the 8-Foot MLLW Bar Entrance Channel to 100 Feet	18,000 cy
June 1889	Construction to Shorten and Strengthen the East Jetty to Accommodate Widened Channel. Jetty Shortened by 60 Feet.	265 Tons New Stone Plus 365 Tons Salvaged Stone Reset
August 1889	Repairs to East Jetty using Stone Recovered from Entrance Channel	10 Tons Stone Reset
June 1891 – Aug 1891	Repairs to East Jetty	840 Long Tons Stone
December 1893	Repairs to East Jetty using New Stone and Recovered Stone	85 Tons New Stone Plus 10 Tons Reset Stone
Oct 1904 – April 1905	Improvement Dredging of the 10-Foot Entrance Channel, 6-Foot Upstream Channel and 2 Acres of the 10-Foot Outer East Anchorage	88,395 cy
June 1905 - Aug 1905	Continue Improvement Dredging of the 10-Foot MLLW Outer East Anchorage	9,082 cy Plus 5 cy Boulders
June 1905 - Aug 1905	Continue Improvement Dredging of the 6-Foot Upper Channel Extension (upper 500 LF only to –5 Feet due to Ledge)	12,212 cy

June 1905 - Aug 1905	Improvement Dredging of the 10-Foot 1.6-Acre West Lower Anchorage	33,714 cy
Nov 1922 – Spring 1923	Maintenance Dipper Dredging of the 10-Foot Entrance Channel and 10-Foot West Anchorage	56,000 cy Estimated
June 1933 – July 1933	Hydraulic Maintenance Dredging of the 10-Foot Entrance Channel	38,705 cy
June 1939 – Nov 1939	Hydraulic Improvement Dredging of the 8-Foot Upper Channel and the Split Depth 10-Foot and 8-Foot West Lower Anchorage Areas	168,302 cy
October 1941	Maintenance Dredging of the 10-Foot Entrance and 10-Foot Lower Anchorage Areas	4,491 cy
Nov 1941 – Dec 1941	Maintenance Dredging of the 8-Foot West Anchorage Area and 8-Foot Upper Channel	38,441 cy
March 1948 – June 1948	Maintenance Dredging of the 10-Foot Entrance Channel, 8-Foot Upper Channel and 10-Foot and 8-Foot Anchorage Areas	38,675 cy
Nov 1948 – Dec 1948	Repairs to East Jetty	1,153 Tons Stone
Nov 1955 - Feb 1956	Maintenance Dredging of the 10-Foot and 8-Foot Channels and the 10-Foot and 8-Foot Anchorage Areas	52,846 cy
Oct 1963 - Dec 1963	Repairs to West (Burns Point) Jetty	1,450 Tons Stone
April 1967 - May 1967	Maintenance Dredging of the 10-Foot and 8-Foot Channels	40,000 cy
May 1974	Repairs to East (Long) Jetty	Unknown
December 1980 – Spring 1981	Hydraulic Maintenance Dredging of the 10-Foot and 8-Foot Channels	16,768 cy
Jan 1988 - June 1988	Maintenance Dredging of the Realigned 10-Foot Entrance Channel, 8-Foot Upper Channel and 10-Foot and 8-Foot Anchorage Areas	88,433 cy

Housatonic River FNP, Stratford to Ansonia, CT

In 1871, the River and Harbor Act provided authorization for the FNP at Housatonic River. The Act permitted a 7-foot deep by 150-foot wide channel across the bars and upriver to Derby, a stone breakwater 4,200 linear feet long from with a top elevation of +11 to +12 feet from Milford Beach to the -6-foot contour, and a stone dike at Sow and Pigs Reef to close the east channel. The channel was authorized to be deepened two years later to 8-feet MLLW for 2,000 linear feet across the bar at the River's mouth. The R&H Act of 1888 added a stone breakwater in two legs extending from the Milford shore 3,250 linear feet at +3 feet top elevation then 2,500 linear feet at +6 feet to the 12-foot contour, and a channel 7 feet deep by 200 feet wide across the bars at the mouth and upriver to Derby at 100 feet wide. A stone training dike built to 555 linear feet was added to the project in 1894 and extended by the River and Harbor Act of 1896 by 1,500 linear feet with a top elevation of +3 feet. The channel from Long Island Sound upriver to the lower end of Culvert's Bar was again deepened in 1930, this time to 18 feet and widened to 200 feet. See Project Map 142 for details.

Project Map 142: Housatonic River FNP



Housatonic River List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 3 March 1871	7-Foot MLLW by 150-Foot Wide Channel Across the Bars and Upriver to Derby, with a Stone Jetty (Breakwater at +11 to +12-Ft Top Elevation) 4,200 LF from Milford Beach to the -6-Foot Contour, and a Stone Dike at Sow & Pigs Reef to Close the East Channel.	Channel Dredging – July 1871 – July 1881 to Reduced Width Dike – July 1871 – Oct 1871 Breakwater – Never Built at this Design
Annual Report for 1873, Appendix W-21, Page 77	Channel -8 Feet MLLW by 150 Feet Wide for 2,000 LF Across the Bar at the River's Mouth (Dredged to –9 Feet)	July 1885 – Aug 1886
Annual Report for 1883, Appendix D-8, Page 518	Removing the Jetty Connecting Drews Rock with the West Shore, and Blasting and Removal of Drews Rock to –7 Feet	Nov 1886 – June 1888
River & Harbor Act of 11 August 1888	Stone Breakwater 5,750 LF in Two Legs Extending from the Milford Shore, 3,250 LF at +3 Feet and 2,500 LF at +6 Feet to –12-Foot Contour. Channel 7 Feet by 200 Feet Wide Across the Bars at the Mouth and Upriver to Derby at 100 Feet Wide.	East Breakwater – July 1889 – Sept 1895 – for 5,821 LF but Not to Full Section - Sept 1913 – July 1914 to Full Section - +12 Ft Channel – Aug 1889 – June 1896
Annual Report for 1894, Appendix D-9, Page 654	Stone Training Dike at Stratford (Built to 555 LF)	July 1893 – Sept 1893
River & Harbor Act of 3 June 1896	Channel Across the Bar at the Mouth -9 Feet MLLW by 200 Feet Wide with Advance Maintenance Authorized to -10 Ft, Dredging above the Bar to Derby to -7 Feet by 100 Feet Wide with Advanced Maintenance to -8 Feet MLLW, and Extension of the Stratford Training Dike along the Channel 1,500 LF by +3 Feet MLLW	9-Ft Entrance Channel – July 1896 – Aug 1896 to 100 Ft Wide 7-Ft Upper Channel – June 1897 – Oct 1897 Stratford Dike – Sept 1908 – Nov 1916 To only 1,255 LF
Annual Report for 1906, Appendix D-11, Page 931	East Breakwater Extended 35 LF Shoreward to Prevent Flanking (Total Length now 5,856 LF)	June 1906 – July 1906
River & Harbor Act	Channel to Provide -18 Feet MLLW by 200	Nov 1944 – Sept 1957

of 3 July 1930	Feet Wide from the Sound Upriver to the Lower End of Culverts Bar	
2 November 1979 House Doc. #96-157 4th Annual Deauth. Report, 26 June 1979	Deauthorizes Unconstructed Portion of the Project Authorized by the River and Harbor Act of 11 August 1888 for Enlargement of the Outer Arm of the Breakwater to Provide a Top Width of 12 Feet and an Outer Slope of 1:2, and the Extension of the Stratford Dike to 1,500 LF	Deauthorization

Housatonic River Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
July 1871 - Oct 1871	Begin Improvement Dredging of 7-Foot MLLW Channel at Drews and Mill Bars	38,370 cy
July 1871 - Oct 1871	Stone Jetty at Sow & Pigs Reef	778 cy Stone
FY 1872	Stone Jetty and Embankment on Drews Rock	426 sy Stone
Sept 1872 - June 1873	Improvement Dredging of 6-Foot Channel from Derby Dock to Huntington Landing	7,739 cy
May 1873 - Sept 1873	Improvement Dredging of 7-Foot MLLW Channel at Two-Mile Island Bar	20,385 cy
July 1873 - Sept 1873	Improvement Dredging of 7-Foot Channel at Crofuts, and Drews Mills Bars, and The Ballast	34,514 cy
Sept 1874 - Oct 1874	Maintenance Dredging of 7-Foot Channel at Two-Mile Island Bar and Drews Rock	9,678 cy
Sept 1874 - Oct 1874	Improvement Dredging to Widen the 7-Foot Channel Cut at Huntington Landing Bar	4,083 cy
May 1875 - June 1875	Maintenance Dredging of 7-Foot Channel at Crofuts Bar	7,186 cy
May 1875 - June 1875	Improvement Dredging to Widen the 7-Foot Channel Cut at Huntington Landing Bar	6,608 cy
July 1875	Maintenance Dredging of 7-Foot Channel at Drews Rock Bar	1,636 cy
July 1876 - Aug 1876	Maintenance and Improvement Dredging of 7-Foot Channel at Drews Rock Shoal & Bar	21,682 cy

May 1879 - June 1879	Maintenance and Improvement Dredging of the 7-Foot Channel at Two-Mile Island, Turkey Hill Brook, Drews Rock, and Mill Bars and Stratford Bend	26,222 cy
May 1881 - June 1881	Maintenance and Improvement Dredging of the 7-Foot Channel at Stratford Bend	9,290 cy
July 1881	Maintenance and Improvement Dredging of the 7-Foot Channel at Drews Rock Shoal & Camp Meeting Ground Shoal Bar	7,818 cy
July 1885 - Sept 1885	Improvement Dredging of 9-Foot Outer Bar Channel	14,394 cy
June 1886 - Aug 1886	Continue Improvement Dredging of 9-Foot Outer Bar Channel	40,912 cy
Nov 1886 - June 1888	Removal of Drews Rock & Old Stone Jetty (From 1872 Act)	357 cy Rock Removed
July 1889 - Dec 1890	Begin Construction of East Breakwater Shore Extension at Milford Beach	12,506 Tons Stone
Aug 1889 - Nov 1889	Maintenance and Improvement Dredging of the 7-Foot Upstream Channel - 100 Foot Wide	35,764 cy
June 1891 - Nov 1891	Maintenance and Improvement Dredging of the 7-Foot Channel at Shelton Bar - 100 Foot Wide	15,789 cy
July 1891 - Aug 1891	Repair East Breakwater (1889 Sections)	2,654 cy Riprap
July 1891 - May 1892	Continue Construction of East Breakwater from Seaward of Milford Beach	17,150 Long Tons Stone
July 1892 - Aug 1892	Maintenance Dredging of the7-Foot Outer Bar Channel - Restore & Widen to 132 Feet	18,300 cy
Oct 1892 - Dec 1892	Continue Construction of East Breakwater Seaward from Milford Beach	3,300 Long Tons Stone
June 1893 - Aug 1893	Maintenance Dredging of Outer Bar Channel to 9 Feet MLLW	19,769 cy
Aug 1893 - Dec 1893	Continue Construction of East Breakwater from Seaward of Milford Beach	5,482 Long Tons Stone
July 1893 - Sept 1893	Begin Construction of Stratford Dike (555 LF)	2,045 Long Tons Stone
Mar 1895 - Sept 1895	Continue Construction of East Breakwater from Seaward of Milford Beach	13,907 Long Tons Stone

December 1895	Repairs to East Breakwater	736 Tons Stone
June 1896 - Aug 1896	Maintenance Dredging of the 7-Foot Bar Channel at the Mouth	33,195 cy
July 1896 - Aug 1896	Improvement Dredging of the 7-Foot Channel at Stratford Bend to Widen the Turn	6,734 cy
Mar 1897 - May 1897	Repairs to East Breakwater	6,652 Long Tons Stone
June 1897 - Oct 1897	Maintenance and Improvement Dredging to Restore and Widen the 7-Foot Channel at Mill, Oronock, Camp Meeting, Drews and Two-Mile Island Bars	54,678 cy
Aug 1900 - Sept 1900	Hydraulic Maintenance Dredging of the 7-Foot MLLW Channel at Mill, Oronock and Drews Bars	21,524 cy
April 1903	Repairs to East Breakwater	400 Tons Stone
June 1903	Maintenance Dredging of the 7-Foot MLLW Outer Bar Channel	5,832 cy
June 1903 - Aug 1903	Maintenance Dredging of the 7-Foot MLLW Channels at Camp Meeting Bar, Drews Bar & Moulthrops Bar	34,032 cy
July 1904 - Nov 1904	Maintenance Dredging of the 7-Foot Channels at the Lower River Bars	14,010 cy
May 1905	Maintenance Dredging of the 7-Foot Channel at Mary Anns Bar	3,326 cy
FY 1905	Repairs to East Breakwater	3,189 Tons New Stone Plus 161 Tons Reset
June 1906 - July 1906	Repairs and Shoreward Extension of East Breakwater	802 Tons Stone
July 1906 - Nov 1906	Maintenance Dredging of the 7-Foot Channels at Various River Bars	40,860 cy
September 1906	Maintenance Dredging of the 7-Foot Channel at Culvers Bar	3,348 cy
May 1906 - Aug 1906	Borrow Dredging of the 7-Foot Channel Abreast the Breakwater by Oyster Interests to –8 to –20 Feet Deep over a Basin 400 Feet Wide	145,440 cy

	by 2,000 Feet Long	
July 1907 - Nov 1907	Maintenance Dredging of the 7-Foot Channels at Various River Bars	50,201 cy
Sept 1908 - Dec 1908	Continue Construction of Stratford Dike (Now 915 LF)	5,575 Long Tons Stone
November 1908	Maintenance Dredging of the 7-Foot Channel for First Time at New Middle Ground Shoal	6,551 cy
Aug 1909 - Oct 1909	Maintenance Dredging of the 7-Foot Channel at New Middle Ground Shoal	13,510 cy
Aug 1909 - Oct 1909	Maintenance Dredging of the 7-Foot Channel at 4 Various River Bars	10,461 cy
Aug 1910 - Oct 1910	Maintenance Dredging of the 7-Foot Channels at 6 Various River Bars	30,612 cy
Mar 1911 - June 1911	Continue Construction of Stratford Dike (Now 1,115 LF)	1,144 Long Tons Stone
Mar 1911 - June 1911	Repairs to East Breakwater	4,718 Long Tons Stone
July 1911	Continue Construction of Stratford Dike by Strengthening Outer End	250 Long Tons Stone
Oct 1912 - May 1913	Repair & Strengthen Outer Breakwater Arm	7,301 Long Tons Stone
August 1913	Storm Damage Repairs to Outer Arm of East Breakwater	406 Long Tons Stone
Sept 1913 - Dec 1913	Maintenance Dredging of 7-Foot MLLW Channels at Shelton and Mill, Oronock Upper, Oronock Lower and Camp Meeting Bars	19,053 cy
Dec 1913 - July 1914	Repair & Strengthen East Breakwater Outer Arm	7,073 Long Tons Stone
May 1914 - June 1914	Maintenance Dredging of 7-Foot MLLW Channel at Drews Bar	9,968 cy
Sept 1914 - Oct 1914	Repairs to East Breakwater Inner Arm	595 Long Tons Stone
October 1914	Maintenance Dredging of 7-Foot MLLW Channel at Shoal Immediately above Washington Bridge	1,002 cy

July 1915 - Aug 1915	Maintenance Dredging of 7-Foot MLLW Channels at Mill Bar & Stratford Dike Bar	2,400 cy
October 1915	Repairs to East Breakwater Outer Arm	420 Long Tons Stone
Sept 1916 - Oct 1916	Maintenance Dredging of 7-Foot MLLW Channels at Mill, Oronoque, Drews, Molthrops and Tow-Mile Island Bars	33,640 cy
Oct 1916 - Nov 1916	Extension of Stratford Dike by 140 LF (Total Length Now 1,255 LF)	2,577 Long Tons Stone
July 1918 - Aug 1918	Maintenance Dredging of 7-Foot Channels at Mill, Oronoque Upper & Lower, Drews, Moulthrops and Hidelum Rock Bars	19,724 cy
Summer-Fall 1920	Maintenance Dredging of 7-Foot MLLW Channel at 7 Unspecified Bars	30,000 cy Estimated
FY 1925	Maintenance Dredging of 7-Foot MLLW Channel at Various River Bars	25,000 cy Estimated
Aug 1928 - Jan 1929	Maintenance Dredging of 7-Foot MLLW Channel in River Bars	33,703 cy
Sept 1932 - Nov 1932	Maintenance Dredging of 7-Foot MLLW Channel at Culvers, Mill, Oronoque, Drews, Moulthrops and Two-Mile Island Bars	28,895 cy
June 1934	Maintenance Dredging of 7-Foot MLLW Channel at Drews Bar	5,028 cy
August 1935	Repairs to East Breakwater	3,926 Long Tons Stone
Nov 1936 - Jan 1937	Maintenance Dredging of 7-Foot MLLW Channel at Unspecified River Bars	55,750 cy
Dec 1939 - Sept 1940	Maintenance Dredging of 7-Foot MLLW Channel at Unspecified River Bars	73,487 cy
September 1940	Maintenance Dredging of 7-Foot MLLW Channel at Unspecified River Bars	500 cy
Dec 1940 - Jan 1941	Repairs to East Breakwater	1,209 Long Tons Stone
Nov 1944 - Dec 1944	Maintenance Dredging of 7-Foot MLLW Channel at Mill, Upper & Lower Oronoque, Camp Meeting, Drews, Moulthrop and Two	45,188 cy

	Mile Island Bars	
January 1945	Maintenance Dredging of 7-Foot MLLW Channel at Bridge Approaches & Draws	3,564 cy
Feb 1953 - April 1953	Maintenance Dredging of 7-Foot MLLW Channel at Outer Bar and Mary Ann Bar	24,267 cy
June 1955 - Sept 1956	Improvement Dredging of the 18-Foot MLLW Stratford Channel	1,975,512 cy
September 1957	State Completion of 18-Foot Stratford Channel by Improvement Dredging at Bridges	4,000 cy
April 1960 - Aug 1960	Maintenance Dredging of 18-Foot MLLW Stratford Channel	132,310 cy
Feb 1975 - Jan 1976	Maintenance Dredging of 18-Foot MLLW Channel from Mouth to Culvers Bar	215,000 cy
November 2013	Maintenance Dredging of 18-Foot MLLW Channel at Tow Places below US Route 1 to a Depth of -14 Feet MLLW with Disposal Nearshore off Point-No-Point	50,000 CY

Bridgeport Dredging Center

Bridgeport Harbor FNP, Bridgeport, CT

Bridgeport Harbor FNP was initially authorized in 1836 as an 8-foot deep channel, 200 feet wide through the outer bar and 100 feet wide through the inner bar. The River and Harbor Act of 1871 authorized an East breakwater at Long Beach, an entrance channel 12 feet deep by 100 feet wide up to Stratford Avenue, with a jetty extending 3,000 linear feet southwest from the tip of Long Beach east of the channel at +11 feet top elevation. Over time the project was modified several times through the deepening and widening of the channels (R&H Acts of 1872, 1875, 1878, 1892, 1894, 1896, 1899, 1907, 1919, 1930, 1937, 1945, 1946, and 1958); creating and adjusting anchorages (R&H Acts of 1882, 1899, 1907, 1919, 1930, and 1937); extending the breakwaters (R&H Act of 1890); and adding two stone outer breakwaters (1907). See Project Map 143.1 for visual of current configuration.

Pequonnock River FNP - Bridgeport Harbor, Bridgeport

The Pequonnock River -9-foot MLLW deep by 100 feet wide channel was extended upstream of the horse railroad bridge in 1888 by the River and Harbor Act of 1888. In 1899, the River and Harbor Act permitted the Pequonnock River channel to a depth of -12 feet MLLW by 100 feet wide running for about one mile up to the upper bridges. The channel was deepened to -18 feet

MLLW running for 750 linear feet as part of the 1910 R&H Act and the remainder of the channel was deepened to 18-feet MLLW by the R&H Act of 1930. See Project Map 143.1.

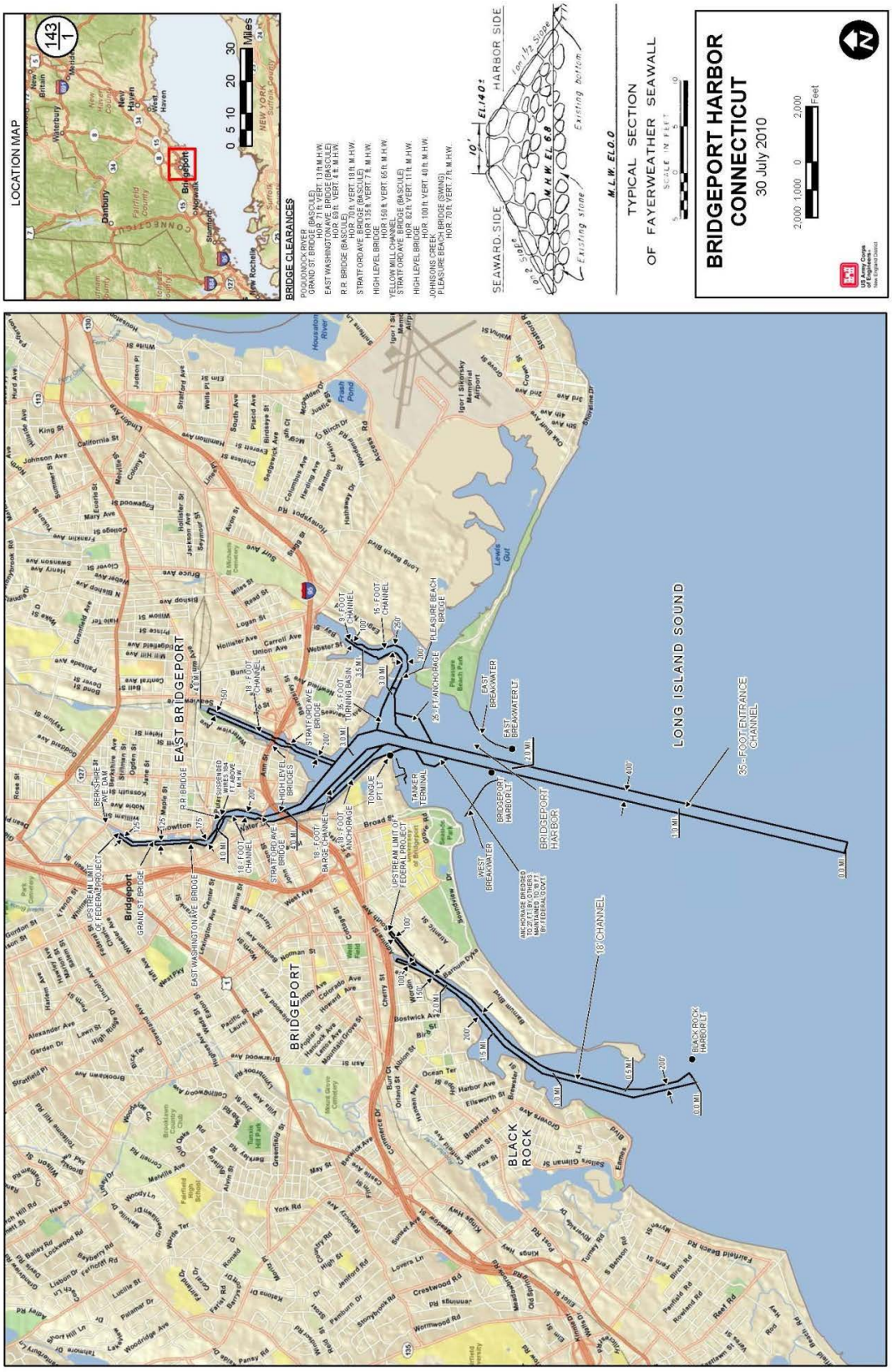
Yellow Mill Channel FNP - Bridgeport Harbor

The Yellow Mill Channel was initially authorized as part of the Bridgeport Harbor FNP by the River and Harbor Act of 1896 which allowed for a 12-foot deep by 200-foot wide channel from the main harbor channel up to the causeway in the Yellow Mill River. The R&H Act of 1899 extended the Yellow Mill River channel to the head of Yellow Mill Cove. The channel was deepened to 18 feet in 1907 as part of the River and Harbor Act of 1907. See Project Map 143.1.

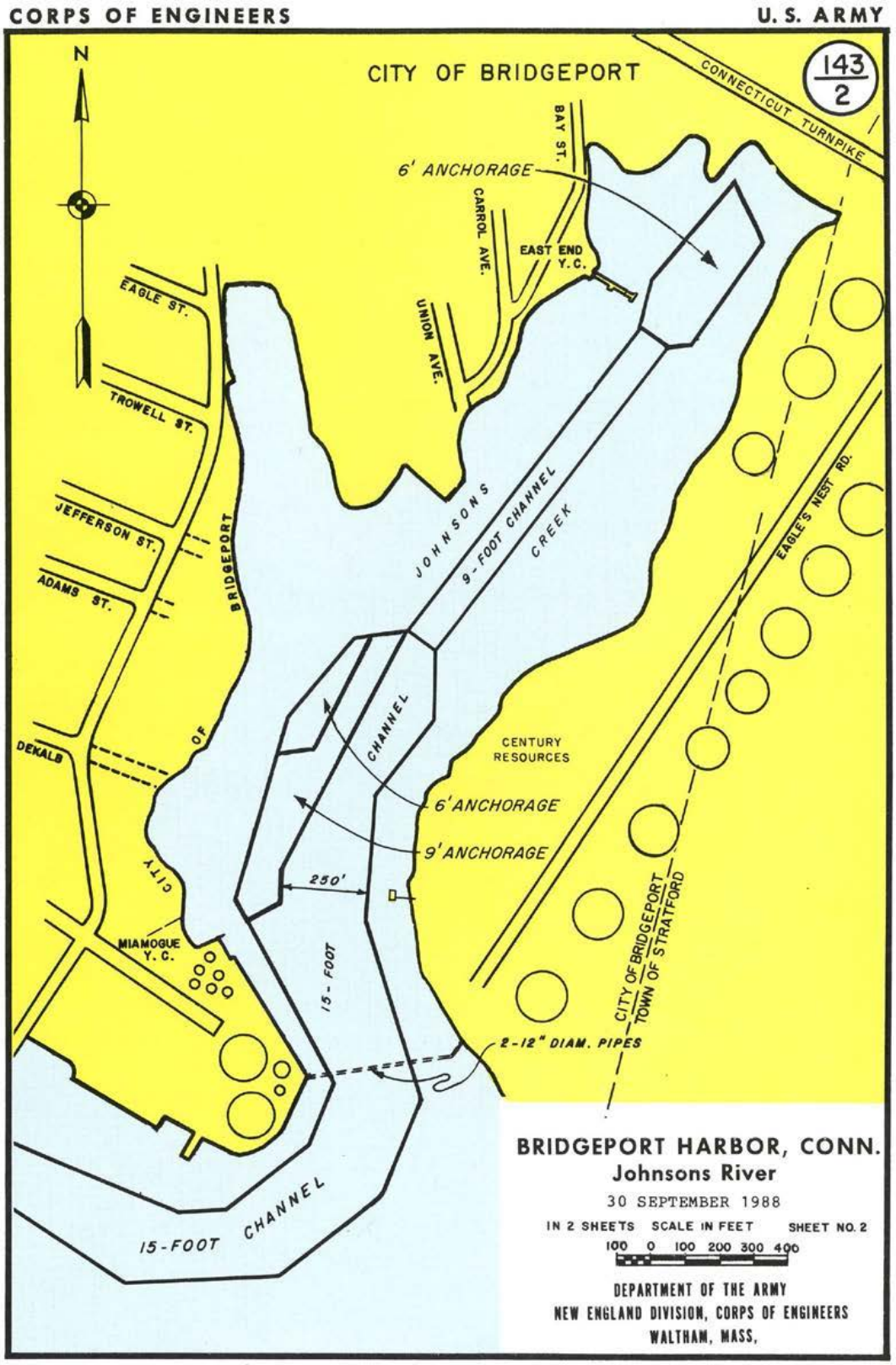
Johnsons River FNP - Bridgeport Harbor

Johnsons River is a tributary running into Bridgeport Harbor. The FNP at Johnsons River was created in 1899 when the River and Harbor Act authorized a channel, 9 feet deep by 100 feet wide for about 0.75 miles up the Johnsons River above the main channel. The channel was deepened to 12 feet and the alignment was adjusted by the R&H Act of 1919. In 1946, the channel was deepened once again, this time to a 15-foot depth upriver to 1,700 feet below the dam, then the channel decreased in depth to 9 feet to roughly 600 feet below the dam; a 30-foot deep turning basin was added at the mouth of Johnsons Creek as well. The River and Harbor Act of 1958 added three anchorages to the Federal project- (1) 6-foot by 2-acres at the head of the 9-foot channel, (2) west of the 15-foot channel at 9 feet deep by 2.4-acres and (3) 6 feet deep by 0.6-acres. The first anchorage and the upstream portion of the Federal channel were deauthorized in WRDA 1996 and in 1999 the two other anchorages were deauthorized by WRDA. See Project Map 143.2 for visual.

Project Map 143.1: Bridgeport Harbor FNP and Black Rock Harbor FNP



Project Map 143.2: Johnsons River Segment of Bridgeport Harbor FNP



Bridgeport Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction**
Act of 1836	8-Foot MLLW Channel 200 Feet Wide through Outer Bar and 100 Feet Wide through Inner Bar	1837 - Channel 60 Feet Wide
Act of 30 August 1852	Dredging through Both Bars to -8 Feet MLLW by 200 Feet Wide Across the Entrance Bars. Dredged to 100 Feet Wide Across the Inner Bar and 60 Feet Wide Across the Outer Bar	Aug 1853 – June 1854 – Deepened to 13 Feet Across Outer Bar
River & Harbor Act of 3 March 1871	East Breakwater at Long Beach, Entrance Channel -12 Feet MLLW by 100 Feet Wide Up to Stratford Avenue, with a Jetty Extending 3,000 LF Southwest from the Tip of Long Beach, East of the Channel + 11 Feet MLLW	Channel - Summer 1871 – July 1875 to -9 Feet 12-Foot Channel – July 1875 – Dec 1881 East Jetty – Summer 1871 – FY 1873 – to 1,380 Feet Long
River & Harbor Act of 10 June 1872	Widening the 9-Foot Channel to 300 - 450 Feet Wide	May 1873 – Sept 1877
River & Harbor Act of 3 March 1875	Deepen –9 by 300-Foot Wide Channel to 12 Feet, Widened to 425 Feet in the Inner Harbor	July 1875 – Dec 1881
River & Harbor Act of 18 June 1878	Extension of the Channel above the Lower Bridge for 3,000 LF to the Horse-Railroad Bridge at -9 Feet MLLW by 100 Feet Wide	Oct 1878 – Dec 1878
River & Harbor Act of 2 August 1882	Widening the 12-Foot Channel to 600 Feet to Create a Refuge Anchorage	Nov 1882 – March 1887
River & Harbor Act of 11 August 1888	Extension of the 9-Foot Poquonnock River Channel 100 Feet Wide Upstream of the Horse Railroad Bridge	May 1889 – Feb 1892 to Reduced Width
River & Harbor Act of 19 September 1890	West Stone Breakwater Extending from the Tongue ESE about 1,165 LF to the Inner Beacon +3 Feet MHW	June 1891 – Dec 1891
River & Harbor Act of 13 July 1892	Further Widening of the 12-Foot Inner Harbor Channel Westerly between the Inner Beacon and Naugatuck Wharf.	Nov 1892 – May 1893

River & Harbor Act of 17 August 1894	Deepening the Channel Across the Outer Bar to -15 Feet MLLW by 100 Feet Wide	Nov 1894 – March 1896
River & Harbor Act of 3 June 1896	Channel -15 Feet MLLW by 300 Feet Wide from Long Island Sound to the Inner Beacon, then 200 Feet Wide up to the Lower Bridge. The Act also Provided for a Channel in Yellow Mill Channel at -12 Feet MLLW by 200 Feet Wide from the Main Harbor Channel up to the Causeway	15-Foot Channel Widening - Aug 1897 – June 1898 Yellowmill Channel – Sept 1898 – Nov 1898
River & Harbor Act of 3 March 1899	Main Harbor: Channel -18 Feet MLLW by 300 Feet Wide Across Outer Bar to Inner Beacon, 200 Feet Wide to Stratford Ave Bridge; a -18-Foot Anchorage West of the Channel above the Beacon, 500 by 2,000 Feet; 12-Foot Anchorage West of the Channel, 500 Feet by 1,500 Feet; a Second -12-Foot Anchorage East of the Channel to the Harbor Line. Pequonnock River: Channel 12 Feet by 100 Feet Wide for about 1 Mile up to Upper Bridges. Johnsons Creek: Channel -9 Feet by 100 Feet for about 3/4 Mile above the Main Channel. Yellow Mill Creek: Channel 12 Feet by 100 Feet from the Main Harbor to Head of Yellow Mill Cove.	Main Harbor – July 1900 – May 1907 Pequonnock River – FY 1901 – Dec 1904 Johnsons Creek – FY 1901 – May 1907 Yellowmill Channel – FY 1901 – May 1907
River & Harbor Act of 2 March 1907	Deepening the Main Entrance Channel and New East Outer Anchorage to -22 Feet, Yellow Mill Channel to -18 Feet, a New -12-Foot Northeast Anchorage, and Two Stone Breakwaters for Outer Harbor	East Breakwater – July 1907 – May 1908 West Breakwater – May 1908 – Sept 1908 22-Foot Harbor Areas April 1908 – Dec 1910 12-Foot Anchorage – July 1908 – Dec 1908 Yellowmill Channel – Not Constructed
River & Harbor Act of 25 June 1910	Extension of the 18-Foot Channel Upstream in Poquonnock River to 750 LF below the Head of the Channel. Plus Continued Maintenance of the Remaining 750-Foot Long Section of the 12 Foot Channel.	Oct 1910 – Feb 1911
River & Harbor Act	Widening and Shifting the 18-Foot Inner	18-Foot Harbor – Jan

of 2 March 1919	Main Channel South, Declaring the 18-Foot Anchorage, Widening the 12-Foot Anchorage West, Shifting the Yellowmill Channel West, and Johnsons River Channel 12 Feet by 125-175 Feet Wide to the First Turn, then 9 Feet by 100 Feet, Increased to 150 to 175 Feet at the Turns.	1920 – FY 1921 12-Foot Anchorage - FY 1924 - FY 1925 Yellowmill Channel – FY 1924 – FY 1925 Johnson Creek - Summer – Fall 1925
River & Harbor Act of 3 July 1930	Deepening the 22-Foot Main Entrance Channel and Anchorage to 25 Feet, Widen the 18-Foot Upper Harbor Channel to 300 Feet, Deepen and Widen the Upper Reach of the Poquonnock River Channel to 18 Feet, Deepen Yellowmill Channel to 18 Feet, Deepen the 12 and 9-Foot Johnsons River Channels to 18-Feet.	25-Foot Harbor – Dec 1932 – Sept 1933 Poquonnock River – June 1938 – Nov 1938 Yellowmill Channel – Nov 1932 – Dec 1932 Except Upstream Ledge Removal Johnson Creek - Never Constructed
River & Harbor Act of 26 August 1937	Deepening Main Channel in Inner Harbor to -25 Feet MLLW up to Stratford Ave Bridge, and Realignment of the 18-Foot and 12-Foot Inner Harbor Anchorage Basins	25-Ft Inner Channel - Nov 1938 – June 1939
River & Harbor Act of 2 March 1945	30-Foot Main Harbor Channel, and Deauthorized the 12-Foot Anchorage	FY 1947 – Feb 1948
River & Harbor Act of 24 July 1946	Turning Basin -30 Feet MLLW at Mouth of Johnsons River, Realign and Widen 30-Foot Main Channel from Power House Creek to Steel Point, Abandon the 18-Ft Johnsons River Channel, and Provide a 15-Foot Channel 200 Feet Wide Upriver to 1,700 Feet below the Dam, then at -9 Feet by 100 Feet Wide to 600 Feet below Dam	15-Ft Johnsons Creek - FY 1948 – Feb 1948 30-Foot Turning Basin FY 1948 – Feb 1948
P.L. 84-151, 69 Stat. 298, 12 July 1955	Declares Non-Navigable an Upper Portion of the West Branch Channel of Cedar Creek in Black Rock Harbor	Abandonment
River & Harbor Act of 3 July 1958	Main Ship Channel 35 Feet by 400 Feet from the Sound to Tongue Pt, Widen to 600 Feet at the Bend, Narrow to 300 Feet at the Pequonnock River Channel 800 Feet below the Stratford Avenue Bridge, an East Turning Basin 35 Feet Southeast of the Mouth of Johnsons River 200 to 1,800 Feet Wide and 1,500 Feet Long, and in Johnsons	35-Ft Channel & Basin Mar 1961 – June 1963 Johnsons Creek – Nov 1963 – Dec 1963

	River 3 Anchorage Areas, (1) 6 Feet by 2-Acres at Head of 9-Ft Channel, (2) West of the 15-Ft Channel at -9 Feet by 2.4 Acres and (3) 6 Feet by 0.6 Acres.	
2 November 1979 House Doc. #96-157 4th Annual Deauth. Report, 26 June 1976	Deauthorizes the Uncompleted Portion of the 18-Foot Yellowmill Channel Consisting of Removal of Ledge from the Upper Reach as Authorized by the River and Harbor Act of 3 July 1930	Deauthorization
O&M Trade-off for Unconstructed West Outer Anchorage	Deepen 25-Foot East Outer Anchorage to –35 Feet MLLW	Dec 1982 – June 1983
Water Resources Development Act of 25 September 1996	Deauthorized a 2-Acre 6-Foot Anchorage at the Head of Johnsons Creek from the Act of 1958. Also Deauthorized the Upstream Portion of the Federal Channel from the Act of 24 July 1946	Deauthorization
Water Resources Development Act of 17 August 1999	Deauthorized Two Anchorages on West Side of the Johnsons River Channel: 2.4 acre by 9 feet, and 0.6-acre by 6 feet deep, from the Act of 1958	Deauthorization
Water Resources Development Act of 8 November 2007, P.L. 110-114, Section 3181(a)(1)	Deauthorizes a Portion of the 18-Foot Yellow Mill Channel as Authorized by the Act of 3 July 1930.	Deauthorization

Bridgeport Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
1837	Improvement Dredging of 8-Foot MLLW Entrance Channel 60 Feet Wide through the Outer Bar	Unknown
Aug 1853 – June 1854	Improvement Dredging of 8-Foot Channel 100 Feet Wide Across the Inner Bar and 60 Feet Wide Across Outer Bar	27,649 cy
Summer 1871 to Fall 1871	Improvement Dredging of the Entrance Channel to a Reduced Depth of -9 Feet MLLW	24,494 cy

Summer 1871 to Fall 1871	Construction of the East Jetty to a Reduced Cross-Section	3,924 Tons Stone
FY 1873	Continue Construction of the East Jetty	9,523 Tons Stone
May 1873 – June 1873	Continue Improvement Dredging of the 9-Foot Entrance Channel Across the Bars	28,058 cy
July 1873 – Jan 1874	Continue Improvement Dredging of the 9-Foot Entrance Channel Across the Bars and in the Harbor Channel	165,751 cy
Sept 1874 – July 1875	Continue Improvement Dredging to Widen the 9-Foot Entrance Channel Across the Bars and in the Harbor Channel	145,343 cy
July 1875 – Dec 1875	Improvement Dredging to Deepen the Entrance Channel and Harbor Channel to –12 Feet MLLW	100,264 cy
July 1877 – Sept 1877	Continue Improvement Dredging to Widen the Upper Reaches of the 9-Foot Harbor Channel to 450 Feet Wide	85,603 cy
Oct 1878 – Dec 1878	Improvement Dredging to Extend 9-Foot Channel Upstream in the Poquonnock River to the Horse Railroad Bridge	71,345 cy
April 1879 – May 1879	Continue Improvement Dredging to Widen the 12-Foot Entrance Channel to 160 Feet Wide	13,682 cy
Sept 1879 – Dec 1879	Continue Improvement Dredging to Widen the 12-Foot Entrance Channel and Harbor Channel to 200 Feet Wide	89,417 cy
Oct 1880 – June 1881	Continue Improvement Dredging to Widen the 12-Foot Entrance Channel and Harbor Channel to 200 Feet Wide	70,703 cy
Nov 1881 – Dec 1881	Continue Improvement Dredging to Widen 12-Foot Channel to 300 Feet, with 425-Foot Basin	90,000 cy
Nov 1882 – Feb 1883	Improvement Dredging to Widen 12-Foot Channel to form 600 Foot Wide Basin	90,561 cy
May 1885 – June 1885	Continue Improvement Dredging to Widen 12-Foot Channel to form 600 Foot Wide Basin	59,352 cy
Nov 1886 – May 1887	Continue Improvement Dredging to Widen 12-Foot Channel to form 600 Foot Wide Basin	261,960 cy

June 1888	Maintenance Dredging of 12-Foot by 300-Foot Chan. at Inner Beacon	14,000 cy
May 1889 – July 1889	Improvement Dredging to Extend the 9-Foot Poquonnock River Channel above the Bridge.	45,000 cy
June 1891 – Dec 1891	Construct Inner (West) Breakwater from the Tongue to the Inner Beacon	9,827 Long Tons Stone
Dec 1891 – Feb 1892	Continue Improvement Dredging to Extend the 9-Foot Poquonnock River Channel above the Bridge.	30,000 cy
Nov 1892 – May 1893	Improvement Dredging to Expand the 12-Foot Inner Basin to 770 Feet Wide	190,132 cy
Nov 1894 – March 1895	Improvement Dredging of 15-Foot Entrance Channel at 100 Feet Wide	48,456 cy
Jan 1896 – March 1896	Continue Improvement Dredging of 15-Foot Entrance Channel at 100 Feet Wide	21,523 cy
Aug 1897 – June 1898	Continue Improvement Dredging of 15-Foot Entrance Channel at 300 Feet Wide	137,700 cy
Sept 1898 – Nov 1898	Improvement Dredging of 12-Foot Yellow Mill Channel, 200 Feet Wide	80,000 cy Estimated
July 1900 – Sept 1900	Improvement Dredging of 18-Foot Main Channel and 12-Foot Northeast Basin.	257,783 cy
July 1900 – Sept 1900	Repair and Extend East Breakwater by 381 LF	5,081 Long Tons Stone
Jan 1901 – June 1901	Continue Improvement Dredging of 18-Foot Main Channel Near Outer Beacon	40,756 cy
Jan 1901 – June 1901	Improvement Dredging of 12-Foot Pequonnock River Channel	141,623 cy
Jan 1901 – June 1901	Improvement Dredging of 9-Foot Johnsons River Channel - Lower End	18,079 cy
April 1902 – FY 1903	Continue Improvement Dredging of 18-Foot Main Channel in Inner Harbor	130,048 cy
April 1902 – FY 1903	Improvement Dredging of 18-Foot Southwest Anchorage at 500 x 2000 Feet	86,377 cy
July 1903 – May 1904	Continue Improvement Dredging of Lower 12-Foot Yellow Mill Channel, 200 Feet Wide	16,093 cy

July 1903 – May 1904	Hydraulic Improvement Dredging of 9-Foot Johnsons River Channel - Upper End	45,811 cy
FY 1903	Improvement Dredging of 12-Foot Pequonnock Channel below the New Railroad Bridge.	2,295 cy
FY 1903 – May 1904	Continue Improvement Dredging of 18-Foot Main Entrance Channel	248,130 cy
July 1904 – Dec 1904	Continue Improvement Dredging of 12-Foot Pequonnock Channel	12,056 cy
July 1904 – Dec 1905	Improvement Dredging of 12-Foot Yellow Mill Channel Extension above Bridge	101,235 cy
November 1905	Maintenance Dredging of 12-Foot Pequonnock Channel	23,175 cy
July 1906 – May 1907	Improvement Dredging of 12-Foot Pequonnock Channel Extension	19,889 cy
July 1906 – May 1907	Continue Improvement Dredging of 9-Foot Johnsons River Channel - Upper End	113,046 cy
July 1906 – May 1907	Improvement Dredging of 12-Foot West Anchorage at 500 x 1500 Feet	108,106 cy
July 1906 – May 1907	Continue Improvement Dredging of 18-Foot Main Entrance Channel	37,366 cy
July 1906 – May 1907	Improvement Dredging of 18-Foot Southwest Anchorage at 500 x 2000 Feet	317,296 cy
July 1906 – May 1907	Improvement Dredging of 12-Foot Yellow Mill Channel	168,801 cy
Jan 1907 – May 1907	Maintenance Dredging of 18-Foot Southwest Anchorage at 500 x 2000 Feet	23,207 cy
Jan 1907 – May 1907	Maintenance Dredging of 18-Foot Inner Main Channel	57,446 cy
Jan 1907 – May 1907	Maintenance Dredging of 12-Foot Pequonnock River Channel	2,775 cy
April 1907	Maintenance Dredging of Lower 12-Foot Yellow Mill Channel at Bridge	700 cy
July 1907 – May 1908	Construct East Breakwater Extension 2,063 LF with +9.5-Foot MLLW Top Elevation	43,559 Long Tons Stone
May 1908 – FY 1909	Begin Construction of West Outer Breakwater	16,009 Long

	1,000 LF with +9.5-Foot MLLW Top Elevation	Tons Stone
August 1907	Maintenance Dredging of 18-Foot Inner Main Channel and Anchorage	773 cy
July 1908 – Sept 1908	Continue and Complete Construction of West Outer Breakwater – Total now 2,010 LF	23,283 Long Tons Stone
July 1908 – Dec 1908	Improvement Dredging of 12-Foot Northeast Anchorage	150,619 cy
April 1909 – June 1910	Improvement Dredging of 22-Foot Main Entrance Channel	425,359 cy
July 1909 – Dec 1910	Improvement Dredging of 22-Foot East Outer Harbor Anchorage	806,162 cy
Oct 1910 – Feb 1911	Improvement Dredging of 18-Foot Pequonnock River Channel	268,126 cy
Nov 1911 – May 1912	Maintenance Dredging of 18-Foot Inner Main Channel	22,151 cy
Nov 1911 – May 1912	Maintenance Dredging of 18-Foot Inner Southwest Anchorage	34,764 cy
Nov 1911 – May 1912	Maintenance Dredging of Lower 12-Foot Yellow Mill Channel	8,932 cy
Nov 1911 – May 1912	Maintenance Dredging of Junction of Johnson Creek & East 12-Foot Anchorage	12,936 cy
July 1916 – Sept 1916	Maintenance Dredging of 12-Foot Yellow Mill Channel - Both Upper and Lower Reaches	53,398 cy
Nov 1919 – Dec 1919	Inner Beacon Lighthouse Moved Back to Permit Widening of Channel Bend	Lighthouse Moved
Jan 1920 – FY 1921	Improvement Dredging to Realign 18-Foot Inner Channel and Realign and Extend the West 12-Foot Anchorage	291,100 cy
FY 1921	Repairs to West Outer Breakwater	Unknown
Sept 1922 – FY 1923	Maintenance Dredging of 18-Foot Upper Channel & Anchorage in Inner Harbor	290,800 cy Estimated
FY 1924	Maintenance & Improvement Dredging of 12-Foot Yellow Mill Channel - Shifted West 50 Feet	69,000 cy Estimated
FY 1924	Maintenance Dredging of 18-Foot Pequonnock	Unknown

	River Channel	
FY 1924 – FY 1925	Improvement and Maintenance Dredging of 12-Foot by 300-Ft North Anchorage & Extension	113,000 cy Estimated
FY 1926	Maintenance and Improvement Dredging of 12-Foot and Widened Extended 9-Foot Johnsons River Channels	100,000 cy Estimated
May 1929 – Aug 1929	Maintenance Dredging of 18-Foot Pequonnock River Channel	82,688 cy
Nov 1932 – Dec 1932	Maintenance and Improvement Dredging of 18-Foot Yellowmill Channel	424,165 cy Plus 2 cy Boulders
Dec 1932 – Sept 1933	Improvement Dredging of 25-Foot Main Channel and Anchorage	959,909 cy
July 1935 – Aug 1935	Repairs to East and West Main Breakwaters	3,296 Tons East 1,173 Tons West
Nov 1936 – Jan 1937	Maintenance Dredging of the 18-Foot Lower and 12-Foot Upper Poquonock River Channels	79,936 cy
June 1938 – Nov 1938	Improvement Dredging to Deepen Upper Poquonnock River Channel to 18 Feet	65,829 cy Plus 303 cy Boulders
Nov 1938 – June 1939	Continue Improvement Dredging of 25-Foot Main Channel and Anchorage	940,879 cy
Nov 1938 – March 1939	Maintenance Dredging of the 18-Foot Yellowmill Channel	118,075 cy
Jan 1941 – Feb 1941	Repairs to East Main Breakwater	2,365 Long Tons Stone
Aug 1941 – Dec 1941	Maintenance Dredging of the 18-Foot Anchorage	121,974 cy
July 1943 – Nov 1943	Maintenance Dredging of 25-Foot Anchorage	126,247 cy
Nov 1943 – Jan 1944	Maintenance Dredging of the Inner End of the 25-Foot Entrance Channel	125,969 cy
March 1944 – Dec 1944	Maintenance Dredging of the 18-Foot Yellowmill Channel	48,668 cy
June 1944 – Dec 1944	Maintenance Dredging of the Johnsons River Channels	20,546 cy
FY 1945 – Dec 1944	Maintenance Dredging of the 18-Foot Poquonock River Channel	48,841 cy

FY 1947	Begin Improvement Dredging of 30-Foot Main Entrance Channel	56,235 cy
FY 1948 – Feb 1948	Continue Improvement Dredging 30-Foot Main Channel & Basin and begin 15-Foot & Modified 9-Foot Johnsons River Channel	2,585,348 cy
June 1952 – Aug 1952	Maintenance Dredging of the 18-Foot Yellowmill Channel	55,010 cy
June 1956 – July 1956	Maintenance Hopper Dredging of the 30-Foot Main Entrance Channel	500,665 cy
Sept 1956 – Oct 1956	Maintenance Dredging of the 30-Foot Inner Harbor Channel and Turning Basin	131,449 cy
April 1960 – May 1960	Maintenance Hopper Dredging of the 30-Foot Main Entrance Channel	347,000 cy
Marc 1961 – June 1962	Improvement Dredging of the 35-Foot Main Channel	1,433,000 cy
April 1962 – Aug 1962	Hydraulic Improvement Dredging of the 35-Foot Main Channel	765,000 cy
Jan 1963 – March 1963	Final Fill and Grading of Stratford Disposal Area	94,600 cy
May 1963 – June 1963	Continue Improvement Dredging and Rock Removal for the 35-Foot Main Channel	Unknown
Nov 1963 – Dec 1963	Johnsons River - Maintenance Dredging of the Existing 6-Foot Anchorage, and Improvement Dredging of the New 6-Foot and 9-Foot Anchorage Areas	24,000 cy
Dec 1982 – June 1983	Improvement Dredging to Deepen a Portion of the 25-Foot Anchorage to 35 Feet	22,963 cy

Black Rock Harbor FNP, Bridgeport, CT

Black Rock Harbor was adopted as a Federal project in 1836 when the construction of a breakwater along the Fayerwether Island spit was authorized, and was completed in 1838. The River and Harbor Act of 1884 authorized a modification for construction of a 2,600-foot long stone breakwater at +10 feet top elevation between Fayerweather Island and the mainland. A channel, 3,300 feet long, by 6 feet deep, by 80 feet wide in Cedar Creek to the Forge Company wharf was also constructed at that time. The River and Harbor Act of 1899 deepened the channel to a 9-foot depth and widened it to 100 feet from Black Rock Harbor upstream to the head of both branches of Cedar Creek and the head of Burr Creek. The channel was deepened to

12 feet in 1910; all of the channels were widened in 1919; and the channel depth was increased to 18 feet in 1930. See Project Map 143.1 above.

Black Rock Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction**
	Southern Fayerwether Breakwater 1,790 LF	Built 1836-38
River & Harbor Act of 5 July 1884	2,600 Foot Long Stone Breakwater +10 Feet MLLW, between Fayerweather Island and the Mainland, and a Channel 3,300 LF in Cedar Creek to the Forge Company Wharf, at -6 Feet MLLW by 80 Feet Wide, Connecting Deep Water at Black Rock with Upper Portions of the Creek	Breakwater - April 1885 – Oct 1885 to Reduced Section Channel – FY 1885 – Jan 1885 with Widths Increased in some Reaches
River & Harbor Act 17 August 1894	Reconstruction of the Fayerwether Seawall with Spur Jetties Added and Structure Extended Shoreward to Prevent Flanking	Oct 1894 – April 1895
River & Harbor Act of 3 March 1899	Channel -9 Feet MLLW by 100 Feet Wide from Black Rock Harbor Upstream to the Head of both Branches of Cedar Creek and Head of Burr Creek, Repair and Maintenance of the Breakwater Connecting Fayerweather Island and the Mainland, and Construction and Maintenance of Shore Protection Measures on Fayerweather Island.	Channel – FY 1903 – May 1904 – but Burr Creek only to 7 Feet (Ledge) Breakwater – Nov 1902 – April 1903
River & Harbor Act of 25 June 1910	Channel to -12 Feet MLLW by 100 Feet Wide From the Sound to the Heads of Both Branches of Cedar Creek	Oct 1910 – June 1911
Annual Report for 1910, Page 128	Recommended that Completion of the Burr Creek Channel beyond the -7 Feet Obtained so Far, Due to Ledge, be Abandoned, as the 7-Foot Depth was Sufficient for Navigation	NA
River & Harbor Act of 2 March 1919	Widen and Straighten Main Channel to 200 Feet in Black Rock Harbor, Widened Further at the Entrance, then 150 Feet Wide into Cedar Creek, Widened to 200 Feet in the Lower Creek and Narrowing to 150 Feet through the Upper Creek and 100 Feet Wide in the East and West Branches,	FY 1924 – FY 1925

	Reducing Project Limits for Burr Creek Channel to -7 Feet MLLW by 100 Feet Narrowing to 75 Feet Wide to Head of the Channel.	
River & Harbor Act of 3 July 1930	Deepening the Channel through the Harbor to the Heads of Both Branches of Cedar Creek to -18 Feet MLLW	Feb 1931 – June 1932
Act of 12 August 1937	Reduced the Authorized Channel for Burr Creek to -7 Feet MLLW by 100 Feet Wide up to the South Side of Yacht Street, about 1/4 Mile, Abandoning the Upper 1/4 Mile by 75-Foot Wide Channel.	NA
P.L. 84-151, 69 Stat. 298, 12 July 1955	Declares Non-Navigable an Upper Portion of the West Branch Channel of Cedar Creek in Black Rock Harbor	Abandonment
River & Harbor Act of 3 July 1958	Two Detached Outer Harbor Stone Breakwaters, One 900 Feet Long Extending West off Fayerweather Island, and One 650 Feet Long Extending East Off the Main Shore, Both with Top Elevations of +10 Feet MLLW, Abandonment of the 7-Foot Burr Creek Channel, Provision of Two -6 Foot MLLW Anchorage Areas in and Opposite Burr Creek Totaling 28 Acres.	Never Constructed
Water Resources Development Act of 17 October 1986	Deauthorized the Two Breakwaters at Mouth of Black Rock Harbor and the -6-Foot MLLW by 28-Acre Burr Creek Anchorage and Cedar Creek Improvements, as Adopted by the River & Harbor Act of 1958	Deauthorization

Black Rock Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Before 1836	Records from 1837 Indicate the Presence of an Earlier Constructed Breakwater at Fairweather	Unknown
1837 - 1938	Southern Fayerwether Breakwater 1,790 LF	Unknown
April 1885 – Oct 1885	North Fayerweather Island Seawall	10,414 Tons

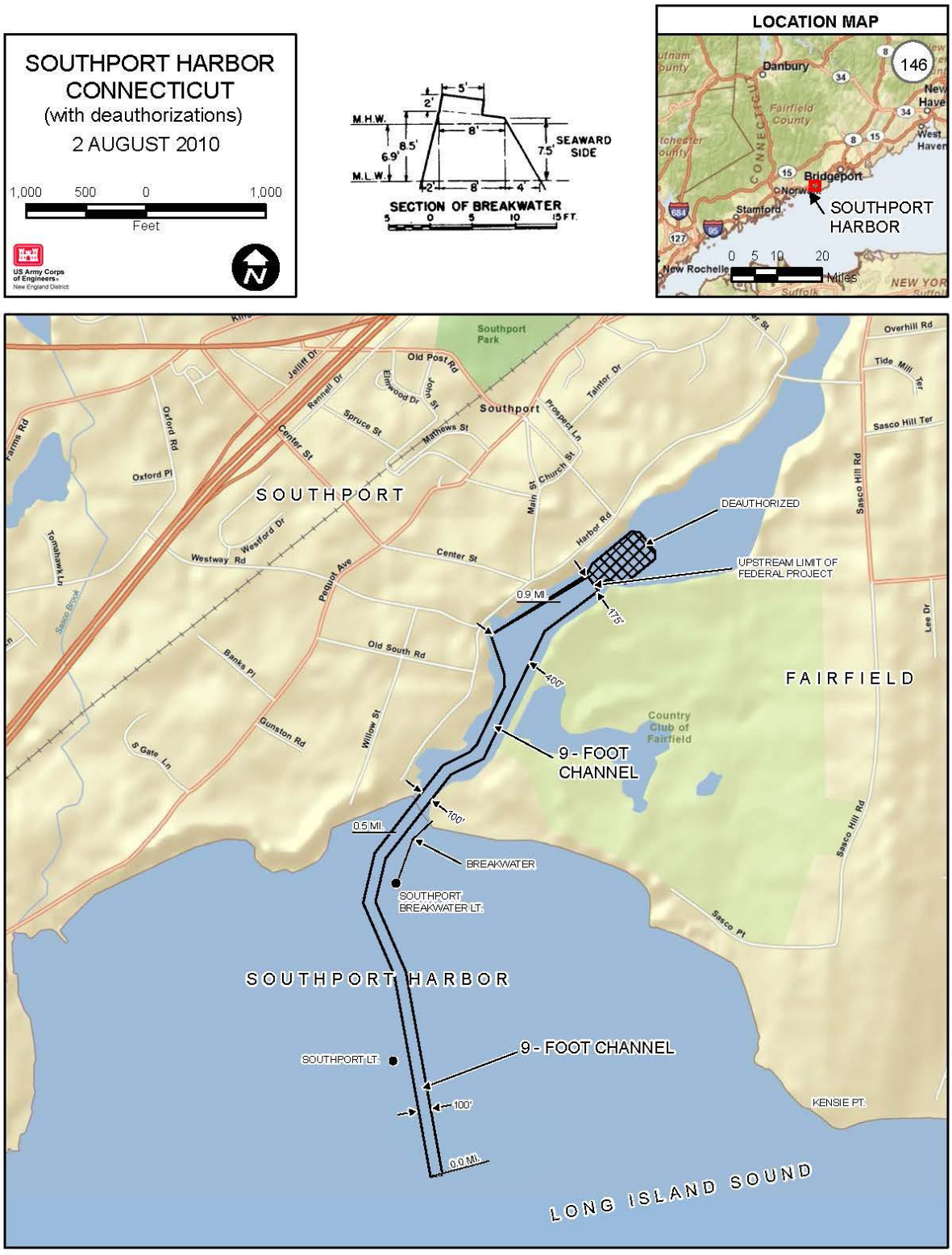
FY 1885	Improvement Dredging of 6-Foot Cedar Creek Channel	19,984 cy
March 1887 – Oct 1887	Continue Improvement Dredging of 6-Foot Cedar Creek Channel	55,831 cy
October 1889	Continue Improvement Dredging of 6-Foot Cedar Creek Channel	50,000 cy
June 1890	Continue Improvement Dredging of 6-Foot Cedar Creek Channel	8,000 cy
Dec 1891 – Feb 1892	Continue Improvement Dredging of 6-Foot Cedar Creek Channel	28,000 cy
Nov 1893 – Jan 1894	Continue and Complete Improvement Dredging of 6-Foot Cedar Creek Channel	25,000 cy
Spring 1894 - May 1894	Repair and Extend the South Fayerwhether Island Breakwater North to Retreating Shore	1,384 Tons Stone
Oct 1894 – April 1895	Repair and Strengthen the South Fayerwhether Island Breakwater with Three Spur Jetties, Extend Back to Shore, Gap Repairs and Toe Protection	1,146 Tons Stone
July 1900 - Sept 1900	Fayerweather Is. – Construct Four Stone Jetties Totaling 900 LF on West Side of Island.	3,701 Long Tons Stone
April 1902 – FY 1903	Improvement Dredging to Widen 9-Foot Channel to Bluff at Faunchers Dock	15,520 cy
Nov 1902 – April 1903	Repair and Extend the South Fayerwhether Island Breakwater and Repair Spur Jetty #4	2,424 Tons Stone & 166 sy Paving
FY 1903 – May 1904	Hydraulic Improvement Dredging of 9-Foot Cedar Creek and 7-Foot Burr Creek Channels (Ledge Prevent Dredging Burr Creek to 9 Feet)	165,144 cy
Aug 1905 – Sept 1905	Improvement Dredging of 7-Foot and 9-Foot Burr Creek Channels	3,982 cy
July 1906 – May 1907	Maintenance Dredging of 7-Foot Burr Creek Channel	32,289 cy
Jan 1908 – April 1908	Maintenance Dredging of 9-Foot Black Rock and Cedar Creek Channels	49,703 cy
April 1908 – May 1908	Repairs to East Face and Toe of Fayerweather Island Breakwater	651 Long Tons Stone Plus 90 cy Concrete

Oct 1910 – June 1911	Improvement Dredging of 12-Foot Black Rock and Cedar Creek Channels	265,073 cy
April 1914 – May 1914	Maintenance Dredging of the 7-Foot Burr Creek Channel	15,852 cy
Sept 1914 – Nov 1914	Repair of the Fayerweather Island Seawall with Displaced Stone Reset, Concrete Grout, a Concrete Toe Placed on Seaward Foot, Stone Apron and Boulders atop the Apron. A Breach at North End of Wall Filled and Reveted with Stone Paving. Six Short Groins, Two Stone and Four Timber, were Constructed along the East Side of Fayerweather Island.	Unknown 150 cy Concrete
FY 1922	Repairs to the Fayerweather Island Seawall	Unknown
FY 1923	Maintenance Dredging of 12-Foot Black Rock and Cedar Creek Channels	56,000 cy Estimated
FY 1924 – Dec 1924	Maintenance and Widening of the 12-Foot Black Rock Harbor & Cedar Creek Channels	330,200 cy Estimated
Feb 1931 – June 1932	Hydraulic Improvement Dredging of 18-Foot Channel	867,907 cy
Nov 1937 – April 1938	Maintenance Dredging of the 18-Foot Black Rock Harbor & Cedar Creek Channels	121,816 cy
June 1943 – Oct 1943	Maintenance Dredging of the 18-Foot Black Rock Harbor & Cedar Creek Channels	215,499 cy
Aug 1950 – Sept 1950	Repair of the Fayerweather Island Breakwater	3,296 Tons Stone
Dec 1954 – Sept 1955	Maintenance Dredging of the 18-Foot Black Rock Harbor & Cedar Creek Channels	263,614 cy
Oct 1961 – Nov 1961	Repair of the Fayerweather Island Breakwater	Unknown
Dec 1982 – May 1983	Maintenance Dredging of the 18-Foot Black Rock Harbor & Cedar Creek Channels	210,000 cy
FY 1984 – Dec 1983	Construction of Confined Upland Disposal Facility in Burr Cove under the WES Field Verification Program using Material Dredged from New Haven Harbor	Unknown

Southport Harbor FNP, Fairfield, CT

A stone breakwater, east of the channel and south about 1,420 linear feet from the Mean High Water line opposite Southport to the Mean Low Water line with a top elevation of +7 feet, top width of 8 feet, an earthen dike 1,350 feet long extending north from the sandspit along the marsh from the river mouth, and a 2-foot channel were authorized to be built at Southport by the River and Harbor Acts of 1829, 1832, and 1836. Major modifications to the Federal project include: in 1875, the R&H Act raised the height of the breakwater and extended it; adding a 4-foot deep by 60-foot wide channel to the upper wharves in 1876; adding two branch channels to the two wharf areas at a 4-foot depth in 1882; deepening the main channel to 6 feet and widening it to 100 feet upstream above White Rock in 1902; re-designating the upper portion of the channel to serve as an anchorage area adjacent to the channel in 1996 and 2007. The current 9-foot channel and 6-foot anchorage area in Southport Harbor was originally authorized in 1935 by the Emergency Relief Appropriations Act. See Project Map 146 for details.

Project Map 146: Southport Harbor FNP



Southport Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
Act of 2 March 1829 3 July 1832 and 4 July 1836	Stone Breakwater, East of the Channel, South about 1,420 Feet from the MHW Line on the Sandspit Opposite Southport to the MLLW Line, with Top Elevation of +7 Feet MLLW, Top Width of 8 Feet, and an Earthen Dike 1,350 Feet Long Extending North from the Sandspit along the "Sunken Ground" Marsh from the River Mouth to the Bluff Opposite the Narrows, and Dredging of the Channel.	Breakwater & Dike 1829 – Spring 1837 2-Foot Channel – FY 1830 - 1833
River & Harbor Act of 3 March 1875	Restore and Raise the Breakwater by 4 Feet for a Length of 200 Feet from the Beach Seaward, then Raised Two Feet for the Remaining Seaward Length, and Extend the Breakwater to a Point about 250 Feet Seward of the Outer Beacon or about the -6-Foot Contour. Also a Timber Sand Barrier on the Beach Shoreward of the Breakwater.	Breakwater Raising Aug 1875 – Jan 1876 Bar Channel – 1876 to 4 Feet
River & Harbor Act of 14 August 1876	Repair and Raise the Dike between the River and the "Sunken Ground". Also a Channel -4 Feet MLLW by 60 Feet Wide to the Upper Wharves, Plus Removed of White Rock. (Channel Completed to 95 Ft Wide for 2,800 LF to Inshore End of Breakwater, 80 Ft Wide to White Rock and 50-60 Ft up to Wharves)	Raise & Repair Dike FY 1878 4-Foot Channel – FY 1878 – Aug 1881
River & Harbor Act of 2 August 1882	Upriver 4-Ft Branch Channels at Southport to the Two Wharf Areas in Lieu of Further Channel Widening above White Rock.	April 1883 – May 1883
River & Harbor Act of 13 June 1902	6-Foot Channel 100 Feet Wide Upstream to above White Rock, Maintain the Two Upstream Branch Channels at 60 Feet Wide, with Repairs to the Existing Breakwater.	May 1903 – Sept 1908
River & Harbor Act of 25 July 1912	6-Foot MLLW by 100-Foot Wide Channel from the Sound to the Second Turn above the Breakwater, then Narrowed to 75 Feet Wide up to the Docks, Eliminating the Western Branch Channel, then Narrowed Further in the Eastern Branch Channel to 60 Feet along the Docks, with an Anchorage Area of the	Aug 1913 – Feb 1914

	Same Depth 75 feet Wide Adjacent to the Channel, and Removal of Ledge Areas to -7 feet MLLW.	
Emergency Relief Appropriations Act of 28 May 1935 and River and Harbor Act of 30 August 1935	Channel -9 Feet MLLW, 100 Feet Wide, from the Sound to the Basin at the Breakwaters, then 9 Feet by Varying Widths of 100 to 400 Feet between the Banks Upriver to and through the Basin Opposite East Main Street, and Provision of an Anchorage -6 Feet MLLW by 300 Feet Wide by 500 Feet Long North of the Golf Club Wharf.	Oct 1935 – March 1936
Water Resources Development Act of 25 September 1996	Deauthorized the 6-Foot Anchorage at the Head of the Project and a Triangular Portion of the 9-Foot Federal Channel, as Authorized by Act of 1935, and Redesignated the Upper Portion of the Remaining Area of the 9-Foot Federal Channel as Anchorage	Deauthorization
Water Resources Development Act of 8 November 2007, P.L. 110-114, Section 3181(c)	Re-designates the Upper 900-Foot Length of the 100-Foot Wide Channel as Anchorage Area.	Re-designation

Southport Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
1829 - 1830	Construction of Stone East Breakwater/Jetty from Beach along Spit to MLLW Elevation in Sound and Earthen Dike along Riverbank	Unknown
1830 – 1831	Dredging to Remove Obstructions from the Channel	Unknown
1832 – Jan 1833	Complete Construction of Earthfill, Brush and Revetment Dike Extension on East River Bank from 1,400 LF Distance Upriver from Beach, and Extension of Stone Breakwater	Unknown
1832 - 1833	Improvement Dredging of –2-Foot Channel Scraped through Bar	11,000 cy Est.
1836 - Spring 1837	Repairs to Dike and 1,320 LF of East Breakwater and Construction of Stone Beacons	Unknown

Aug 1875 - Jan 1876	Repair and Increase Top Elevation of East Breakwater for 1,036 LF, with 135 LF Timber Plank Sand Fence at Shore End	570 cy Stone Placed
FY 1878	Improvement Dredging of 4-Foot Entrance Channel – Dispose as Dike Fill and in Sound and Repairs to the Dike	17,319 cy (Incl. 631 cy in Dike)
FY 1878	Repairs to East Breakwater and Slope Filled-Out	685 cy Stone Placed (Est.)
Mar 1881 - Apr 1881	Continue Improvement Dredging to Extend 4-Foot Channel Upstream to Wharves	11,294 cy
July 1881 - Aug 1881	Continue Improvement Dredging to Widen and Extend 4-Foot Entrance Channel to 100 Feet	6,768 cy
Apr 1883 - May 1883	Maintenance Dredging of the 4-Foot Channel along the Breakwater and Improvement Dredging of the 4-Foot Upstream Inner Branch Channels at the Wharves	8,390 cy
April 1903	Storm Damage to East Breakwater Repaired	Unknown
May 1903 - June 1903	Improvement Dredging of the 6-Foot Channel	26,300 cy
July 1903 - Aug 1903	Continue Improvement Dredging to Widen the 6-Foot Channel	1,471 cy
July 1904	Storm Damage to East Breakwater Repaired	Unknown
Sept 1905 - Feb 1906	Continue Improvement Dredging of the 6-Foot Channel & Branches to 7 Feet	28,036 cy Plus 115 cy Ledge
December 1907	Storm Damage to East Breakwater Repaired	24 cy Stone Placed
Aug 1908 - Sept 1908	Ledge Removed from 6-Foot East Branch Channel to 7 Feet	141 cy Plus 157 cy Ledge
October 1908	Storm Damage to 50 LF of the East Breakwater Repaired	15 cy Capstone Set in Concrete
Aug 1913 - Feb 1914	Improvement Dredging of the Modified 6-Foot Channel & 6-Foot Anchorage (Ledge to 7 Feet)	44,533 cy Plus 244 cy Ledge and 5 cy Boulders
FY 1915	Minor Repairs to the East Breakwater	Unknown
Late 1916 Non-Federal	Non-Federal Dredging of Areas of Channel and Anchorage to –10 to –25 Feet for Borrow to Fill East Marsh for Golf Course Development	990,294 cy

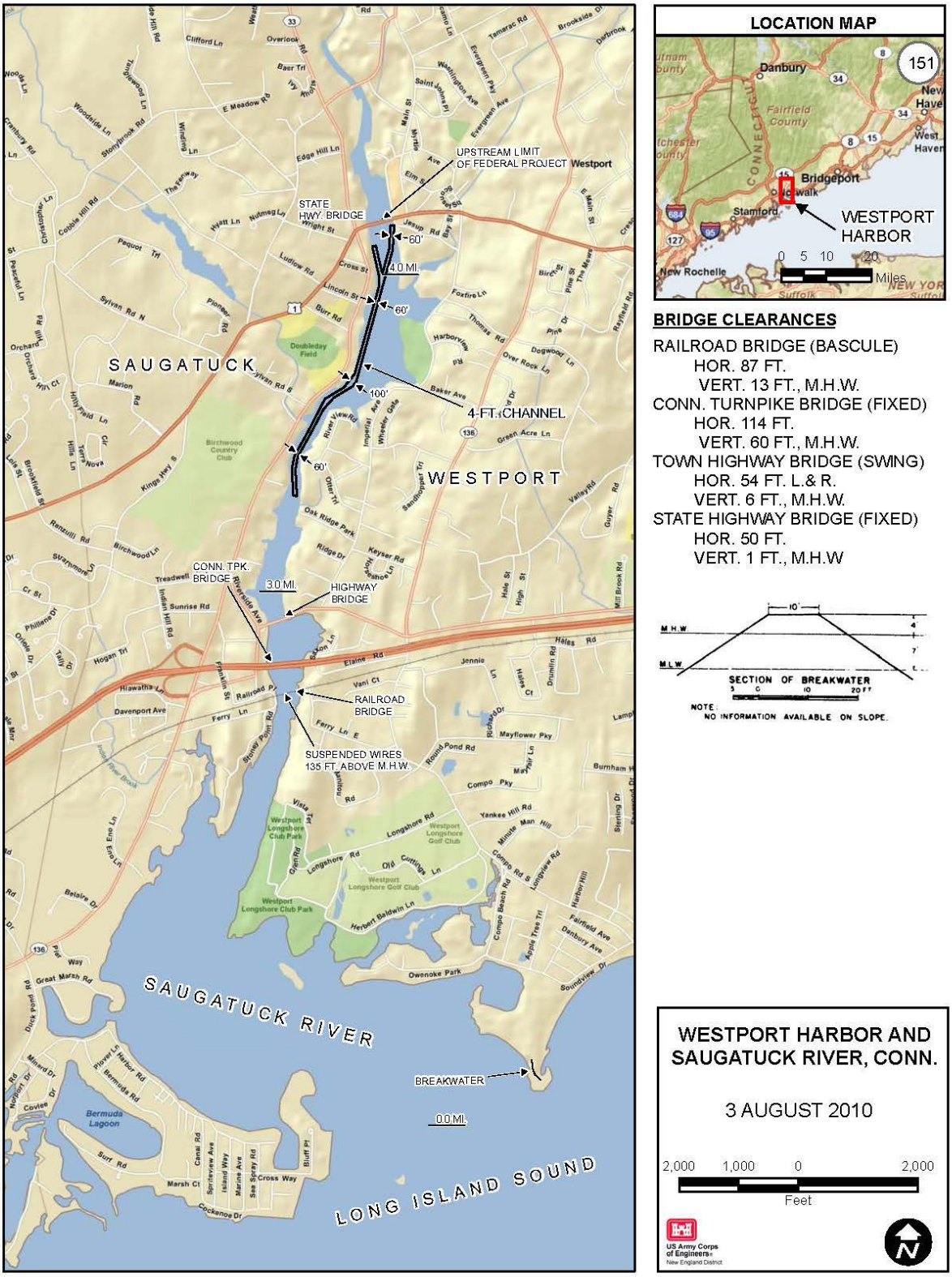
FY 1917	Minor Repairs to the East Breakwater	Unknown
FY 1925 Non-Federal	Non-Federal Dredging of Areas of Channel and Anchorage for Borrow to Fill Area Marshes for Private Development	Unknown
April 1930	Minor Repairs to 166 LF of East Breakwater	Unknown
Oct 1935 - Mar 1936	Improvement Dredging of the 9-Foot Channel and 6-Foot Anchorage	112,975 cy Plus 723 cy Ledge
Oct 1935 - Mar 1936	Work for Others - Municipal Berth Dredging	4,849 cy
May 1948 - July 1948	Maintenance Dredging of the 9-Foot Channel and 6-Foot Anchorage	25,295 cy
August 1948	Minor Concrete Repairs to Four Breaks in the East Breakwater Repaired	Unknown
Apr 1958 - June 1958	Repairs to the East Breakwater	3,500 Tons Stone Placed
Nov 1961 - Mar 1962	Maintenance Dredging of the 9-Foot Channel	41,200 cy
Nov 2004 – March 2005	Maintenance Dredging of the 9-Foot Channel and Anchorage	56,700 cy

Norwalk Dredging Center

Westport Harbor & Saugatuck River FNP, Westport, CT

The FNP at Westport Harbor and Saugatuck River initially gained authorization in 1827 when the breakwater at Cesar Point was first constructed. A 4-foot deep by 44 feet wide channel was cut through Great Marsh and a 300-foot long stone jetty at the south entrance of the channel was built through the authorization in the R&H Act of 1836. The Saugatuck River channel first gained approval for construction by the R&H Act of 1892 which allowed for a 4-foot deep by 100-foot wide and about 4,300-foot long channel from deep water in the river up to Westport, then branching into two channels along the wharves at Westport. See Project Map 151.

Project Map 151: Westport Harbor and Saugatuck River FNP



Westport Harbor & Saugatuck River List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
Act of 2 March 1827, with Further Appropriation by the Act of 30 April 1830	Improvements to the River Mouth Consisting of Removal of Rocks from the Channel and Construction of a Jetty/Breakwater at Cedar Point to Help Reduce Erosion to Preserve Channel Depth.	Breakwater – FY 1837
River & Harbor Act of 4 July 1836	Cutting a Channel through Great Marsh -4 Feet MLLW by 44 Feet Wide at the Bottom, with a 300-Foot Long Stone Jetty Built on the South Entrance to the Canal.	Canal & Jetty – 1836 - 1839
River & Harbor Act of 2 March 1867 and River & Harbor Act of 11 July 1870	Repairs to the Cedar Point Breakwater, Removal of Rocks from the River Channel, and Revetment Repairs and Redredging of the Great Marsh Canal.	Breakwater Rehab – Nov 1870 – Dec 1870 Canal Rehab -
River & Harbor Act of 13 July 1892	Channel –4 Feet MLLW by 100 Feet Wide Extending about 4,300 LF from Deep Water in the Saugatuck River up to Westport, Branching into Two Channels along the Wharves at Westport, and Some Boulder Removal along the Channel.	May 1893 – May 1896 (Main Channel to 60 Feet Wide, East Branch 40 Ft Wide, West Branch to 54 Ft Wide)
River & Harbor Act of 3 June 1896	Repairing the Cedar Point Breakwater, Removal of the Ledge Opposite Stony Point, and Removing Boulders from the Channel at the Railroad Bridge.	Breakwater – April 1897 Ledge – May 1908 – Aug 1908 Boulders – June 1897 – July 1897
River & Harbor Act of 3 September 1954	Channel -9 Feet MLLW by 125 Feet Wide from the Sound across the Bar off of Cedar Point, then Upriver at 100 Feet Wide to the Highway Bridge at Saugatuck, and an Anchorage -6 Feet MLLW by 3.5 Acres between the Highway and Railroad Bridges.	Project was Never Constructed and was Later Deauthorized
February 1970		Deauthorization
2 November 1979 House Doc. #96-157 4th Annual Deauth. Report, 26 June	Deauthorizes above Listed Projects for Westport Harbor and the Saugatuck River: (1) the Uncompleted Portion of the Project Authorized by the River & Harbor Act of	2 Deauthorizations

1979	1892 Consisting of Widening the 4-Foot East Branch Channel to 60 Feet, and (2) the Entire Project Authorized by the River and Harbor Act of 1954 (P.L. 83-780), Consisting of a 9-Foot Channel across the Bar and Upriver to a 6-Foot Turning and Anchorage Basin at the Highway Bridge	

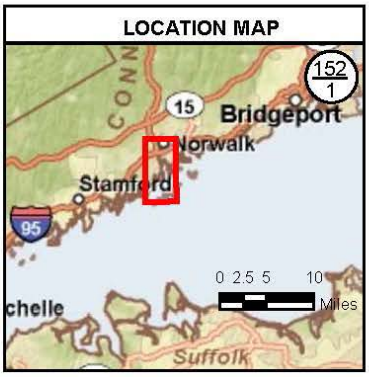
Westport Harbor & Saugatuck River Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
1827 - 1829	Initial Construction of Cedar Point Breakwater	Unknown
1827 - 1828	Remove Boulders from Entrance Channel	Unknown
1830 - 1831	Remove Boulders from Entrance Channel	Unknown
1836 - 1839	Improvement Dredging of the 4-Foot by 44-Foot Wide Great Marsh Canal and 300 LF Stone Jetty Construction	Unknown
1836 – Nov 1837	Complete Construction of 464 LF Cedar Point Breakwater	Unknown
Oct 1870 - Dec 1870	Repairs and Shoreward Extension of the Cedar Point Breakwater	284 Tons Stone
May 1893 - Nov 1893	Improvement Dredging of the 4-Foot River Channel up to Westport	16,642 cy
Mar 1896 - May 1896	Improvement Dredging to Complete the 4-Foot Upstream Branch Channels Extensions	9,759 cy
Apr 1897 - May 1897	Repairs and 30 LF Shoreward Extension of the Cedar Point Breakwater	400 Tons Stone
June 1897 - July 1897	Remove Boulders from the River Entrance Channel	103 Tons Boulders
May 1908 - Aug 1908	Ledge Removal of Lawrence Rock to -7 Feet	175 cy Rock Removed
June 1947 - July 1947	Maintenance Dredging of the 4-Foot River Channel in the Stony Point Reach	15,124 cy Plus 6,873 cy Boulders
Nov 1969 - April 1970	Maintenance Dredging of the 4-Foot River Channel in the Upper Reaches at Westport	25,874 cy

Norwalk Harbor FNP, Norwalk, CT

Norwalk Harbor's Federal project began in 1872 when Congress passed the River and Harbor Act which provided language for an 8-foot deep channel, 100 feet wide up to South Norwalk, thence 6 feet deep by 100 to 60 feet wide to the stone bridge at Norwalk. A basin at the head of the harbor was formed to a 6-foot depth in 1878 and the channel was widened to 150 feet and deepened to 10 feet from the Sound at Sheffield Island Harbor up to the Railroad Bridge at South Norwalk.

Changes to the harbor occurred in 1907 when the River and Harbor Act approved the following modifications to the project: (1) a channel 10 feet deep by 150 feet wide (200 feet wide in the bends) from the Sound to South Norwalk, and a 10-foot deep by 100-foot wide by 1,600-foot long basin opposite South Norwalk, (2) an East Norwalk channel, 6 feet deep by 75 feet wide, widened in bends, and (3) a channel from South Norwalk upriver above the Railroad Bridge, 8 feet deep by 100 feet wide, with decreased width through the "gorge" and increased width above the Railroad Bridge and at Oyster Shell Point, with a turning basin at the head of the channel at Norwalk. In 1919, another modification by the River and Harbor Act deepened the channel to 12 feet and widened it 200 feet from Sheffield Island to Dorlons Point thence 150 feet wide to the wharves at South Norwalk thence 250 feet wide along the wharves; the Act also created a 10-foot deep by 17-acre anchorage about the confluence of the East Norwalk channel. The current configuration can be seen in Project Map 152.1 (entire harbor), and Project Map 152.2 (for the East Norwalk channel).

Project Map 152.1: Norwalk Harbor FNP



BRIDGE CLEARANCES

WASHINGTON STREET BRIDGE (BASCULE)
HOR. 70 FT.
VERT. 8.3 FT., M.H.W.
RAILROAD BRIDGE (SWING)
HOR. 55 FT. left drow
HOR. 58.4 FT. right drow
VERT. 16.2 FT., M.H.W.
CONN. TURNPIKE BRIDGE (FIXED)
HOR. 100 FT.
VERT. 60 FT., M.L.W.

FOR ENLARGEMENT OF EAST NORWALK CHANNEL SEE 152/2

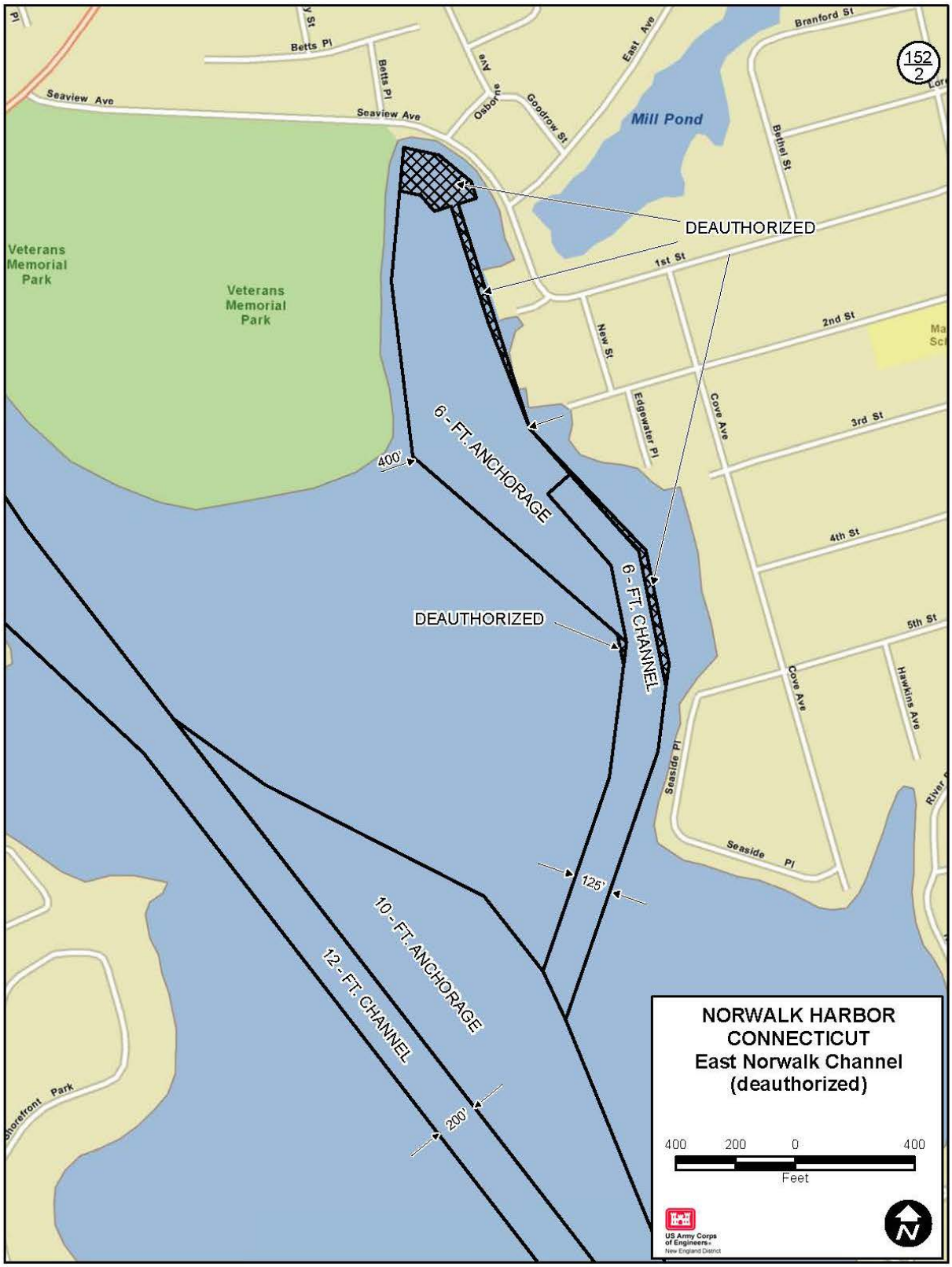
NORWALK HARBOR CONNECTICUT (with deauthorizations)

5 AUGUST 2010

2,500 1,250 0 2,500
Feet

US Army Corps of Engineers
New England District

Project Map 152.2: East Norwalk Channel Segment of Norwalk Harbor FNP



Norwalk Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 10 June 1872	Channel -8 Feet MLLW by 100 Feet Wide up to South Norwalk, then -6 Feet MLLW by 100 to 60 Feet Wide to the Stone Bridge at Norwalk.	6-Ft Channel - Sept 1872 – June 1887 8-Ft Channel – Sept 1880 – July 1885
River & Harbor Act of 18 June 1878	Removal of the Middle Ground at the Head of the Harbor at Norwalk to form a Basin at –6 Feet MLLW.	Aug 1878 – March 1880
River & Harbor Act of 14 June 1880	Deepening the Lower Portion of the Upper Channel to -8 Feet MLLW by 100 Feet Wide, up to the Steamboat Landing	Sept 1880 – June 1887
River & Harbor Act of 17 August 1894	Removal of the Flats at Ferrys Point between the Channel and West Harbor Line above Jennings Wharf to the Railroad Wharf to -6 Feet MLLW, and if Funds Remain, to Ease the Bend in the Channel at Keysers Island	Sept 1896 – May 1897
River & Harbor Acts of 3 June 1896 & 3 March 1897	Widening the Channel from the Sound at Sheffield Island Harbor, up to the Railroad Bridge at South Norwalk to 150 Feet Wide by -10 Feet MLLW and Further Widening of the Two Bends at the Entrance to 250 to 300 Feet Wide.	Dec 1896 – Oct 1905
River & Harbor Act of 2 March 1907	(1) Channel -10 Feet MLLW by 150 Feet Wide (200 Feet Wide in the Bends) from Sound to South Norwalk, and a -10-Foot MLLW by 100-Foot Wide by 1,600-Foot Long Basin Opposite South Norwalk, (2) East Norwalk Channel, -6 Feet MLLW by 75 Feet Wide, Widened in Bends, and (3) Channel from South Norwalk Upriver above the Railroad Bridge, -8 Feet MLLW by 100 Feet Wide, with Decreased Width through the "Gorge" and Increased Width above the Railroad Bridge and at Oyster Shell Point, with a Turning Basin at the Head of the Channel at Norwalk	Sept 1907 - April 1909
River & Harbor Act	Channel -12 Feet MLLW by 200 Feet Wide	FY 1924 – Spring 1929

of 2 March 1919	from Sheffield Island Harbor to Dorlons Point, then 150 Feet Wide to the Wharves at South Norwalk, then 250 Feet Wide along the Wharves, the Area between the Existing and Proposed Alignments to be Deepened to Become a -10-Foot MLLW by 17-Acre Anchorage about the Confluence with the East Norwalk Channel, and Deepening the Upper Channel to Norwalk to -10 Feet MLLW by 150 Feet Wide Increased at the Bends and Decreased through the 'Gorge' to Norwalk	
River & Harbor Act of 2 March 1945	Widening the East Norwalk Channel to 125 Feet, Widened to 150 Feet at the Bend Opposite Fifth Street and through the Upper Reach beyond Third Street, with an Anchorage -6 Feet MLLW by 7+ Acres, Located North and West of the East Channel	Nov 1949 – Oct 1950
Water Resources Development Act of 25 September 1996	Deauthorized the Upstream Portion of the Federal Channel, as Authorized by the Act 1919, Realigns the 6-Foot East Norwalk Channel and Anchorage and Redesignates all but a 100-Foot Width of the Channel as Anchorage, and Deauthorizes the Remaining Non-Realigned Areas of the 6-Foot East Norwalk Channel and Anchorage as Authorized by the Act of 1945.	Deauthorization
Water Resources Development Act of 8 November 2007, P.L. 110-114, Section 3181(a)(3)	Deauthorizes Two Portions of the 10-Foot Channel as Authorized by the Act of 2 March 1919. Also Realigns the 10-Foot Channel by Adding a Small Triangular Area	Deauthorization and Realignment

Norwalk Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Sept 1872 - Mar 1873	Begin Improvement Dredging of the 6-Foot Upper Channel up to Norwalk	35,175 cy
July 1873 - Oct 1873	Continue Improvement Dredging of the 6-Foot Upper Channel up to Norwalk	19,985 cy

Sept 1874 - Dec 1874	Continue Improvement Dredging of the 6-Foot Upper Channel up to Norwalk	9,784 cy
Apr 1875 - Aug 1875	Continue Improvement Dredging of the 6-Foot Upper Channel up to Norwalk	26,931 cy
Sept 1875 - Nov 1875	Continue Improvement Dredging of the 6-Foot Channel above Gregory's Point to Norwalk	44,444 cy
Aug 1878 - Dec 1878	Improvement Dredging to Widen the 6-Foot Channel Bends and Construct the 6-Foot Turning Basin at Norwalk	26,080 cy
Sept 1879 - Mar 1880	Improvement Dredging to Widen 6-Foot Channel and Extend that Depth below South Norwalk	40,671 cy
Sept 1880 - Oct 1880	Begin Improvement Dredging of the 8-Foot Lower Channel below Railroad Bridge and Steamboat Landing	38,083 cy
Oct 1881 - Dec 1881	Continue Improvement Dredging of the 8-Foot Lower Channel below the Railroad Bridge	14,815 cy
Oct 1881 - Dec 1881	Maintenance Dredging of the 6-Foot Channel above the Railroad Bridge	11,344 cy
Oct 1882 - Dec 1882	Improvement Dredging to Widen the 6-Foot Channel above the Railroad Bridge	25,003 cy
Mar 1885 - July 1885	Maintenance and Improvement Dredging of the 8-Foot Lower Channel below the Railroad Bridge from Gregory's Point to South Norwalk – 8-Foot by 100-Foot Channel Completed	34,824 cy
May 1887 - June 1887	Maintenance and Continued Improvement Dredging to Widen the 6-Foot Channel above the Railroad Bridge	20,427 cy
Apr 1889 - May 1889	Maintenance Dredging of the 8-Foot Lower & 6-Foot Upper Channels below and above South Norwalk	12,337 cy
Oct 1891 - Dec 1891	Maintenance Dredging of the 8-Foot Lower & 6-Foot Upper Channels – Now Completed	28,000 cy
Sept 1896 - May 1897	Improvement Dredging to Straighten & Widen the 6-Foot Channel Near its Head	78,720 cy
Sept 1896 - May 1897	Improvement Dredging to Widen the 6-Foot Channel Bend at Oyster Shell Point	10,000 cy

Dec 1896 - Mar 1897	Improvement Dredging of the 10-Foot Lower Channel below the Railroad Bridge	77,000 cy Plus Boulder Removal
August 1899	Maintenance Dredging of the 6-Foot Upper Channel above the Railroad Bridge	10,500 cy
Dec 1902 - June 1903	Maintenance Dredging of the 10-Foot Channel below the Railroad Bridge	78,492 cy Plus 1¼ Tons Boulders
Nov 1904 - Jan 1905	Maintenance Dredging of the 6-Foot Channel above the Railroad Bridge	35,234 cy Plus 5 cy Boulders
Aug 1905 - Oct 1905	Maintenance Dredging of the 6-Foot Basin at Norwalk	5,052 cy Plus 9 cy Rock
Aug 1905 - Oct 1905	Maintenance and Improvement Dredging to Complete the 10-Foot by 150-Foot Channel Width at the Railroad Bridge	13,453 cy
Sept 1907 - Jan 1908	Improvement Dredging of the 6-Foot East Norwalk Branch Channel	73,560 cy
Sept 1907 - Jan 1908	Maintenance and Improvement Dredging of the Widened 10-Foot Channel and Basin below the Railroad Bridge	59,354 cy
Mar 1908 - Sept 1908	Improvement Dredging of the 8-Foot Channel above the Railroad Bridge to Norwalk	153,774 cy Plus 164 cy Rock
April 1909	Boulder Removal from Upper Basin at Norwalk	Unstated
May 1910 - June 1910	Maintenance Dredging of the 10-Foot Channel below the Railroad Bridge	4,323 cy Plus 2 cy Boulders
May 1910 - June 1910	Maintenance Dredging of the 6-Foot East Norwalk Channel	15,462 cy
May 1910 - June 1910	Maintenance Dredging of the 8-Foot Upper Channel at Norwalk	1,607 cy
May 1914	Maintenance Dredging of the 10-Foot Channel at Junction of East Channel	6,368 cy
June 1915 - July 1915	Maintenance Dredging of the 8-Foot Upper Channel above the Railroad Bridge to Norwalk	3,470 cy Plus 28 cy Boulders
May 1917 - July 1917	Maintenance Dredging of the 10-Foot Channel below the Railroad Bridge	27,302 cy
June 1917 - July 1917	Maintenance Dredging of the 8-Foot Upper Channel above the Railroad Bridge to Norwalk	19,901 cy

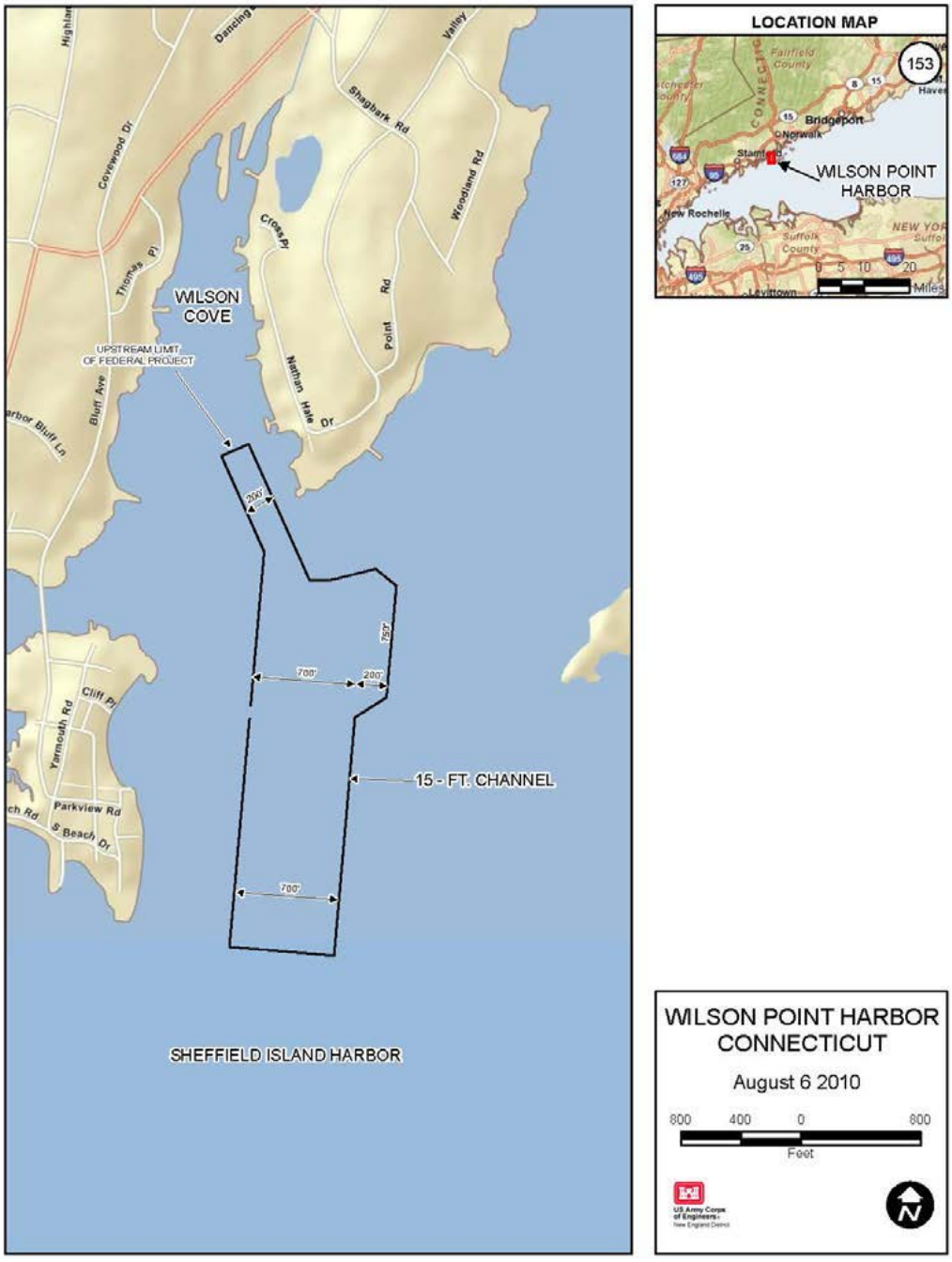
FY 1921	Maintenance Dredging of the 10-Foot Channel below the Railroad Bridge	13,000 cy Est.
Summer 1923 (FY-24)	Maintenance Dredging of the 8-Foot Upper Channel above the Railroad Bridge to Norwalk	60,000 cy
Fall 1923 - Fall 1924	Improvement Dredging of the 10-Foot Anchorage & Upper 12-Foot Channel	450,000
Fall 1924 - FY 1925	Improvement Dredging of the 6-Foot East Norwalk Channel	45,000
FY 1925 - Aug 1925	Improvement Dredging of the 12-Foot Outer Harbor Channel	236,000
FY 1926	Improvement Dredging of the 8-Foot Basin at Norwalk	Logs & Boulders Removed
Aug 1928 - Spring 1929	Improvement Dredging and Completion of the 10-Foot West Channel above South Norwalk	304,908 cy
FY 1930 - Sept 1930	Maintenance Dredging of the 12-Foot Channel & Anchorage below South Norwalk	221,762 cy
Summer 1930	Maintenance Dredging of the 10-Foot Lower Harbor Anchorage	40,254 cy
Dec 1932 - Jan 1933	Maintenance Dredging of the 6-Foot East Norwalk Channel	49,099 cy
Oct 1934 - Jan 1935	Maintenance Dredging of the 10-Foot Main Channel above South Norwalk	146,751 cy
Dec 1936 - Feb 1937	Maintenance Dredging of the 12-Foot Channel & 10-Foot Anchorage below South Norwalk	101,399 cy
Dec 1936 - Feb 1937	Maintenance Dredging of the 10-Foot South Norwalk Anchorage Basin	64,932 cy
Dec 1937 - Jan 1938	Maintenance Dredging of the 6-Foot East Norwalk Channel	22,429 cy
Mar 1940 - Apr 1940	Maintenance Dredging of the West 10-Foot Norwalk River Channel	72,309 cy
May 1941	Maintenance Dredging of the 12-Foot Channel Entrance below South Norwalk	1,837 cy
Dec 1941 - Jan 1942	Maintenance Dredging of the 12-Foot Channel below South Norwalk	65,814 cy
Nov 1949 - Oct	Improvement Dredging to Widen the 6-Foot	177,465 cy

1950	East Norwalk Channel & Anchorage	
May 1954 - Aug 1954	Maintenance Dredging of the 12-Foot Lower Channel & 6-Foot East Channel	214,492 cy
Nov 1955 - May 1956	Maintenance Dredging of the 10-Foot Norwalk River Channel above Washington Street	73,726 cy
Aug 1960 - Sept 1960	Maintenance Dredging of the 12-Foot Lower Harbor Channel and the 10-Foot River Channel	77,340 cy
Jan 1964 - Aug 1964	Maintenance Dredging of the 12-Foot Lower Channel, the 6-Foot East Channel and Basin, & the 10-Foot Lower Anchorage	184,723 cy
Sept 1969 - Nov 1969	Maintenance Dredging of the 12-Foot Lower Channel, the 6-Foot East Channel and Basin, the 10-Foot West Channel and Turning Basin, and the 10-Foot Lower Anchorage	63,223 cy
Mar 1980 - Jun 1981	Maintenance Dredging of the 12-Foot Lower Channel, the 6-Foot East Channel and Basin, the 10-Foot West Channel and Turning Basin, and the 10-Foot Lower Anchorage, with Construction of an In-Channel CAD Cell for Deposit of Small Volume (2,000 cy) of Contaminated Sediment, Remainder to CLIS.	276,000 cy
Oct 2005 – Feb 2006	Maintenance Dredging of the 10-Foot Upper Channel with a Portion Placed in 2 In-Channel CAD Cells, Capped with Small Amounts from the 6-Foot East Channel and 10-Foot Channel. Remainder to CLIS. From 10-Foot Channel to CLIS 65,413 From CAD Cell to CLIS 52,584 10-Foot Channel into CAD Cell 30,574 From 10-Foot Channel to Cap CAD 3,000 From 6-Foot Channel to Cap CAD 2,242	<u>153,813 cy Total</u> - 101,229 cy from Channels - 52,584 cy from CAD Cells
October 2008 – January 2009	Maintenance Dredging of the 6-Foot East Channel, 12-Foot Entrance Channel, and Dredging the 10-Foot South Anchorage (to a Reduced Depth of 6 Feet) with Disposal at the CLIS Disposal Site (Capped from North Cove)	195,042 cy
2013	Phase III Maintenance Dredging of the 35-Foot Main Ship Channel and Maneuvering Basin in Conjunction with Maintenance Dredging of New Haven Harbor with Disposal at the CLDS	352,200 cy

Wilson Point Harbor FNP, Norwalk, CT

Wilson Point Harbor has not changed since it's authorization by the River and Harbor Act of 1888 when the 15-foot deep channel, 700 to 900 feet wide up to the railroad wharves at Wilson Point then decreasing in width to 200 feet, was first approved for construction. See Project Map 153.

Project Map 153: Wilson Point Harbor FNP



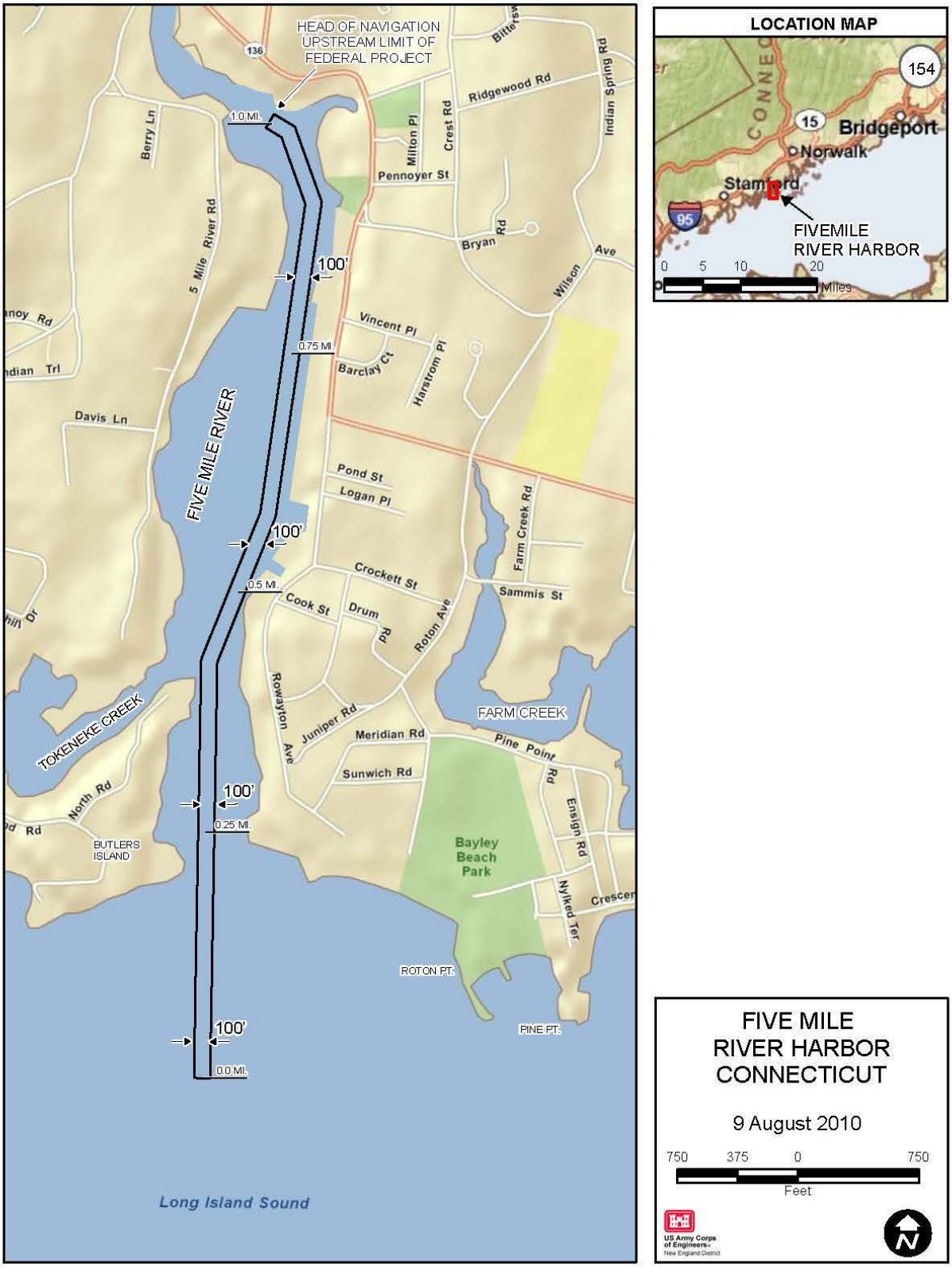
Wilsons Point Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 11 August 1888	15-Foot MLLW Channel, 700 to 900 Feet Wide, up to the Railroad Wharves at Wilsons Point and then 200 Feet Wide.	Jan 1889 – June 1892

Wilsons Point Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Jan 1889 – Apr 1889	Improvement Dredging of the 15-Foot Channel and Anchorage – Now 200 Feet Wide and 2/3 Length	109,995 cy
Aug 1889 – Nov 1889	Continued Improvement Dredging of the 15-Foot Channel and Anchorage – Area Widened to 400 Feet	95,591 cy
Feb 1891 - June 1891	Continued Improvement Dredging to Widen the 15-Foot Channel to the East at the Docks	124,974 cy
Feb 1892 - June 1892	Continued Improvement Dredging to Widen the 15-Foot Channel to West Completing the Project	179,000 cy

Fivemile River FNP, Darien & Norwalk, CT

The Fivemile River FNP was initially authorized in 1888 by the River and Harbor Act of the same year to be built as an 8-foot deep channel, 100 feet wide that was built to extend about 6,000 linear feet up to the head of the harbor. The upper 700 feet of the channel was deauthorized in 1978, making the channel roughly 5,300 feet long. The Federal project has remained unchanged since that time. See Project Map 154.

Project Map 154: Fivemile River FNP



Fivemile River List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 11 August 1888	Channel -8 Feet MLLW by 100 Feet Wide, Extending 6,000 LF Up to Head of Harbor Channel -8 Feet MLLW by 50 Feet Wide Extending about 1,500 LF Upriver. Completed in 1910 Except for Upper 600 to 700 LF of Channel of which Only about 200 LF was Dredged to Widths of 75 to 25 Feet	May 1889 – Sept 1907 Completed Channel 4,940 Feet Long with the Upper 200 LF at only 60 Feet Wide
Annual Report for 1908, Appendix D-15 (A), Page 1023	Recommended that the Design for the Uncompleted Upper End of the Channel (600 to 700 LF) be Reduced to -6 Feet MLLW by 50 Feet Wide.	Upper Channel Reaches Never Constructed
3 October 1978	Deauthorized the Uncompleted Upper 600 LF of the 8-Foot Channel as Authorized by the River & Harbor Act of 11 August 1888	Deauthorization

Fivemile River Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
May 1889 – Aug 1889	Improvement Dredging of 6-Foot MLLW Lower Channel	22,938 cy
Aug 1891 - Oct 1891	Improvement Dredging to Widen and Extend the 8-Foot MLLW Lower Channel Reach	30,000 cy
Sept 1893 - Oct 1893	Improvement Dredging to Extend the 8-Foot MLLW Channel Upstream	30,000 cy
Nov 1895 - Dec 1895	Improvement Dredging to Extend the 8-Foot MLLW Channel Upstream – Now 4,180 LF	15,014 cy
Oct 1897 - Dec 1897	Improvement Dredging to Widen the 8-Foot MLLW Channel at Entrance	21,956 cy
June 1899	Improvement Dredging to Extend the 8-Foot MLLW Channel Upstream – Now 4,290 LF	13,333 cy Estimated
Sept 1905 - Oct 1905	Maintenance and Improvement Dredging to Restore and Widen the 8-Foot MLLW Channel	29,943 cy

Aug 1907 - Sept 1907	Maintenance Dredging of the 8-Foot Channel	3,337 cy
Aug 1907 - Sept 1907	Improvement Dredging to Widen and Extend the 8-Foot MLLW Channel	34,947 cy
July 1911 - Aug 1911	Maintenance Dredging of the Lower 4,800 LF of the 8-Foot Channel	31,549 cy
June 1937	Maintenance Dredging of the Lower End of the 8-Foot Channel	4,199 cy
Nov 1937 - Jan 1938	Maintenance Dredging of the 8-Foot Channel	60,858 cy
May 1968	Maintenance Dredging of the 8-Foot Channel	47,700 cy
Feb 1999 - May 1999	Maintenance Dredging of the 8-Foot Channel	48,000 cy

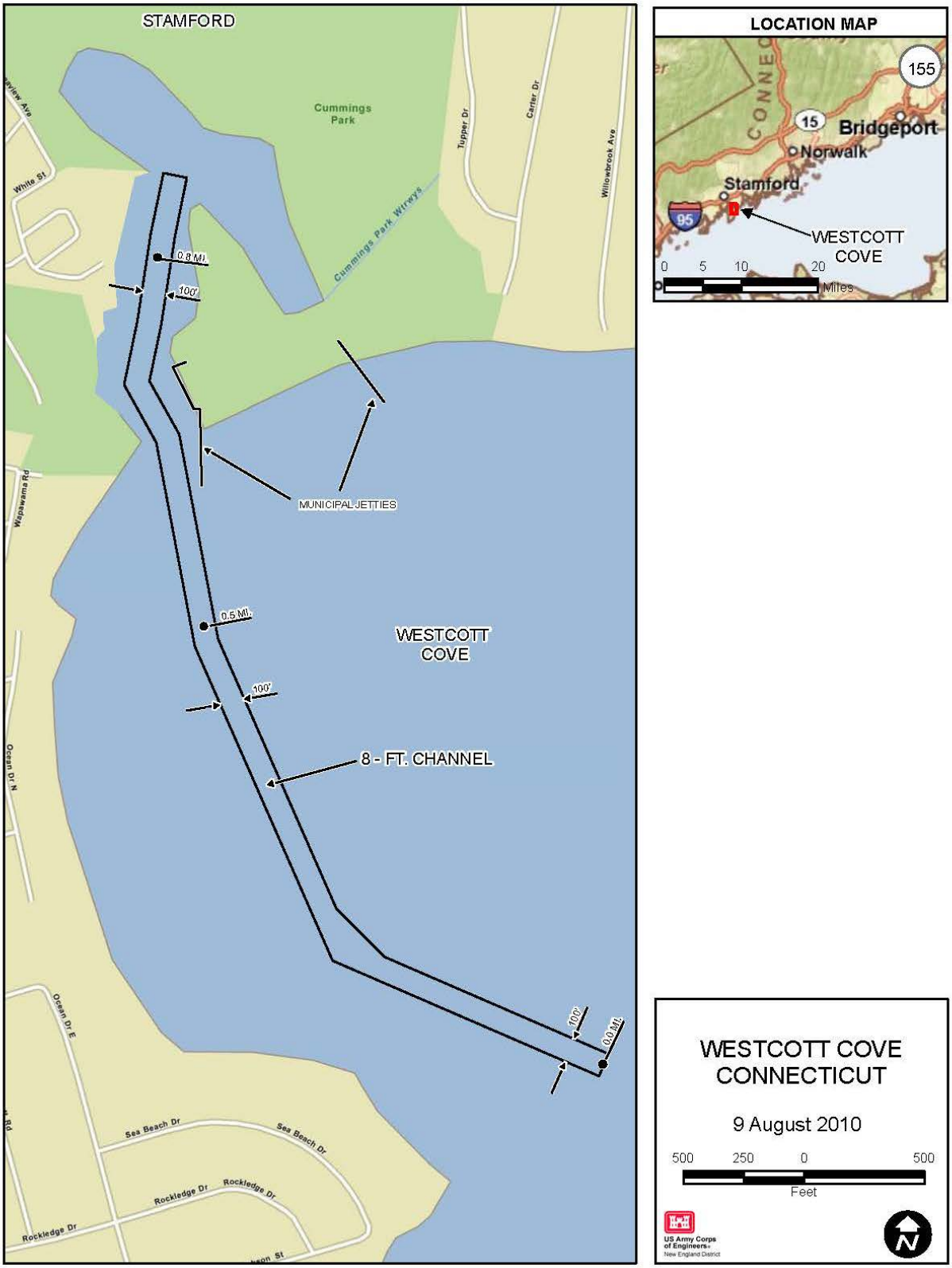
Stamford Dredging Center

Westcott Cove FNP, Stamford, CT

Westcott Cove was initially authorized by the River and Harbor Act of 1948. The Federal project has remained unchanged since that time and still consists of an 8-foot deep by 100-foot wide channel from Long Island Sound extending approximately 0.8 of a mile into Westcott Cove. See Project Map 155.

Westcott Cove List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 30 June 1948	Channel -8 Feet MLLW by 100 Feet Wide from the Sound into Westcott Cove to Access to a Municipal Marina and Mooring Basin Constructed by Local Interests	Nov 1956 – Jan 1957

Project Map 155: Westcott Cove FNP



Westcott Cove Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Nov 1956 - Jan 1957	Improvement Dredging of the 8-Foot Entrance Channel and Placed Upland to the West of the Cove	57,452 cy
Nov 1963 - Dec 1963	Maintenance Dredging of the 8-Foot Channel with Disposal at Stamford Disposal Site	6,700 cy
Feb 1972 - Mar 1973	Shoal Obstruction Removed from Entrance Channel and Placed on West Beach	6,000 cy
May 1978 - Jun 1978	Maintenance Dredging of the 8-Foot Entrance Channel with 7,000 CY Placed on West Beach and 18,500 CY Placed Upland West of the Cove	20,500 cy

Stamford Harbor FNP, Stamford, CT

The Stamford Harbor FNP consists of three channels: the East Branch which goes through the hurricane barrier, the West Branch which goes to a turning basin at the mouth of the Rippowam River, and the main entrance channel. The entrance channel gained authorization through the River and Harbor Act of 1886 which allowed for a channel, 5 feet deep by 80 feet wide by 6,600 linear feet long from deep water in the harbor up to the wharves below the bridge in Mill Creek. Modifications were made to the project several times throughout history including: channel deepening, widening, and realigning (1892, 1919, 1935, 1937); adding turning basins and anchorages (1892, 1935, 1937); adding breakwaters (1937); and the construction of a tidal surge barrier across the East Branch channel with a navigation sector gate (1960).

The final configuration of Norwalk Harbor includes an East (1,200 linear feet) and West (2,900 linear feet) breakwater both with a top elevation of +12 feet and top width of 6 feet; an entrance channel, 18 feet deep by 200 feet wide by approximately 0.75 miles then becoming 15 feet deep until it branches into the East and West Branch channels; an 18-foot by 20-acre, 600-foot wide anchorage to the west of the entrance channel; a West Branch channel running for about 1 mile into the Rippowam River at 125 feet wide and 15 feet deep; a 15-foot deep by 380-foot wide turning basin at the head of the West Branch channel; an East Branch channel running for about 1.25 miles upriver at 100 to 150 feet wide by 12 feet deep; an 8-foot deep by 4.2-acre anchorage to the east of the East Branch channel; and a tidal surge barrier across the East Branch channel with 90-foot gate openings. See Project Map 156 for visual.

Project Map 156: Stamford Harbor FNP

Stamford Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1886	5-Foot MLLW Channel 80 Feet Wide 6,600 LF from Deep Water in the Harbor up to the Wharves below the Bridge in Mill Creek (Upper End only to 50-70 Feet Wide)	April 1887 – Dec 1891
River & Harbor Act of 13 July 1892	West Branch Channel to -7 Feet MLLW by 150 Feet Wide, Deepening the Head of the Harbor Basin to -7 Feet MLLW, East Branch Channel -9 Feet MLLW by 100 Feet Wide Upstream 8,535 LF to the Steamboat Wharf, then at 50 Feet Wide for a Further 1,200 LF with a Turning Basin at its Head.	9-Ft East Channel – May 1893 – Aug 1908 7-Ft West Channel – Oct 1895 – June 1912
River and Harbor Act of 2 March 1919	Entrance Channel -12 Feet MLLW by 200 Ft Wide from the Sound to the Confluence of the Two Branch Channels, a Realigned West Branch Channel at -9 Feet MLLW by 150 Feet Wide with a Basin 200 Feet Wide at the Upper End, and East Branch Channel -12 Feet MLLW by 85 to 125 Feet Wide.	12-Foot Channels – FY 1921 – FY 1927 9-Foot West Channel – FY 1924 – FY 1927
Act of 5 June 1920	Repealed a Restriction in the 1919 Act that Established a Ceiling for Project Costs that Turned Out to be Less than Bids Received	NA
River & Harbor Act of 30 August 1935	Outer Harbor Entrance Channel -15 Feet MLLW by 200 Feet Wide, West Branch Channel -15 Feet MLLW by 125 Feet Wide, with a 200-Foot Basin Width at the Upper End, and a 17-Acre Outer Harbor Anchorage East of the Channel at -8 Feet MLLW by 1000 Feet Long.	15-Ft Channels – March 1937 – Jan 1940 8-Ft Outer Anchorage – Never Constructed
River & Harbor Act of 26 August 1937	Two Stone Breakwaters Across the Outer Harbor Entrance with a Navigation Opening of About 800 Feet, the East Breakwater 1,200 LF Southwesterly from about 400 Feet off Shippan Point towards the Entrance Channel, the West Structure about 2,400 Feet from South of Peck Point 2,900 LF Easterly towards the Channel. Both to have a Top Elevation of +12 Feet MLLW, and Top Width of 6 Feet. Also an Outer Harbor Anchorage Basin -18 Feet MLLW by about	West Breakwater – June 1940 – Sept 1941 East Breakwater – July 1941 – Sept 1941 18-Ft Channel and Anchorage – Dec 1941 – March 1944

	20 Acres, West of the Entrance Channel 600 Feet Wide, and a 200-Foot Wide Entrance Channel -18 Feet MLLW to the Head of the Recommended -18-Foot Anchorage.	
River & Harbor Act of 24 July 1946	Substitution of an 8-Foot by 4.2-Acre Anchorage Area Adjacent to the East Branch Channel for the Unconstructed 8-Foot by 17-Acre Anchorage in the Outer Harbor.	Never Constructed Deauthorized 1 January 1990
River & Harbor Act of 14 July 1960	Construction of a Tidal-Surge Barrier Dike Across the East Branch of the Harbor about 1,000 Feet above its Mouth, with a Navigation Sector Gate. The Barrier Includes a 1,030 LF Earth-Filled Dike, with Stone Slope and Toe Protection, with a Top Elevation of +18 Feet MSL, Opening 75 Feet Wide, Sill Elevation of -14.6 Feet MLLW with Concrete Abutments, with Channel Realignment Dredging to Conform to the Location and Angle of the Gate. The West Branch Barrier would be Composed of 1,780 LF of Concrete Wall and 220 LF of Sheet-Pile Bulkhead Wall at its Northern End with Top Elevations of +16 to +17 Feet MSL. A Pumping Station is Included	
3 October 1978	Deauthorized the Unconstructed Portion of the Project Authorized in 1919 and the Entire Unconstructed Project Authorized by the River and Harbor Act of 1946	Deauthorization
1 January 1990, Federal Register, Vol. 55, #194, 5 Oct 1990, Pg. 40906	Deauthorized the Unconstructed Project for Widening the 8-Foot East Branch Channel and the 8-Foot East Branch Anchorage as Authorized by the River and Harbor Act of 24 July 1946	Deauthorization: May be Duplicate of Above Deauthorization

Stamford Harbor: Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Apr 1887 - Oct 1887	Begin Improvement Dredging of the 5-Foot by 80-Foot Wide West Branch Channel	54,462 cy

Mar 1889 - Apr 1889	Continue Improvement Dredging of the 5-Foot West Branch Channel	22,504 cy
Apr 1891 - June 1891	Continue Improvement Dredging of the 5-Foot West Branch Channel - Upper Reach	15,550 cy
Nov 1891 - Dec 1891	Complete Improvement Dredging of the 5-Foot West Branch Channel - Widened at the Bends, but with Reduced Width at Upper End	7,365 cy
May 1893 - Oct 1893	Begin Improvement Dredging of the 9-Foot East Branch Channel	55,166 cy
July 1893 - Oct 1893	Maintenance Dredging of the 5-Foot West Branch Channel Bends	6,340 cy
Oct 1893 - Nov 1893	Improvement Dredging and Rock Removal from the 9-Foot East Branch Channel	434 cy Plus 205 cy Boulders
July 1894	Improvement - Rock Removal from the 9-Foot East Branch Channel	17 cy Boulders Estimated
Oct 1895 - Jan 1896	Improvement Dredging and Rock Removal from the 9-Foot East Branch Channel	20,771 cy Plus 163 Tons Boulders
Oct 1895 - Jan 1896	Improvement Dredging and Rock Removal from the 7-Foot West Branch Channel - Lower Reaches	44,974 cy Plus 7½ Tons Boulders
June 1897 - Aug 1897	Continue Improvement Dredging of the 7-Foot West Branch Channel & Basin	79,167 cy Plus 2 Large Boulders
July 1899 - Nov 1899	Continue Improvement Dredging of the 7-Foot West Branch Channel & Basin	7,524 cy
July 1899 - Nov 1899	Continue Improvement Dredging of the 9-Foot East Branch Channel and Upper Basin	21,714 cy
Dec 1902 - Mar 1903	Continue Improvement Dredging of the 9-Foot East Branch Channel and Upper Basin	31,706 cy Plus 72 Tons Boulders
Sept 1905 - Mar 1906	Maintenance and Improvement Dredging of the 7-Foot West Branch Channel & Basin	55,584 cy Plus 248 cy Boulders
Oct 1907 – Sept 1908	Maintenance and Improvement Dredging to Complete the 9-Foot East Branch Channel & Basin	65,176 cy Plus 291 cy Rock
Oct 1907 – Sept 1908	Maintenance and Improvement Dredging of the 7-Foot West Branch Channel & Basin	107,152 cy Plus 1,120 cy Rock

Mar 1911 - July 1911	Improvement Dredging of the 7-Foot West Branch Turning Basin	60,080 cy Plus 24 cy Rock
June 1911	Removal of Boulders from the 9-Foot East Branch Channel	18 cy Boulders
Jan 1917 - May 1917	Maintenance Dredging of the 9-Foot East Branch Channel and Basin	22,853 cy Plus 20 cy Boulders
Jan 1917 - May 1917	Maintenance Dredging of the 7-Foot West Branch Basin	14,765 cy Plus 10 cy Boulders
FY 1921	Improvement Dredging of the 12-Foot Main Entrance Channel and the 12-Foot East Branch Channel	237,200 cy Estimated
Oct 1922 - Nov 1922	Rock Removal from the 12-Foot East Branch Channel	232 cy Rock
Oct 1922 - Nov 1923	Improvement Dredging of the 12-Foot Main Entrance Channel and the 12-Foot East Branch Channel	143,239 cy Plus 1,217 cy Rock
Spring 1923	Improvement Dredging of the 12-Foot East Branch Channel	1,800 cy Rock and Overburden
Fall 1923 - Aug 1924	Improvement and Improvement Dredging of the 9-Foot West Branch Channel & Basin	148,500 cy Estimated
FY 1925	Maintenance Dredging of the 12-Foot East Branch Channel	5,000 cy Estimated
Summer - Fall 1925	Maintenance Dredging of the 12-Foot East Branch Channel	75,000 cy Estimated
Fall 1926	Rock Removal from the 12-Foot East Branch Channel and 9-Foot West Branch Channels	170 cy Rock Estimated
July 1931 - Sept 1931	Maintenance Dredging of the 9-Foot West Branch Channel & Turning Basin	83,101 cy
July 1932 - Oct 1932	Maintenance Dredging of the 12-Foot East Branch Channel & Entrance Channel	142,387 cy Plus 161 cy Boulders
May 1934 - July 1934	Boulder Removal from Slopes of the 9-Foot West Branch & 12-Foot East Branch Channels	441 cy Boulders
Mar 1937 - June 1937	Improvement Dredging of the 15-Foot Main Entrance Channel	128,915 cy Plus 7 cy Boulders
Mar 1937 - Sept 1937	Improvement Dredging of the 15-Foot West Branch Channel & Basin	150,364 cy Plus 556 cy Rock

Oct 1937 - Mar 1938	Improvement Dredging of the 15-Foot Main Entrance Channel	1,984 cy Plus 15 cy Boulders
Oct 1937 - Mar 1938	Improvement Dredging of the 15-Foot West Branch Channel & Basin	128,343 cy Plus 871 cy Boulders
Mar 1938 - June 1938	Maintenance Dredging of the 12-Foot East Branch Channel	77,167 cy Plus 69 cy Boulders
Apr 1939 - Jan 1940	Improvement Dredging and Rock Removal from the 15-Foot Main Channel & 15-Foot West Channel and Basin	7,869 cy Plus 3,160 cy Boulders
Feb 1939 - Mar 1939	Rock Removal by US Lighter from the 12-Foot East Branch and 15-Foot West Branch Channel and Basin	127 cy Boulders
June 1940 - Sept 1941	Construction of the Rubblestone Stamford Light Breakwater	105,443 Long Tons Stone Placed
July 1940 - Aug 1941	Construction of the Rubblestone Shippan Point Breakwater	35,792 Long Tons Stone Placed
Dec 1941 - June 1943	Improvement Dredging of the Outer 18-Foot Channel Depth	219,395 cy Plus 318 cy Boulders
Sept 1943 - Mar 1944	Improvement Dredging of the Outer 18-Foot Channel & 18-Foot Anchorage	55,463 cy Plus 593 cy Rock
July 1945 - May 1946	Maintenance Dredging of the 15-Foot Upper Entrance Channel and 15-Foot West Branch Channel and Basin	46,928 cy Plus 195 cy Boulders
November 1963	Maintenance Dredging of the 15-Foot West Branch Channel and Basin	100,000 cy
FY 1979 - FY 1980	Maintenance Dredging of the 12-Foot East Branch Channel	78,000 cy in FY79

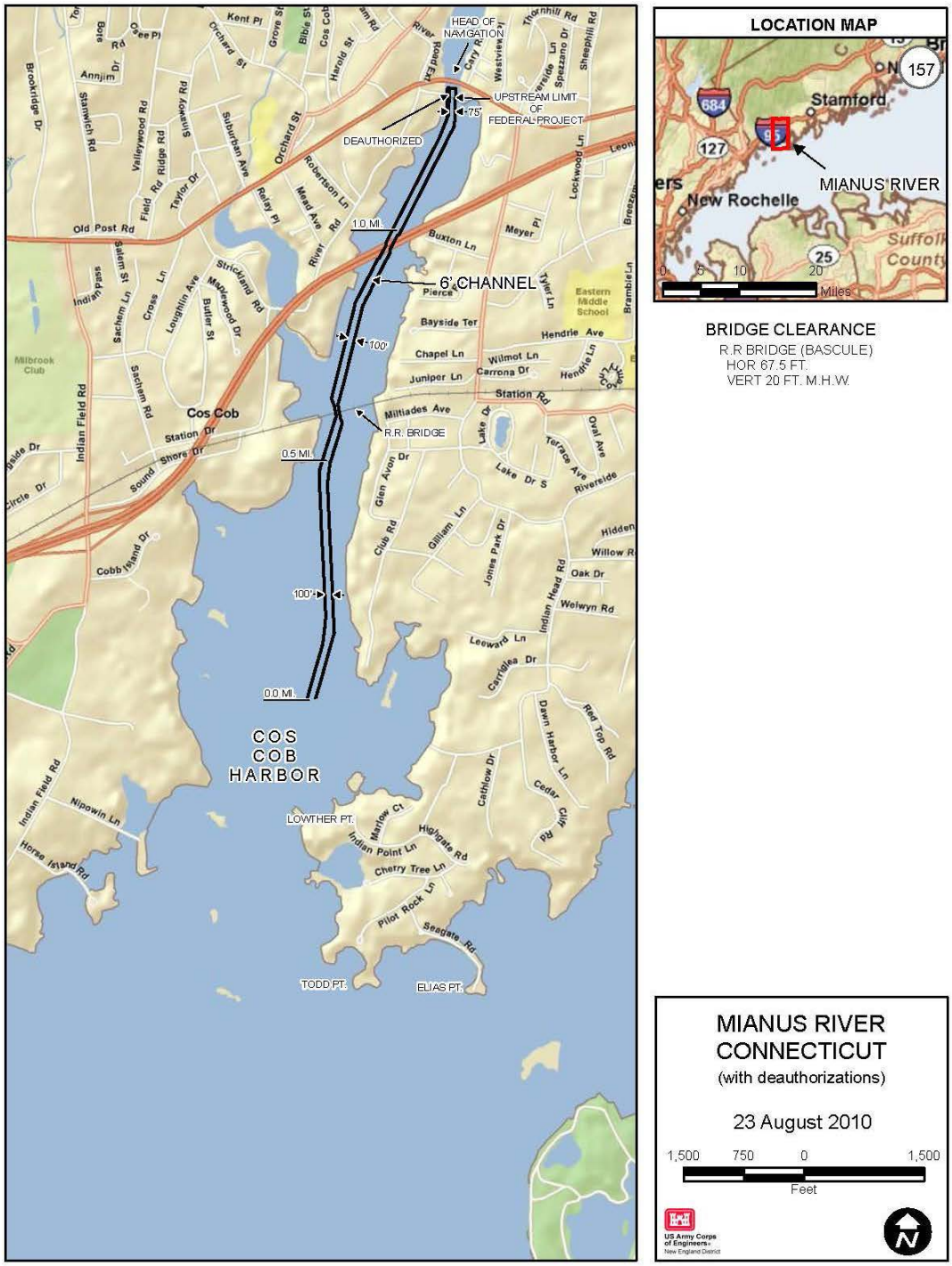
Greenwich Area Dredging Center

Mianus River FNP, Greenwich, CT

The River and Harbor Act of 1892 authorized a channel with a depth of 6 feet, 150 feet wide below the Railroad Bridge and 100 feet wide above the bridge to Mianus. In 1896, an anchorage was added to the lower harbor west of the channel between Goose Island and the Riverside

Yacht Club wharf, which measured 7 feet deep by 300 feet wide. These portions of the project were deauthorized in 1805 due to a decline in waterborne commerce, but replaced in 1945 with a 6-foot deep by 100-foot wide channel upstream from Lower Cos Cob Harbor to the U.S. Route 1 Bridge at Mianus. See Project Map 157.

Project Map 157: Mianus River FNP



BRIDGE CLEARANCE
R.R BRIDGE (BASCULE)
HOR 67.5 FT.
VERT 20 FT. M.H.W.

MIANUS RIVER
CONNECTICUT
(with deauthorizations)

23 August 2010

1,500 750 0 1,500
Feet

US Army Corps of Engineers - New England District

Mianus River List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 13 July 1892	Channel -6 Feet, 150 Feet Wide below the Railroad Bridge and 100 Ft Wide above the Bridge to Mianus. Completed to 1,600 LF above the Railroad Bridge and to –7 Feet below the Bridge, plus a Further 180 LF at –5 Feet by 50 Feet at the Upstream End.	May 1893 – July 1899
River & Harbor Act of 1896	Anchorage Area in the Lower Harbor at -7 Feet by 300 Feet Wide, West of the Channel, between Goose Island and Opposite Riverside Yacht Club Wharf, 2,000 LF along the Channel and 1,500 LF along the Western Limit.	June 1896 – Aug 1897
River & Harbor Act of 3 March 1905	Prior Projects of 1892 and 1896 Abandoned and Deauthorized due to Decline in Waterborne Commerce	Deauthorization
River & Harbor Act of 2 March 1945	Channel -6 Feet by 100 Feet Wide Upstream from Lower Cos Cob Harbor to the US Route 1 Bridge at Mianus.	Oct 1950 – Sept 1951
Water Resources Development Act of 17 November 1986	Section 1006(a) – Deauthorized Portion of the 6-Foot Channel from 1945 Act to Resolve Encroachment	Deauthorization
Water Resources Development Act of 17 November 1988 P.L. 100-676	Section 51(b) – Modified Deauthorization Language of WRDA 1986 to Change Misstated Coordinates and Ranges	Deauthorization

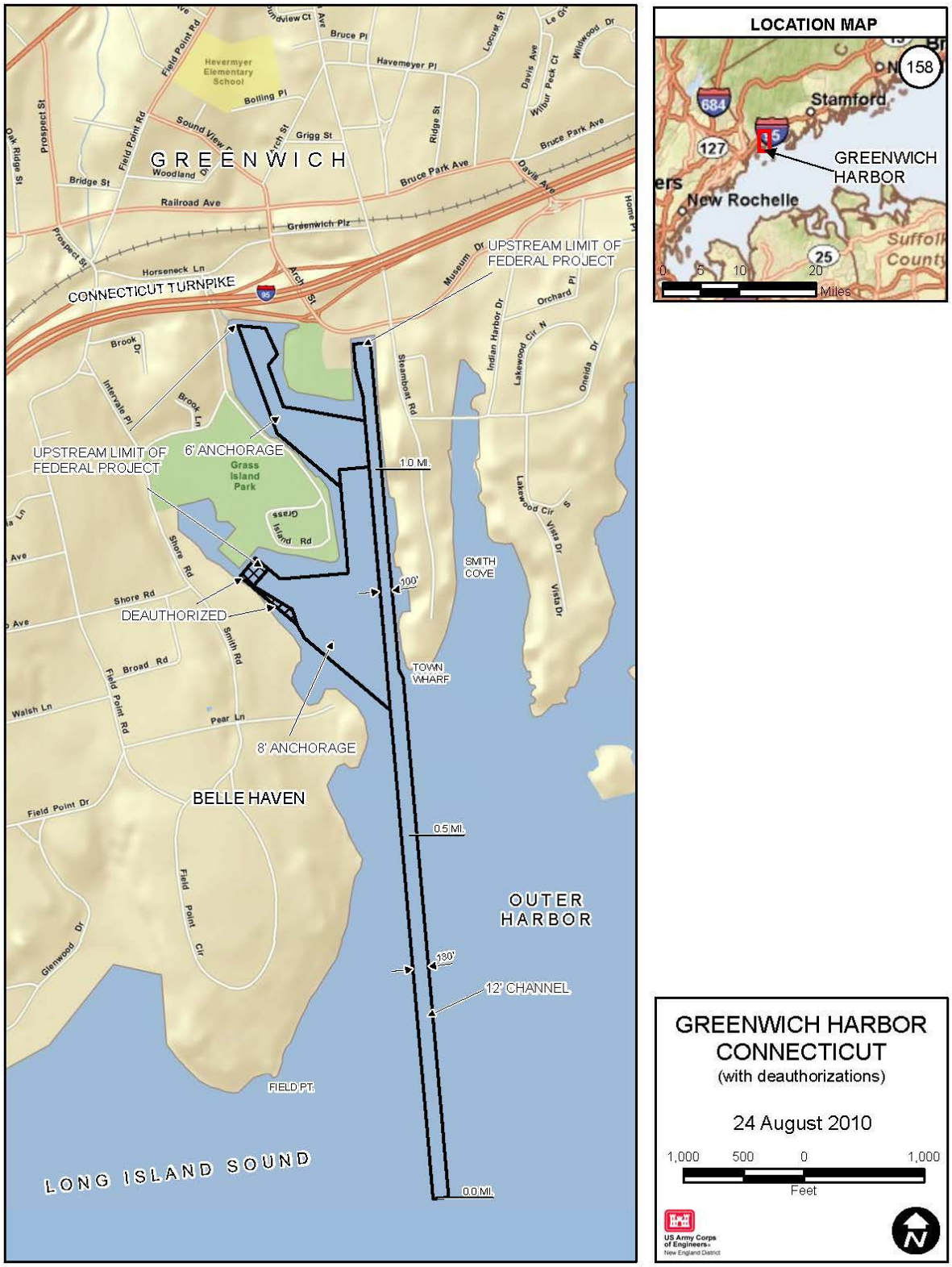
Mianus River Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
May 1893 – Aug 1893	Begin Improvement Dredging of the 6-Foot by 150-Foot Wide Channel up to the Railroad Bridge – Dredged to –7 Feet	40,000 cy
Oct 1895 – May 1896	Improvement Dredging of the 6-Foot by 100-Foot Wide Channel above the Railroad Bridge	32,946 cy

	– Dredged 1,300 LF	
June 1896 – Aug 1897	Improvement Dredging of the 7-Foot Anchorage in the Lower Harbor – East Half of Area Completed	60,000 cy
June 1899 – July 1899	Continue Improvement Dredging to Extend the 6-Foot Upper Channel for 300 Feet at –6 Feet by 100 Feet Wide and a Further 180 Feet at –5 Feet by 50 Feet Wide	6,500 cy
Oct 1950 – Sept 1951	Improvement Dredging of –6-Foot by 100-Foot Wide Channel Upriver to the Route 1 Highway Bridge	211,135 cy
Jan 1964 – Feb 1964	Maintenance Dredging of 6-Foot Channel above the Railroad Bridge	18,000 cy
March 1985 – June 1985	Maintenance Dredging of 6-Foot Channel above the Railroad Bridge	52,682 cy

Greenwich Harbor FNP, Greenwich, CT

Greenwich Harbor's Federal navigation project began as a channel extending 5,200 feet from deep water in Captain Harbor through Greenwich Harbor at a 9-foot depth, 90 feet wide by 3,500 linear feet long thence 6 feet deep by 90 feet wide by 1,700 linear feet with a small turning basin at the upper end. This was accomplished by the passage of the River and Harbor Act of 1896. In 1919, the project was deepened to 12 feet and widened to 130 feet through the outer harbor up to the lower wharves, thence at 100 feet wide to along the waterfront to the existing turning basin. In 1945, the R&H Act authorized the addition of two anchorages west of the channel, one 8 feet deep by 17.5-acres east and south of Grass Island, the second at 6 feet deep by 5-acres north of Grass Island. Those anchorages were expanded in 1948, the one north of Grass Island was brought to 12.5-acres and the one east and south of Grass Island was increased to 21.5-acres. See Project Map 158.

Project Map 158: Greenwich Harbor FNP



Greenwich Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 3 June 1896	Channel 5,200 LF from Deep Water in Captain Harbor through Greenwich Harbor along the East Wharves to the Causeway above the Wharves at –9 Feet by 90 Feet Wide 3,500 LF up to the Steamboat Dock then -6 Feet by 90 Feet Wide by 1,700 LF with a Small Turning Basin at the Upper End.	Oct 1897 – Sept 1905
River & Harbor Act of 2 March 1919	Channel -12 Feet by 130 Feet Wide through the Outer Harbor Up to the Lower Wharves (Town Pier), then at 100 Feet Wide to along the Waterfront to a Point below the Existing -6 Foot Turning Basin	July 1919 – FY 1924
River & Harbor Act of 2 March 1945	Extending the -12-Foot Channel North to the Head of Navigation at the Causeway at 140 Ft Wide, and Adding Two Anchorage Areas West of the Channel, One -8 Feet by 17.5 Acres East and South of Grass Island, and a Second at -6 Feet by 5-Acres North of Grass Island.	Nov 1949 – Jan 1951
River & Harbor Act of 30 June 1948	Expanding the Design for the Two West Anchorage Areas to Provide -6 Feet by 12.5-Acres North of Grass Island and -8 Feet by 21.5-Acres East and South of Grass Island.	Nov 1949 – Jan 1951
P.L. 84-152, 69 Stat. 298, 12 July 1955	Declares Non-Navigable an Upper Portion of Greenwich Harbor Provided the State Dredges a Compensatory 0.9-Acre Area of 6-Foot Anchorage	Abandonment
Water Resources Development Act of 28 November 1990, P.L. 101-640, §119(c)	Deauthorized an Irregular Shaped Area at the Head of the 8-Foot Anchorage Area South of Grass Island to Resolve an Encroachment	Deauthorization

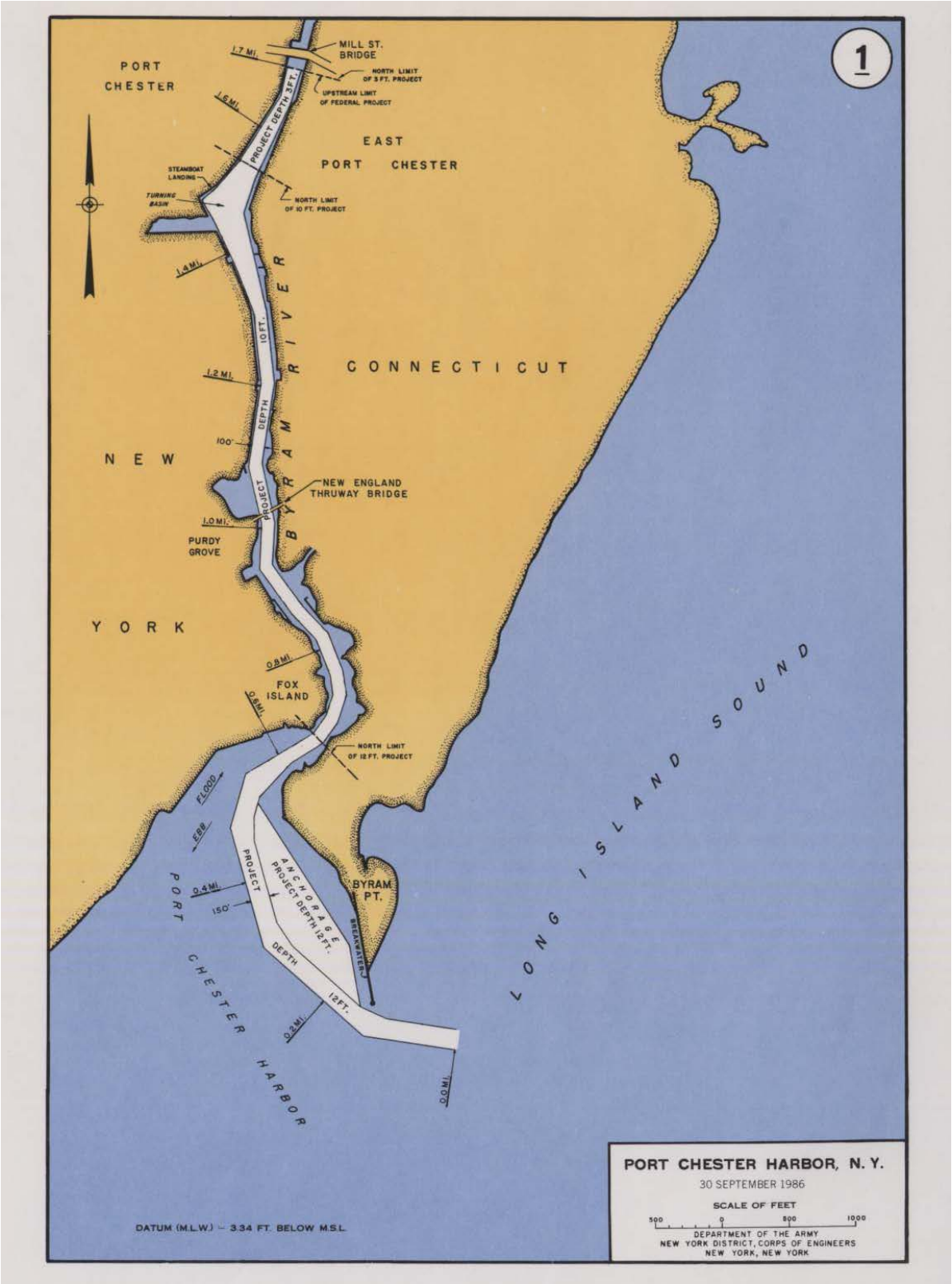
Greenwich Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Oct 1897 - Jan 1898	Begin Improvement Dredging of the Upper 6-Foot Channel	35,000 cy
Dec 1902 – March 1903	Maintenance and Improvement Dredging of the 6-Foot Upper Channel and Improvement Dredging of the 9-Foot Lower Channel	43,573 cy
Sept 1904 – Oct 1904	Maintenance and Improvement Dredging of the 6-Foot and 9-Foot Channels	11,000 cy
Aug 1905 – Sept 1905	Maintenance and Improvement Dredging of the 6-Foot and 9-Foot Channels	27,632 cy
June 1911 – July 1911	Maintenance Dredging of the 6-Foot and 9-Foot Channels and 6-Foot Turning Basin	10,412 cy
July 1913 - Sept 1913	Maintenance Dredging of the Lower End of the 9-Foot Channel and the 6-Foot Channel and Basin	12,048 cy
July 1919 - May 1920	Improvement Dredging of the 12-Foot Channel	137,393 cy
FY 1924 - Aug 1924	Maintenance and Improvement Dredging of the 12-Foot Channel	50,000 cy Estimated
July 1931 - Sept 1931	Maintenance Dredging of the 12-Foot Channel	41,761 cy
Apr 1940 - May 1940	Maintenance Dredging of the 12-Foot Channel	110,240 cy
Nov 1949 - Jan 1951	Improvement Dredging of 12-Foot Channel Extension, and the 6-Foot and 8-Foot Anchorages	407,992 cy Plus 589 cy Boulders
Apr 1968 - May 1968	Maintenance Dredging of the 12-Foot Outer Channel and Waterfront Channels	39,800 cy

Port Chester/Rye Dredging Center

Port Chester Harbor FNP, Rye, NY

The Port Chester Federal navigation project was authorized by the River and Harbor Act of 1872 and modified in 1930. The FNP was authorized to consist of a 12-foot deep entrance channel, 150-foot wide leading from Long Island Sound to the tip of Fox Island; thence a 10-foot deep by 100-foot wide channel from Fox Island to the steamboat landing; thence a 3-foot deep channel running to the Mill Street Bridge; a breakwater off the tip of Byram Point; a 12-foot deep anchorage to the east of the channel; and a 10-foot deep turning basin at the steamboat landing. The total length of the channel is about 1.7 miles. See Project Map 1 below.

Project Map 1: Port Chester Harbor FNP



Port Chester Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1872	Improvement of Port Chester Harbor by Removing Sunken Rock to 11 Feet, Removing Salt Rock at 9 Feet, and the Construction of a Breakwater at Byram Point, 400 Feet Long, 13 Feet Above MLW	1872-1873
River & Harbor Act of 1882	Continuing Improvement of Port Chester Harbor: Channel from 60 to 100 Feet Wide and 2.5 Feet Deep from the Bay to 150 Feet of the Bridge at Port Chester	August 1884 - May 1885 for Rock Removal May 1885 – July 1886 for Channel Creation
River & Harbor Act of 1888	Continuing Improvement of Port Chester Harbor by Omitting the Removal of Sunken Rock and Changing the Location of the Breakwater Such That it Extends from Sunken Rock Towards the Shore	18 March – 22 May 1889
River & Harbor Act of 1890	Continuing Improvement of Port Chester Harbor by Extending the Breakwater from Sunken Rock Towards the Shore	23 February – 15 April, 1891
River & Harbor Act of 1892	Continuing Improvement of Port Chester Harbor by Extending and Enlarging the Breakwater	30 December 1892 – 5 August 1894
River & Harbor Act of 1894	Continuing Improvement of Port Chester Harbor by Completing the Breakwater as Authorized by the R&H Act of 1892	5 November – 8 December 1894
River & Harbor Act of 1896	Continuing Improvement of Port Chester Harbor by Dredging the Channel Across the Outer Bar in the Bay to 8 Feet, 75 Feet Wide, and 1,900 Feet Long, as well as Widening the Channel near Town Dock by 75 Feet and Deepening it to 8 Feet MLLW	17 December 1895 – 29 February 1896
River & Harbor Act of 1899	Continuing Improvement of Port Chester Harbor by Enlarging the Channel Below and up to Town Dock to a Depth of 12 Feet and a Width of 70 Feet, and From Town Dock to the Steamboat Dock to a Depth of 9 Feet and a Width of 60 Feet	Unknown

River & Harbor Act of 1910	Improvement of Port Chester Harbor by Providing a Channel 12 Feet Deep, 150 Feet Wide to the Southerly Point of Fox Island, Thence a Depth of 10 Feet with a Width of 100 Feet to Just Below the Steamboat Dock, Above the Dock and to 900 Feet Below the Fixed Bridge with a Width Varying From 100 to 340 Feet (Includes a Turning Basin), for 800 Feet Above this Last Length a Channel 3 Feet Deep 175-100 Feet Wide	1912 - 1916
River & Harbor Act of 1924	A Dam Built by Either the Village of Port Chester or the Town of Greenwich, Connecticut is Allowed to be Constructed and Maintained Across the Byram River	Unknown
House Document 192-	Deauthorization of the Work to Widen the Turning Basin and Construct Fenders on the Back Opposite the Southern End of Fox Island	Deauthorization

Port Chester Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
May 1932	Improvement Dredging of the 12-Foot Anchorage at Byram Point	143,460 cy
July – Sept 1932	Maintenance Dredging of the 10-Foot Channel	681 tons rock, 18,591 cy sediment
March 1935	Maintenance Dredging of the 10-Foot Channel	8,737 cy
June 1938	Maintenance Dredging Byram Point to Turning Basin to 10-Feet	956 cy
July – Oct 1938	Improvement and Maintenance Dredging Byram Point to Turning Basin to 10-Feet	New work: 799 tons stone 1,927 cy Maintenance: 10,363 cy
June 1947	Maintenance Dredging of the 10-Foot Channel from Fox Island to Turning Basin	7,100 cy
July 1947	Maintenance Dredging of the 10-Foot Channel from Fox Island to Turning Basin	24,506 cy

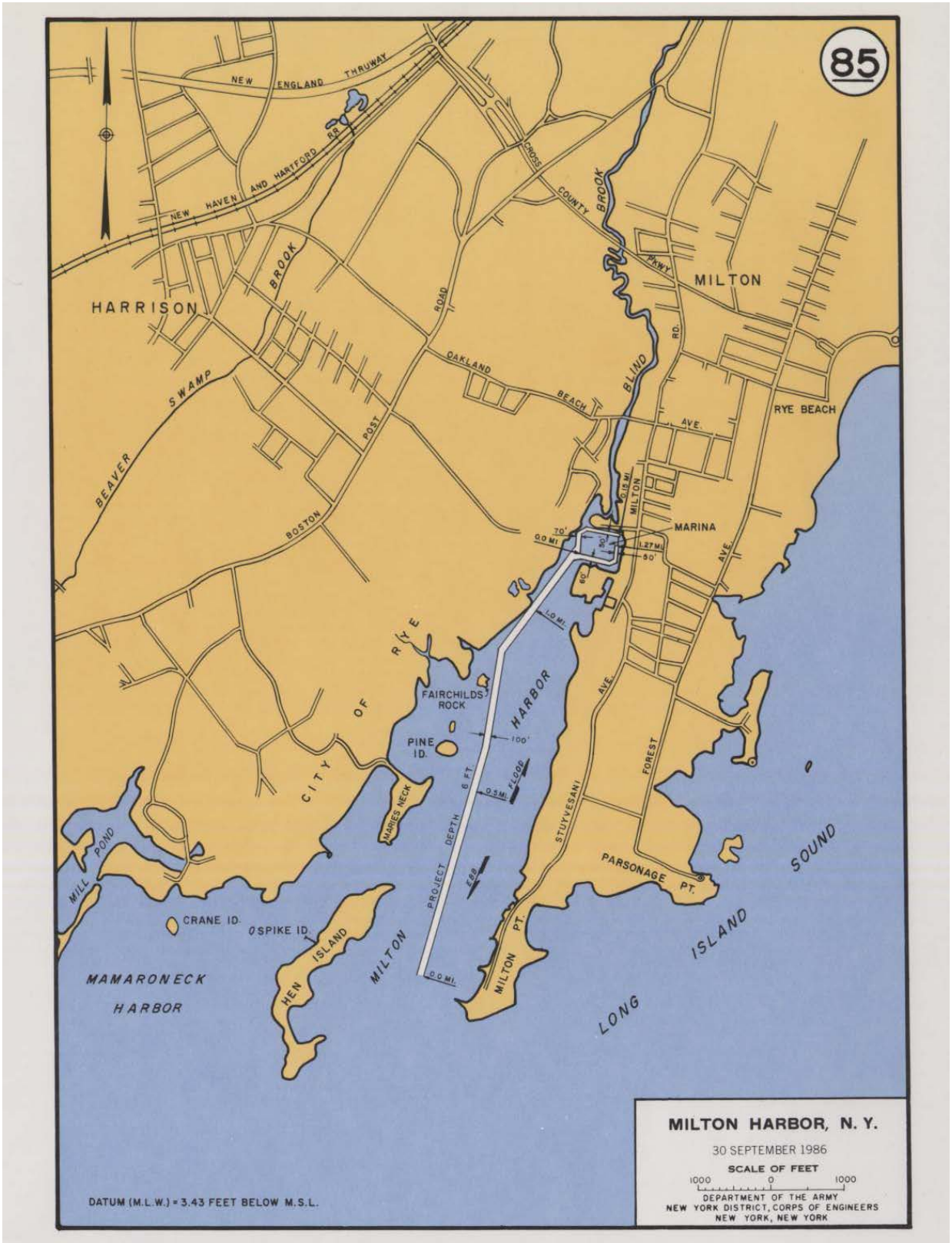
March – April 1959	Maintenance Dredging 10- and 12-Foot Channel from the Mouth to Upper End of Turning Basin	79,988 cy
Nov – Dec 1963	Repairs to the Breakwater	Unknown
May 1966	Maintenance Dredging the 10- and 12-Foot Channels	42,800 cy
11 July 1966	Maintenance Dredging the 10- and 12-Foot Channels	18,270 cy
9 May – 15 July 1966	Maintenance Dredging 10- and 12-Foot Channels from Long Island Sound to Upper Limit of 10-Foot Project	61,070 cy
9 March – 12 April 1985	Maintenance Dredging 3-foot Channel, and 10- and 12-foot Channels 0.5 Miles to End of Project	118,901 cy
April – May 1990	Maintenance Dredging 10- and 12-Foot Channels	40,797 cy

Milton Harbor FNP, Rye, NY

The Federal navigation project at Milton Harbor was initially authorized in 1965 and provides for a 6-foot deep entrance channel, 1.12 miles long from the 6-foot contour in the outer harbor; thence at the same depth an inner channel 60 and 50 feet wide, 0.15 miles long; thence at the same depth a branch channel 70 and 50 feet wide, 0.17 miles long. See Project Map 85 for features.

Milton Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1965	Improvement of Milton Harbor by Providing an Entrance Channel 6 Feet Deep, 100 Feet Wide and 1.1 Miles Long from the Outer Harbor, Thence an Inner Channel 60 and 50 Feet Wide and 0.15 Mile Long, Thence a Branch Channel 70 and 50 Feet Wide and 0.17 Mile Long.	March 23 – June 16 1967

Project Map 85: Milton Harbor FNP



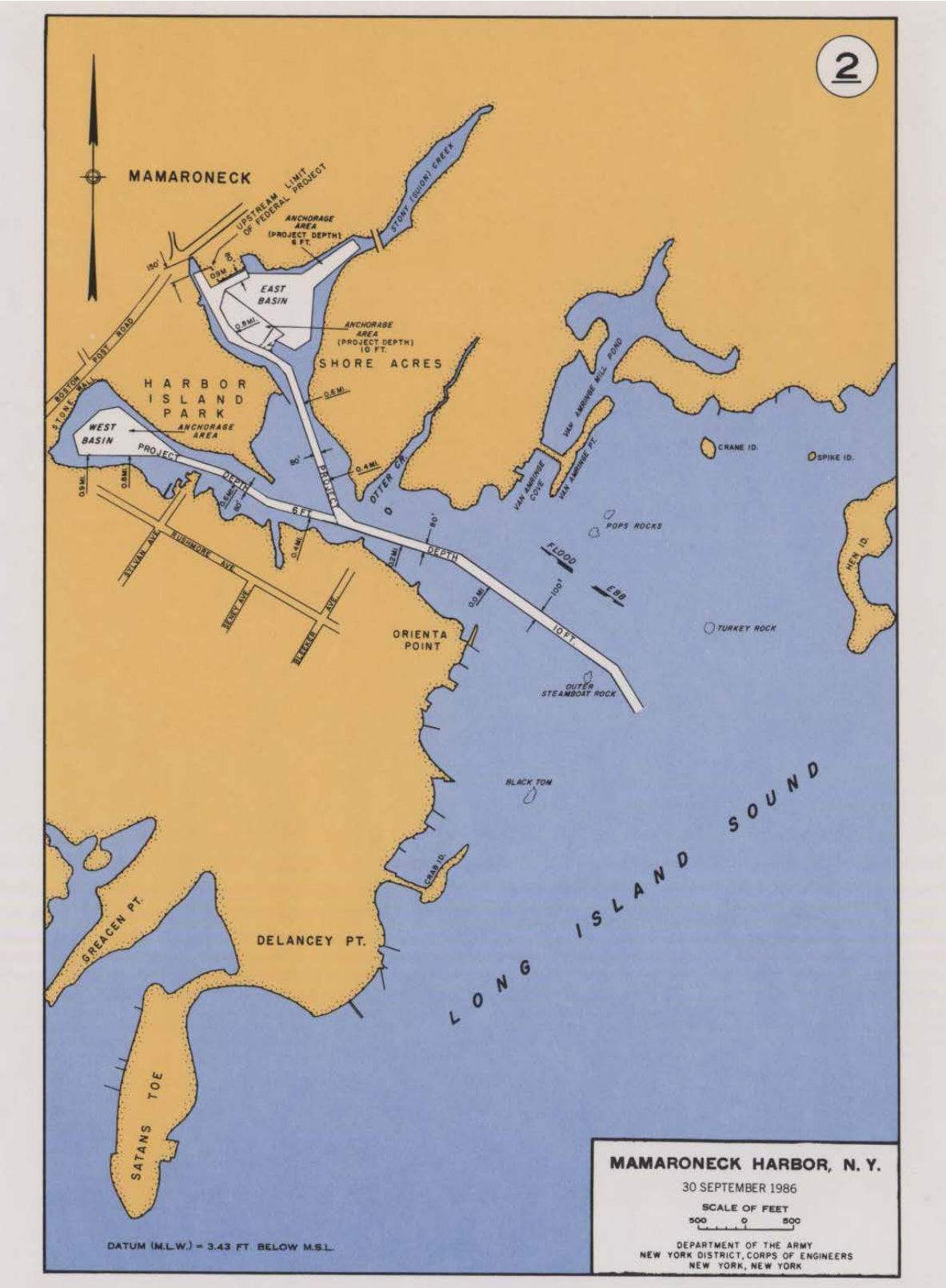
Milton Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
23 March – 16 June 1967	Improvement Dredging of the Entire Project to 6 Feet	147,330
30 Jan – Sept 1976	Maintenance Dredging of the Entire Project to 6 Feet	72,600 cy
April – June 1984	Maintenance Dredging of the Entire Project to 6 Feet	76,157 cy
Feb – March 1993	Maintenance Dredging of the Entire Project to 6 Feet	60,315 cy

Mamaroneck Area/New Rochelle Area Dredging Center

Mamaroneck Harbor FNP, Mamaroneck, NY

Mamaroneck Harbor has a 10-foot deep by 100-foot wide entrance channel that leads from Long Island Sound to Orienta Point, thence 80 feet wide to a point 150 feet below Boston Post Road; then the channel branches into the East and West Branches. The East Branch is 10 feet deep by 80 feet wide and leads from Otter Creek to two anchorage areas, (1) 10 feet deep and about 4.5-acres in extent, (2) 6 feet deep, by approximately 14-acres in area which leads partially into Stony Creek. The West Branch is on the southern side of Harbor Island Park and is a 6-foot deep by 80-foot wide channel that ends in a 6-foot deep anchorage area. See Project Map 2. The project was initially authorized in 1882 and modified in 1922, 1935, and 1960.

Project Map 2: Mamaroneck Harbor FNP



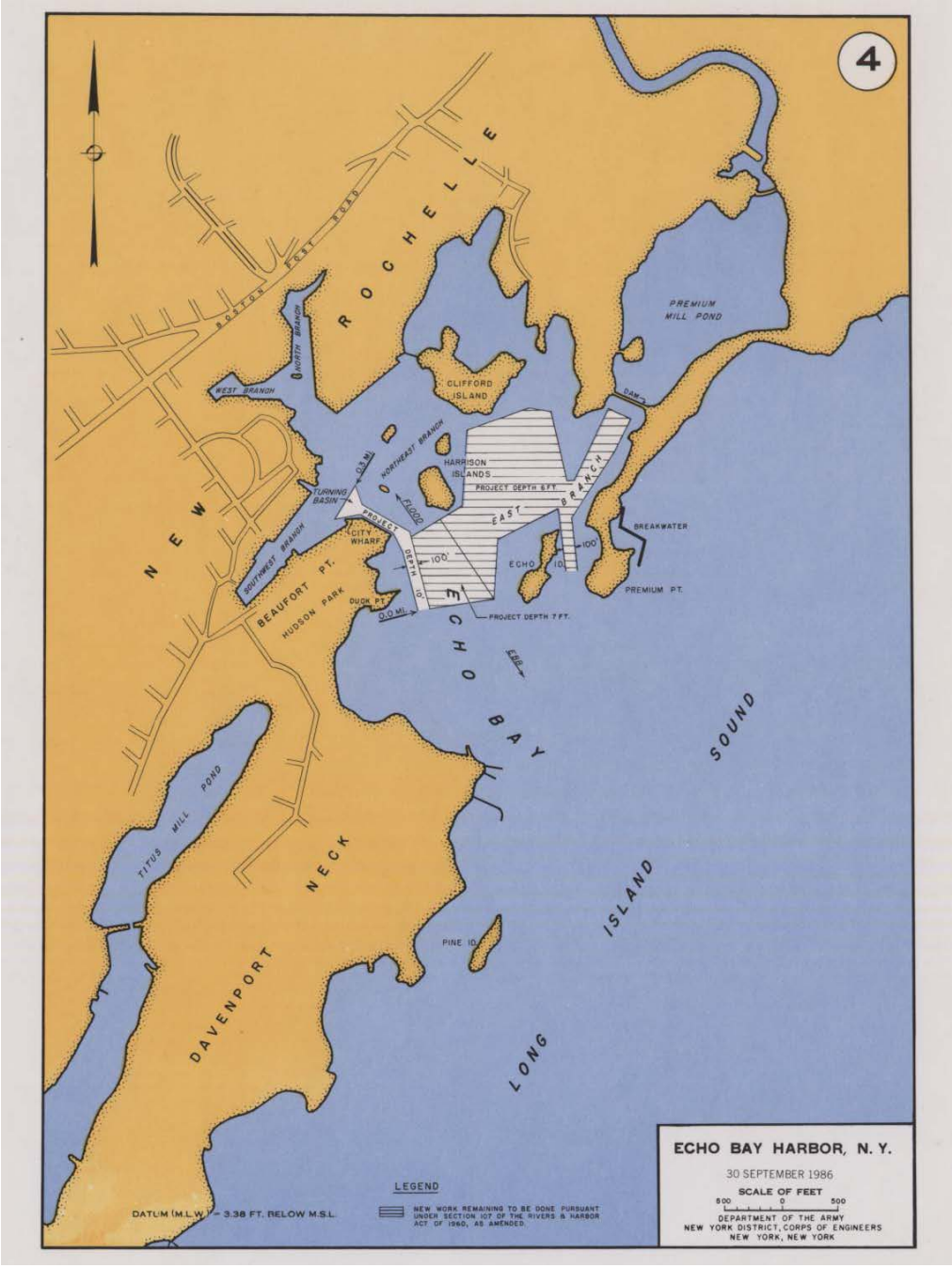
Mamaroneck Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1882	Improvement of Mamaroneck Harbor by Removing Sunken Rocks Obstructing the Channel, and the Excavation of a Channel, 7 Feet Deep from the Harbor Entrance to the Upper Wharves	Construction: 1882 - 1905
River & Harbor Act of 1912	Improvement of Mamaroneck Harbor by Providing a Straighter Channel, 7 Feet Deep by 80 Feet Wide Except at Bends and Near its Upper End, a Turning Basin, Cross-Channel, and Extension of Main Channel up to Boston Post Road Bridge	Construction Start 1912
River & Harbor Act of 1916	Completing Improvement of Mamaroneck Harbor Authorized by the R&H Act of 1912	Construction End 1917
River & Harbor Act of 1922	Improvement of Mamaroneck Harbor by Providing a Channel, 10 Feet MLLW Deep, 100 Feet Wide from Deep Water in Long Island Sound to Orienta Point, Thence 80 Feet Wide to a Point 150 Feet Below the Boston Post Road	Unknown
River & Harbor Act of 1935	Improvement for Mamaroneck Harbor: Final Configuration of FNP: a Main Entrance Channel 10 Feet Deep by 100 Feet Wide from Long Island Sound to Orienta Point, Thence 80 Feet Wide to a Point 470 Feet Below Boston Post Road, an Anchorage Area, 6 Feet Deep in the West Basin, with a Channel 6 Feet Deep, 80 Feet Wide Connecting to the Main Channel, and an Anchorages Near the Head of Navigation in the East Basin, 10 Feet Deep	Main Channel and Anchorage in East Basin Complete: 1933 Anchorage and Connecting Channel in West Basin Complete: July 1939
River & Harbor Act of 1960	Improvement of Mamaroneck Harbor by Providing an Additional Anchorage in the East Basin, 6 Feet Deep	Construction End: May 1966

Mamaroneck Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
June – April 1933	Dredging of the 10-Foot Channel	Unknown
Dec 1938 – June 1939	Maintenance Dredging of the 6-Foot Anchorage in West Basin and Channel	21,173 cy
July 1939	Improvement Dredging of the 6-Foot Anchorage in West Basin and Channel	161,699
March – April 1949	Maintenance of the Main Channel to Village Wharf	33,200 cy
April – June 1963	Maintenance Dredging of the 10-foot Main Channel, Branch Channel, and Anchorage in East Branch	57,574 cy
Dec 1964 – Feb 1965	Maintenance Dredging 10-Foot Main Channel	Unknown
15 March – 24 May 1966	Improvement Dredging of the 6-Foot East Basin	144,180 cy
28 March – 27 April 1966	Maintenance Dredging of the 6-Foot Channel and West Basin	28,349 cy
March – May 1966	Improvement and Maintenance Dredging of the 6-Foot Anchorage in East Basin and 6-Foot Channel and Anchorage in West Basin	New Work: 144,180 cy Maintenance: 28,349 cy
1981	Maintenance Dredging of the West Basin	19,360 cy
1990	Maintenance Dredging of the 6-Foot Channel and East Basin	54,980 cy
1999	Maintenance Dredging	161,635 cy

Echo Bay, New Rochelle, NY

The Federal Navigation Project at Echo Bay Harbor was authorized in 1881 and provides for a channel 8 feet deep, 120 feet wide from deep water in Long Island Sound between Glen Island and Davenport Neck to deep water in New Rochelle Harbor. Total length is about 0.4 miles. See Project Map 4 for features.

Project Map 4: Echo Bay FNP



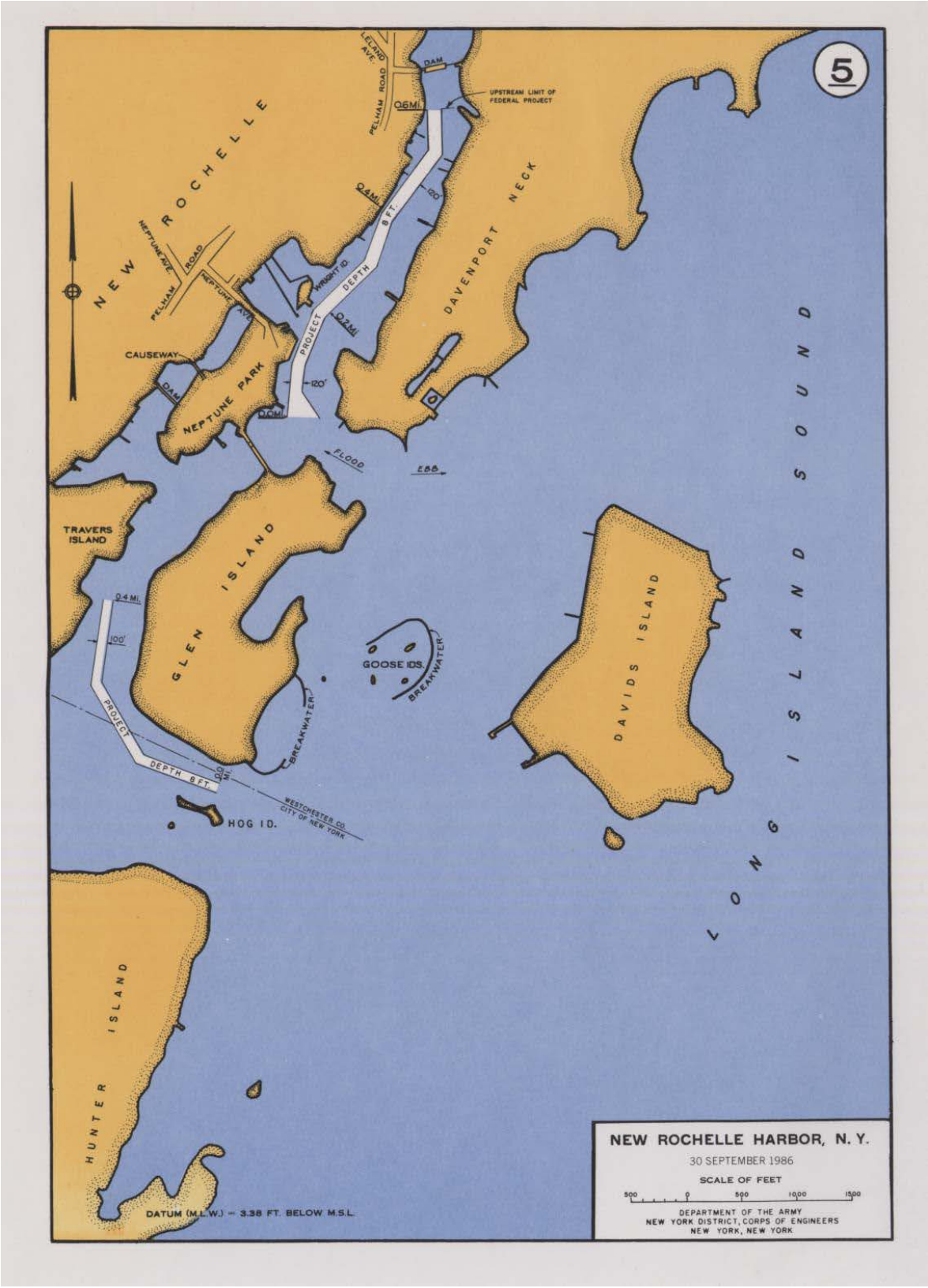
Echo Bay List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River and Harbor Act of 1878	Improvement of Echo Harbor by the Removal of Two Rocky Reefs from the Channel to a Depth of 9 Feet at Sheepshead Reef and 7 Feet at Start Rock	Construction: 1878 - 1883
River & Harbor Act of 1902	Completing Improvement of Echo Bay by the Removal of the Remaining Portions of Sheepshead Reef to Bring the Depth to 9 Feet and Start Rock to 7 Feet	Unknown
River & Harbor Act of 1907	Improvement of Echo Bay by the Removal of Long Rock to a Depth of 6 Feet at MLLW	Unknown
Rive & Harbor Act of 1910	Improvement of Echo Bay by Obtaining Channel Depth of 10 Feet, 100 Feet Wide from Echo Bay to the City Wharf at Beaufort Point, and a Turning Basin of the Same Depth at the Inner Extremity of the Channel	Unknown

Echo Bay Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Oct 1931	Maintenance Dredging of the Entire Channel and Turning Basin	7,039 cy

New Rochelle Harbor, New Rochelle, NY

The Federal Navigation Project at New Rochelle Harbor was authorized in 1881 and provides for an 8-foot deep channel, 120 feet wide from deep water in Long Island Sound between Glen Island and Davenport Neck to deep water in New Rochelle Harbor. Total length is about 0.4 miles. See Project Map 5 for features.

Project Map 5: New Rochelle Harbor FNP



New Rochelle Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1881	Improving New Rochelle Harbor by the Removal of Corning Rock to -12 Feet, of Rock C to -9 Feet Depth, and Dredging of Channel 100 Feet Wide and 8 Feet Deep Around South End of Glen Island to Connect with Channel at North End of Glen Island, and Removal of Reef Obstructing Entrance of the Proposed Channel	Construction: 1881 - 1888
River & Harbor Act of 1922	Improvement of New Rochelle Harbor by Providing a Channel 8 Feet Deep, 120 Feet Wide and about 3,400 Feet Long	Unknown

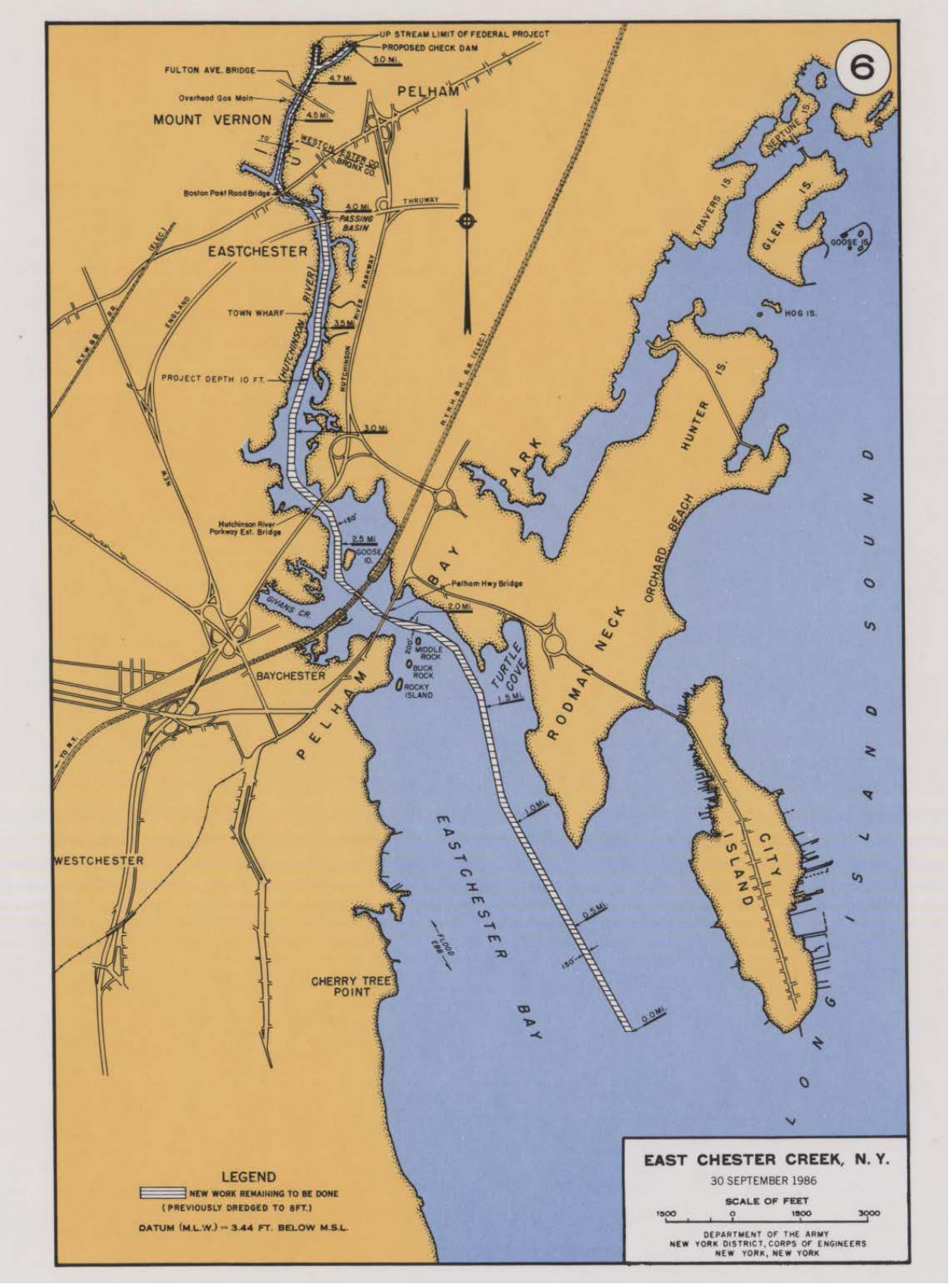
New Rochelle Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Nov 1931	Maintenance Dredging of the Entire 8-Foot Channel	33,335 cy
July – Aug 1936	Maintenance Dredging of the Entire 8-Foot Channel	23,044 cy
Feb – May 1971	Maintenance Dredging of the Entire 8-Foot Channel	43,054 cy

Eastchester Bay Area Dredging Center

Eastchester Creek FNP, Bronx, NY

The Federal project at Eastchester Creek, authorized in 1873, consists of a 10-foot deep channel leading from Long Island Sound past Fulton Avenue Bridge. The channel is 5 miles long with varying widths beginning at 150 feet, 200 feet, and ending at 70 feet wide in two (East and West) branches after the Fulton Avenue Bridge. The project also has a passing basin south of the Boston Post Road Bridge. See Project Map 6.

Project Map 6: Eastchester Creek FNP



Eastchester Creek (Hutchison River) List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1873	Removal of Obstructions and a Channel Cut to -9 Feet at Mean High Water Deep Extending Up the Creek for 4,000 Feet	Unconstructed Due to Real Estate Issues
River & Harbor Act of 1875	Continuing Improvement of East Chester Creek	Unconstructed Due to Real Estate Issues
River & Harbor Act of 1878	Continuing Improvement of East Chester Creek: Dredging Under Boston Road Bridge, and at Goose Island	Construction: 1878 - 1889
River & Harbor Act of 1879	Continuing Improvement of East Chester Creek: Dredging 40 to 90 Feet Wide from Pell Point to Town Dock and above to Lockwoods	Construction: 1878 - June 1889
River & Harbor Act of 1894	Continuing Improvement of East Chester Creek: Excavation of a -9-Foot MHW Cut, 100 Feet Wide by 3,000 Feet Long Through Marsh Land	Construction: 1896 - 1906
River & Harbor Act of 1907	Continuing Improvement of East Chester Creek and Maintenance of Project	1908
River & Harbor Act of 1910	Improvement of East Chester Creek to -5 Feet	Unknown – Completed 1917
River & Harbor Act of 1930	Improvement of East Chester Creek: Channel -8 Feet Deep by 150 Feet Wide from Long Island Sound Through East Chester Bay to a Point 700 Feet Below Boston Post Road Bridge, Thence 70 Feet Wide to the Northern Terminus of the Project, and a Passing Basin in the Vicinity of the Boston Post road Bridge	1941
River & Harbor Act of 1950	Improvement of East Chester Creek to Provide for Deepening of Channel to -10 Feet, Extension of the Existing Project Approximately 350 Feet, Thence Approximately 1,000 Feet in the East Branch and 500 Feet in the West Branch, All to a Depth of 10 Feet and 70 Feet Wide, Widening of the Channel at Boston Post Road Bridge, and Construction of a Check Dam at the Head of Navigation	Never Constructed

Federal Register 5 December 1992	Deauthorization of the Improvements Authorized by the R&H Act of 1950	Deauthorization

Eastchester Creek Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Sep – Nov 1930	Maintenance Dredging of the 5-Foot Previous Project	42,608 cy
May 1935	Maintenance Dredging of the 5-Foot Previous Project	18,832 cy
Oct – Dec 1935	Improvement Dredging of the 5-Foot Channel to 8-Foot Depth	211,710 cy
March – April 1936	Improvement Dredging of the 5-Foot Channel to 8-Foot Depth	Unknown
March – June 1936	Improvement Dredging of the 5-Foot Channel to 8-Foot Depth	1,034 tons stone 997 cy sediment
June 1936	Improvement Dredging of the 5-Foot Channel to 8-Foot Depth	37,622 cy
July 1936	Improvement Dredging of the 5-Foot Channel to 8-Foot Depth	72,572
July – Oct 1936	Improvement Dredging of the 5-Foot Channel to 8-Foot Depth	2,108 tons stone 5,978 cy sediment
July 1940 – June 1941	Improvement Dredging of the 5-Foot Channel to 8-Foot Depth and Y-Shaped Extension for Local Interests	2,946 tons stone 213,320 cy sediment
July – Aug 1941	Improvement Dredging of the 5-Foot Channel to 8-Foot Depth and Y-Shaped Extension for Local Interests	380 tons stone 10,770 cy sediment
July 1947	Maintenance Dredging of the 8-Foot Channel to the Fulton Ave Bridge	6,734 cy
April – 30 June 1952	Maintenance Dredging of the 8-Foot Channel	109,511 cy

17 July 1952	Maintenance Dredging of the 8-Foot Channel	44,061 cy
July – Aug 1964	Maintenance Dredging of the 8-Foot Channel	17,545 cy
15 May – 22 June 1974	Maintenance Dredging of the 8-Foot Channel	38,000 cy
5 July 1974	Maintenance Dredging of the 8-Foot Channel	7,211 cy
25 March – 11 May 1985	Maintenance Dredging of the 8-Foot Channel to Hutchinson Parkway	66,432 cy
28 Sept – 3 Nov 1989	Maintenance Dredging of the 8-Foot Channel from Mile 3.5 to Fulton Ave Bridge	36,200 cy
2010	Maintenance Dredging of the Channel	21,310 cy

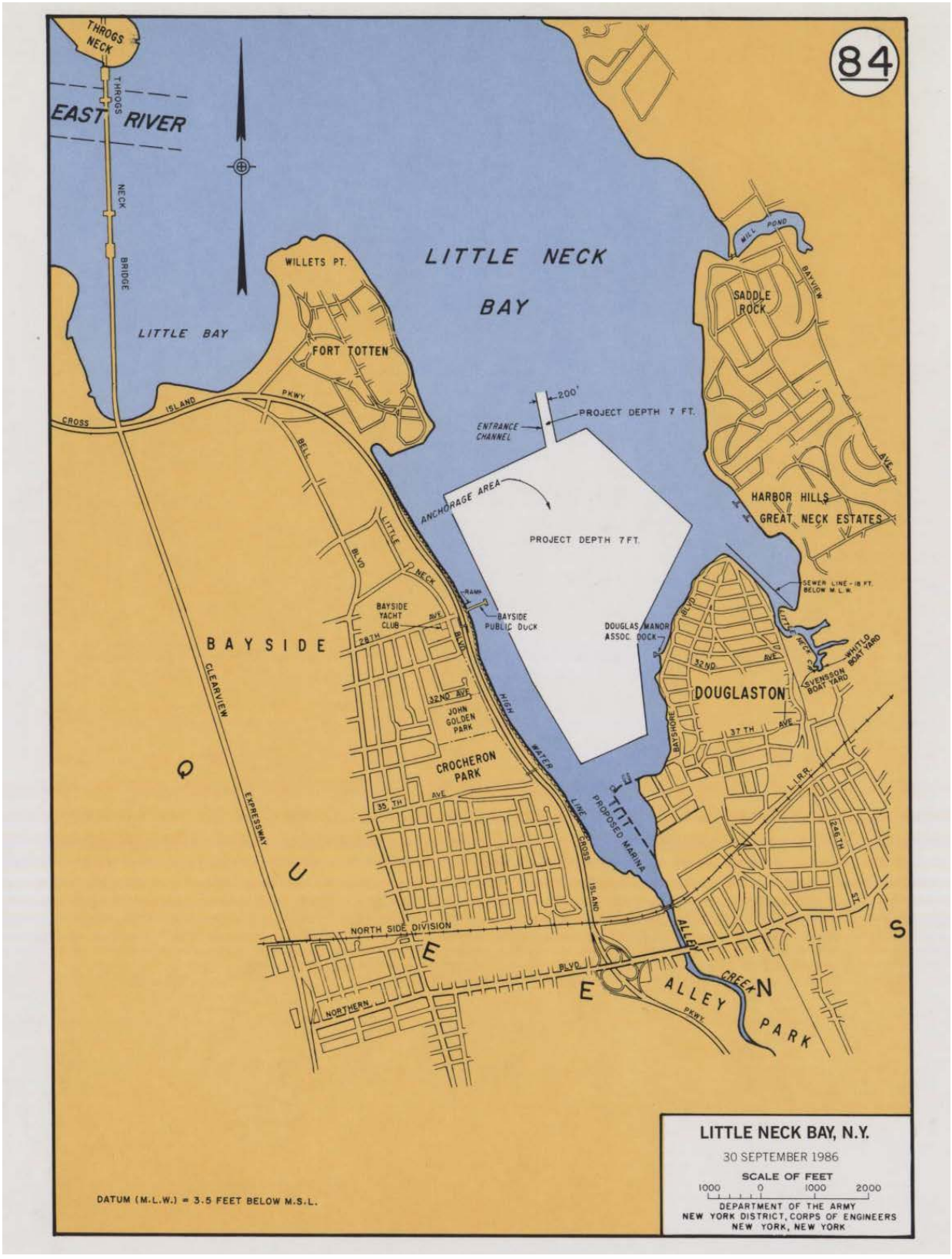
Manhasset & Little Neck Bays Dredging Center

Little Neck Bay FNP, Bayside & Douglaston, NY

The Federal Navigation Project at Little Neck Bay was adopted in 1962. The project consists of a very short, 200-foot wide by 7-foot deep, entrance channel that leads from Little Neck Bay directly into a large (350-acre) anchorage area, 7 feet deep, situated between Douglaston and Bayside that was added on after the project's adoption in 1962. See Project Map 84. The anchorage was created in 1966 and maintained in 1967 and 1968; see the table below for details.

Little Neck Bay List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1962	Entrance Channel -7 Feet Deep by 200 Feet Wide Leading to an Anchorage -7 Feet Deep by 350-Acres	May – Aug 1966

Project Map 84: Little Neck Bay FNP



Little Neck Bay Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
13 May – 8 Aug 1966	Improvement Dredging to Create the 7-Foot Anchorage between Douglaston and Bayside	601,534 cy
3 Jan – 17 Aug 1967	Maintenance Dredging to 7 Feet in Anchorage between Douglaston and Bayside	803,878 cy
10 Jun – 3 Sep 1968	Maintenance Dredging to 7 Feet in Anchorage between Douglaston and Bayside	1,193,473 cy

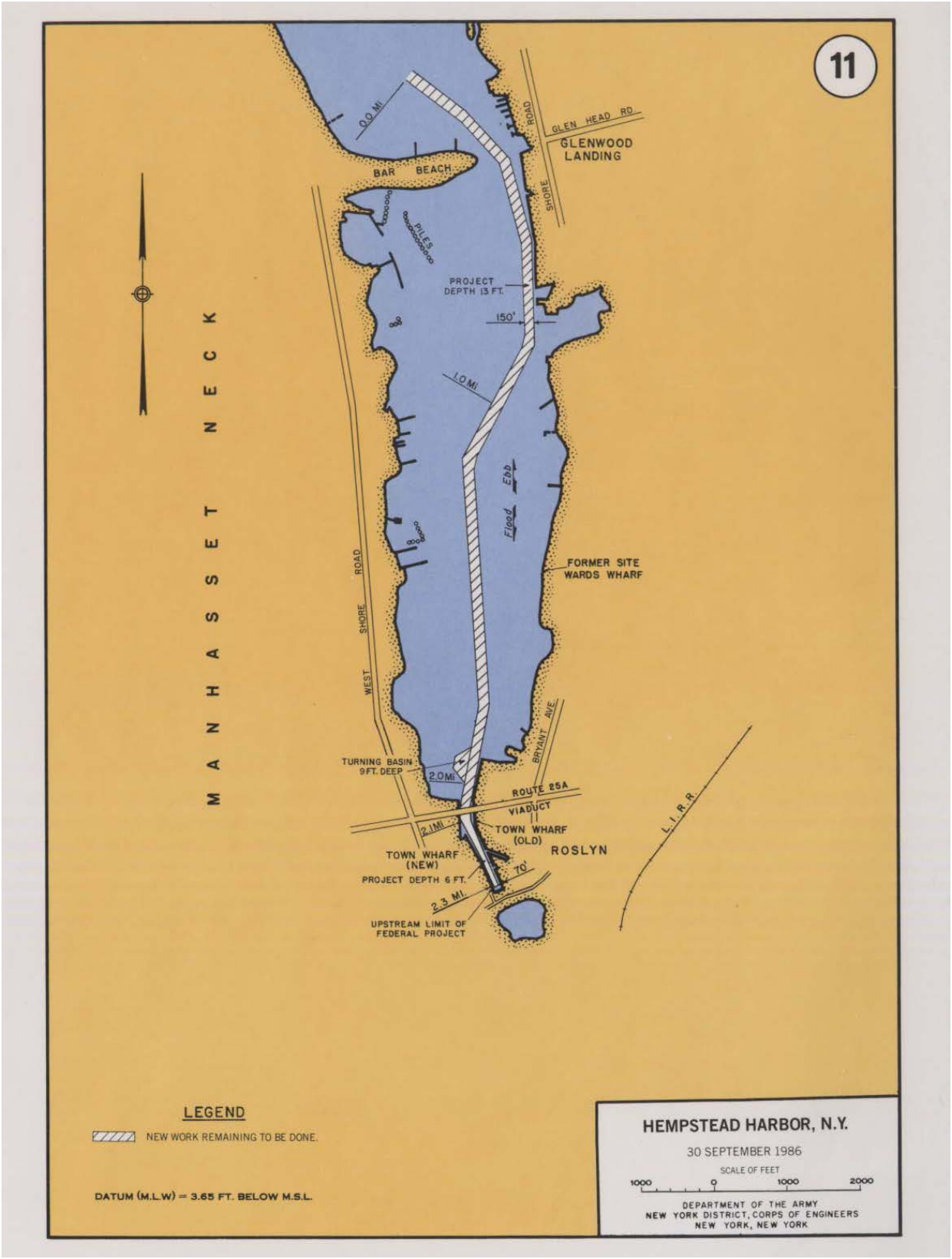
Hempstead Harbor Area Dredging Center

Hempstead Harbor FNP, Roslyn, NY

Hempstead Harbor's Federal project consists of a 13-foot deep by 150-foot wide channel leading from Bar Beach past Glenwood Landing for about 2 miles and ending in Roslyn at the old Town Wharf. The channel then decreases to a 6-foot depth and 70-foot width. There is also a turning basin, 9 feet deep on the western side of the 13-foot channel before the Route 25A viaduct, 190 feet wide and 470 feet long. The FNP was authorized in 1910 and modified in 1968. See Project Map 11 for details.

Hempstead Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1910	Channel -6 Feet Deep from Bar Beach into Roslyn	Unknown
River & Harbor Act of 1968	Improvement of Hempstead Harbor to Obtain a Channel Depth of -13 Feet by 150 Feet Wide From Deep Water to the North Hempstead Turnpike, and a Turning Basin 190 Feet Wide and 470 Feet Long Near the Head of Improvement	Never constructed
5 Oct 1990 Federal Register	Deauthorization of the Improvements Authorized by the R&H Act of 1968 Which Were Never Constructed	Deauthorization

Project Map 11: Hempstead Harbor FNP



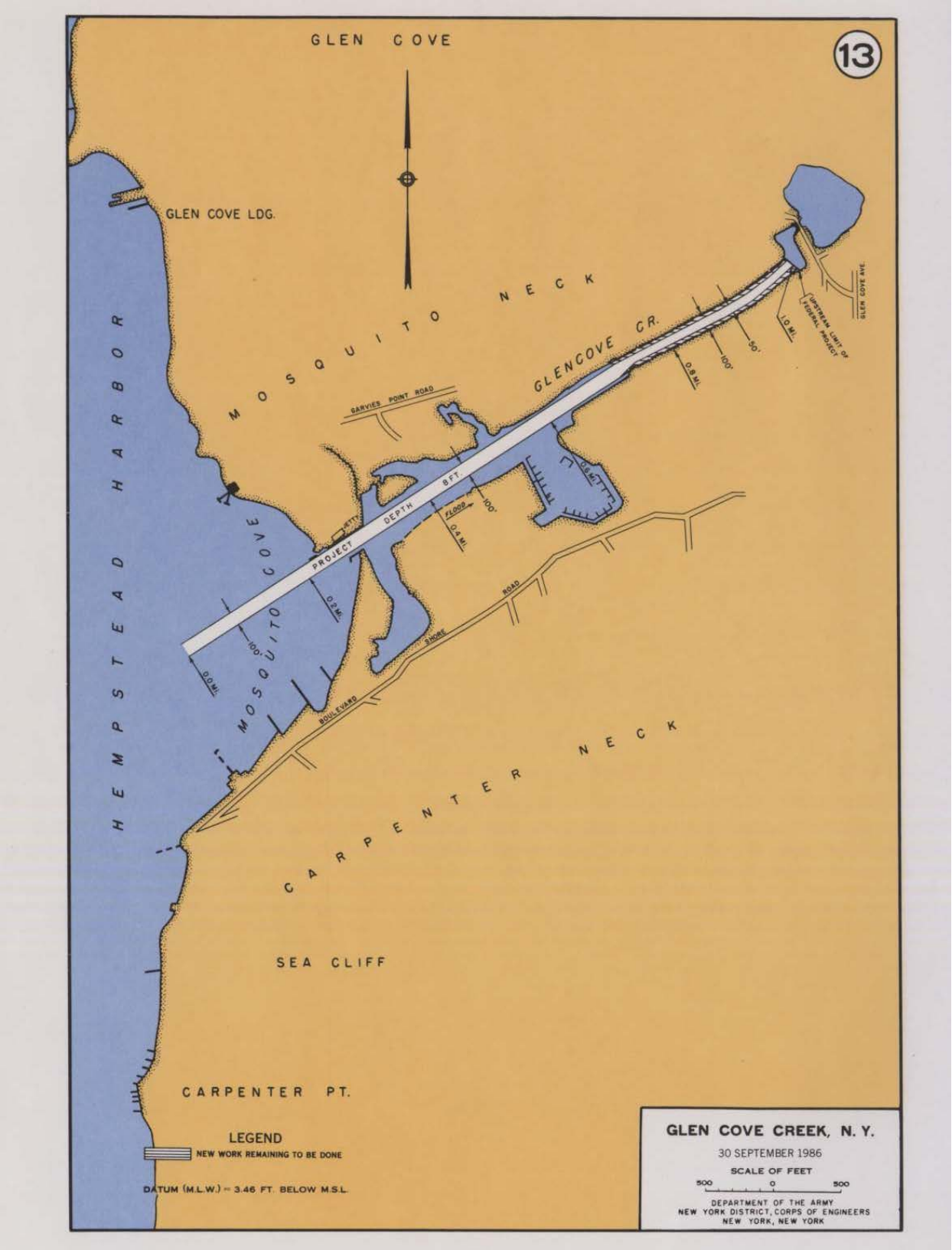
Hempstead Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
April – June 1928	Maintenance Dredging of the Upper 7,300 Feet to 6 Feet at the Head of Improvement	69,913 cy
March – April 1936	Maintenance Dredging of the Entire Channel to 6 Feet	19,799 cy
May 1950	Maintenance Dredging of the Entire Channel to 6 Feet	31,600 cy

Glen Cove Creek FNP, Glen Cove, NY

The Federal project at Glen Cove Creek, authorized in 1925, is an 8-foot deep by 100-50-foot wide channel by 1 mile long, running from Hempstead Harbor through Mosquito Cove into Glen Cove Creek. See Project Map 13 for visual.

Glen Cove Creek List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1925	Channel 100 Feet Wide and 8 Feet Deep From Deep Water in Hempstead Harbor to the Head of Navigation	Aug 1933 – May 1934

Project Map 13: Glen Cove Creek FNP



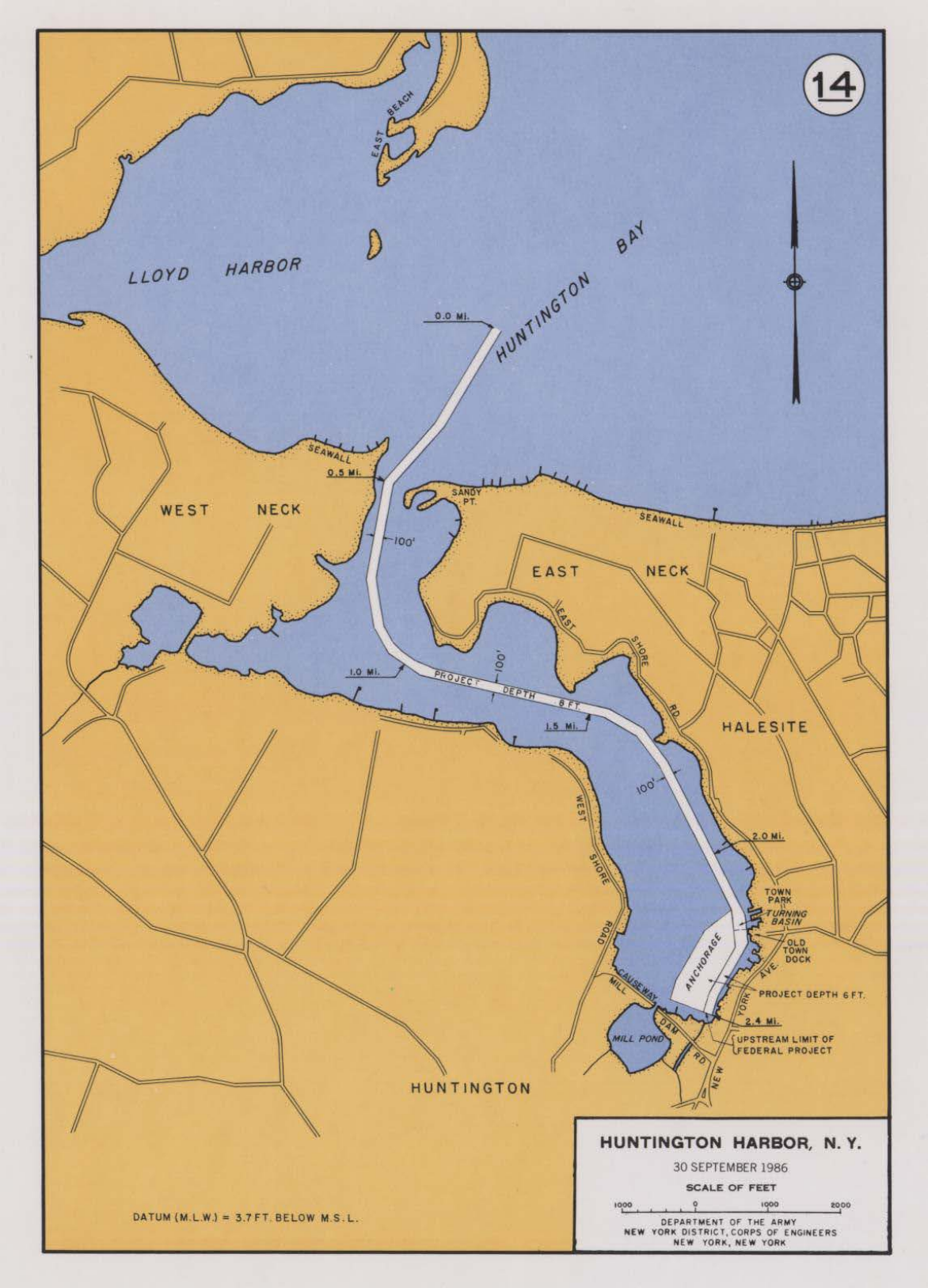
Glen Cove Creek Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Aug 1933 – May 1934	Improvement Dredging to Create 8-Foot Channel From Hempstead Harbor to Glen Cove Creek – 50% of Project Completed	195,509 cy
July – Aug 1934	Dredging to Remove Isolated Shoals	10 cy of stone 35 cy of sediment
April – June 1948	Maintenance Dredging to 8 Feet in Lower 0.7 Mile Reach of Channel	26,515 cy
April – June 1960	Maintenance Dredging to 8 Feet in Lower 0.6 Mile Reach of Channel	27,111 cy
May – June 1965	Maintenance Dredging to 8 Feet in Lower Reach of Channel	6,286 cy
1996	Maintenance Dredging to 8 Feet in Lower Portion of Channel	11,605 cy
2001	Maintenance of the Upper Portion of Channel to 8 Feet (Work Stopped Due to Contamination, Became Superfund Site)	30,500 cy

Huntington & Northport Bay Area Dredging Center

Huntington Harbor FNP, Huntington, NY

The Huntington Harbor FNP was first authorized in 1872. The FNP consists of a main channel, 8 feet deep, 100 feet wide from the 8-foot contour in Huntington Bay to a turning basin of the same depth and 200 feet wide opposite the old Town dock; thence 6 feet deep, 100 feet wide to a point 450 feet north of the causeway (total length is about 2.4 miles); an anchorage, 6 feet deep and 14-acres in extent, west of the 6-foot channel; and a cross channel, 8 feet deep, 100 feet wide from the main 8-foot channel to within 150 feet of the causeway. Project Map 14 details these features.

Project Map 14: Huntington Harbor FNP



Huntington Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1871 and 1872	Improvement Dredging for a Channel -8 Feet MLW by 140 Feet Wide extending 2,200 feet along the east side of the harbor to the old town dock, with dredging across the middle ground shoal in the bay entrance.	1872 to 1873
River & Harbor Act of 1890	Channel -8 Feet MLW by 100 Feet Wide extending 2,400 feet along the waterfront to the old town dock, with a 200-foot wide turning basin at the head of the channel, and a 1,400 foot long timber sheet pile shoal barrier parallel to the channel's upper reach.	Completed 1904, except no sheet pile was built, but channel made 200 feet wide instead
River & Harbor Act of 1938	Extend the channel 880 feet up-harbor at -6 feet MLW by 100 feet wide, with a 6-foot by 14-acre anchorage, and an 8-foot cross channel, 100 feet wide extending to and along the west side wharves to within150 feet of the causeway.	East channel extension and anchorage completed 1941. West cross-over channel never built.
19 June 1975 House Document No. 94-192	Deauthorization of the 8 Foot Cross Channel as Proposed in the R&H Act of 1938	Deauthorization

Huntington Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
1872-1873	Improvement Dredging for a Channel -8 Feet MLW by 140 Feet Wide extending 2,200 feet along the east side of the harbor to the old town dock.	91,786 cy
Completed 1904	Channel 8 feet MLW by 200 feet wide to old town dock.	Unknown
Completed 1941	Easterly 6-foot channel extension Channel -8 Feet MLW by 100 Feet Wide extending 2,400 feet to the old town dock, with a turning basin at the head of the channel, and a 1,400 foot long timber sheet pile shoal barrier parallel to	Unknown

	the channel's upper reach.	
	Improvement Dredging for a Channel -8 Feet MLLW by 100 Feet Wide then -6 Feet Deep by 100 Feet Wide (Total Length 2.5 Miles) from Huntington Bay into Huntington Harbor, an Anchorage -6 Feet MLLW by 14-Acres, and a Cross Channel -8 Feet Deep by 100 Feet Wide from the Main 8-Foot Channel to Within 150 Feet of the Causeway	
June 1935	Maintenance Dredging of the Entire Project to 8 Feet	8,500 cy
July 1935	Maintenance Dredging of the Entire Project to 8 Feet	12,925 cy
Nov 1940 – May 1941	Improvement Dredging of the 14-Acre Anchorage and Maintenance Dredging of the Channel	New work: 217,818 cy Maintenance: 3,111 cy

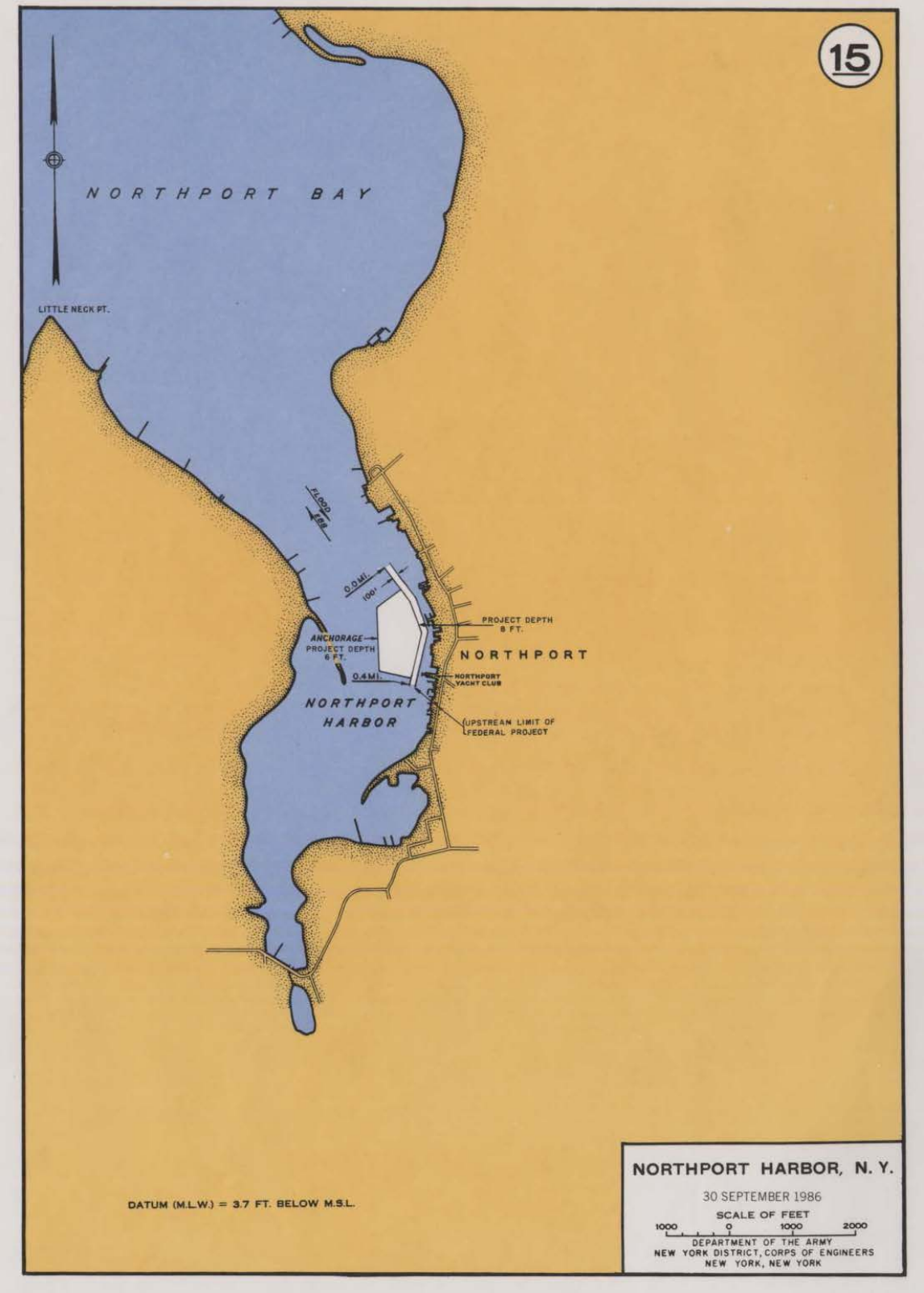
Northport Harbor FNP, Huntington, NY

The FNP at Northport Harbor was authorized in 1945 and allows for an 8-foot deep by 100-foot wide by 0.4 mile long channel in Northport Harbor. An anchorage, 6 feet deep and 15-acres in extent is located along the western side of the channel. See Project Map 15.

Northport Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1945	Channel -8 Feet by 100 Feet Wide in Northport Harbor, a 15-Foot Anchorage -6 Feet	May-June 1956

Northport Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
May – June 1956	Improvement Dredging to Create Channel (-8 Feet) and Anchorage (-6 Feet)	86,338 cy

Project Map 15: Northport Harbor FNP



Port Jefferson/Mount Sinai Dredging Center

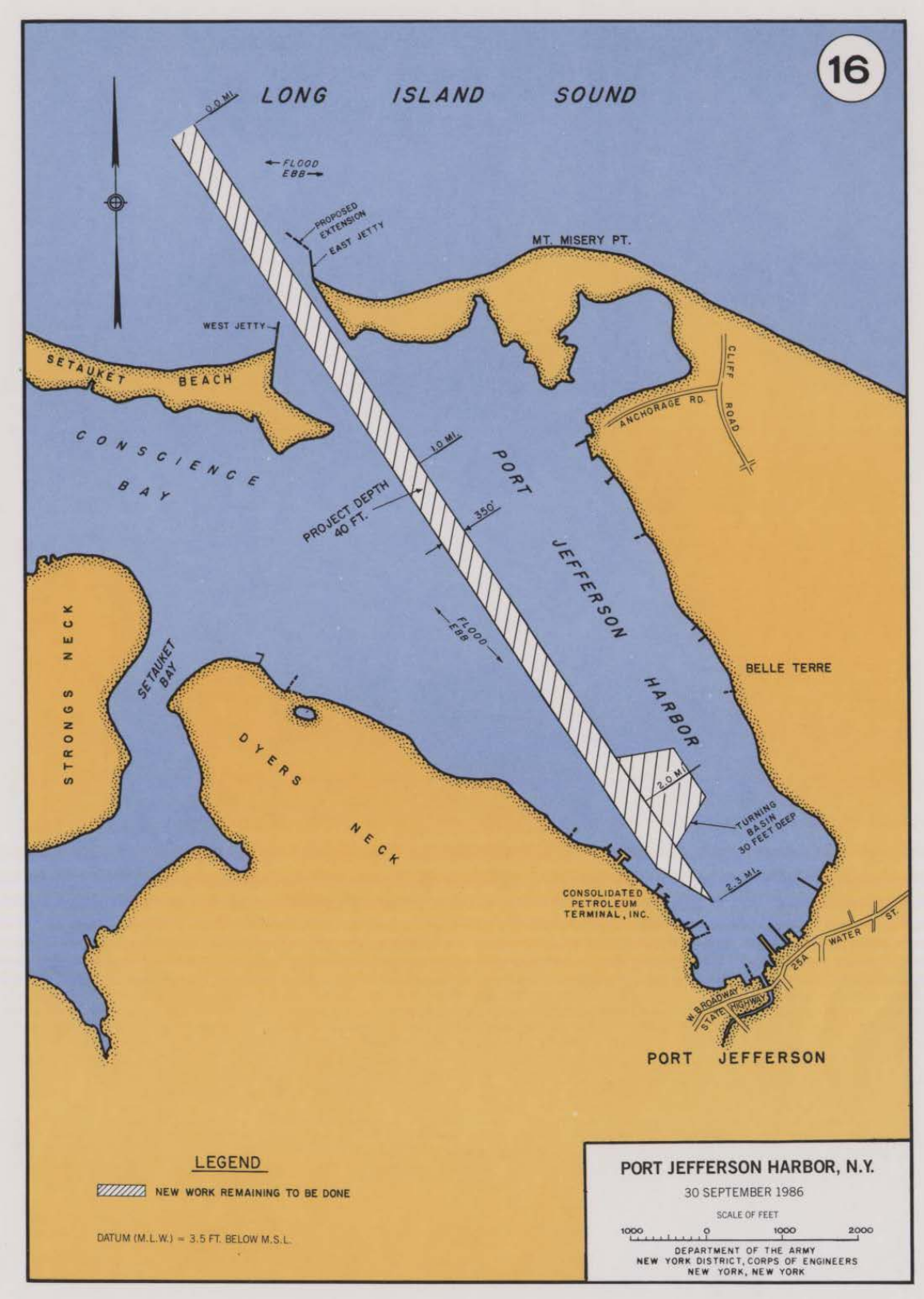
Port Jefferson Harbor, Brookhaven, NY

Port Jefferson Harbor's Federal navigation project was authorized in 1872. It consists of an East and West jetty, a channel, and a turning basin. The West jetty extends from the tip of Setauket Beach for a length of 940 feet and the East jetty runs out from the tip of Misery Point into Long Island Sound for a length of 2,000 feet. The channel is 40 feet deep by 350 feet wide running from deep water in Long Island Sound to the head of Port Jefferson Harbor for a total distance of about 2.3 miles. The turning basin is located on the eastern side of the channel and is 30 feet deep, 700 feet wide and 1,400 feet long in extent. The channel was completed to 12-foot depth in 1903. See Project Map 16 for visual. No work of maintenance or improvement has been done since 1909. Project construction and maintenance history was not obtained for this FNP.

Port Jefferson
List of Authorizations

Authorization	Work Authorized & Constructed	Construction Dates
River & Harbor Act of 1871 and 1872	Channel 8 feet by 100 feet wide through the inlet with two stone jetties triangular section with slopes 1:1, East Jetty 1,390 feet long +5 foot MHW top elevation, West Jetty 940 feet long with +4 foot MHW (inner) and +2 feet MLW (outer) elevations.	Completed1883
River & Harbor Act of 1890	Improving Harbor at Port Jefferson to Give a Channel 10 Feet Deep and 250 Feet Wide (Unconstructed)	Never constructed
River & Harbor Act of 1894	Improvement to Obtain a Channel 12 Feet MLW by 200 feet wide.	Completed 1903
River & Harbor Act of 1930	Improvement to Deepening the Entrance Channel to 16 Feet, Widening it to 300 Feet, and Extending the East Jetty by 450 Feet (Unconstructed)	Never constructed. Channel Built 1931 by Local Interests.
River & Harbor Act of 1968	Improvement (Unconstructed) for a Channel -40 Feet by 350 Feet Wide from Long Island Sound to Head of Port Jefferson Harbor, and a Turning Basin -30 Feet.	Never constructed. Channel Built by Local Interests.
Federal Register	Deauthorization of uncompleted portions of project including the east jetty extension from the R&H Acts of 1890, and the 16-foot and 40-foot channel deepening of 1930 and 1968 all of which were Never Constructed.	Deauthorization

Project Map 16: Port Jefferson Harbor FNP



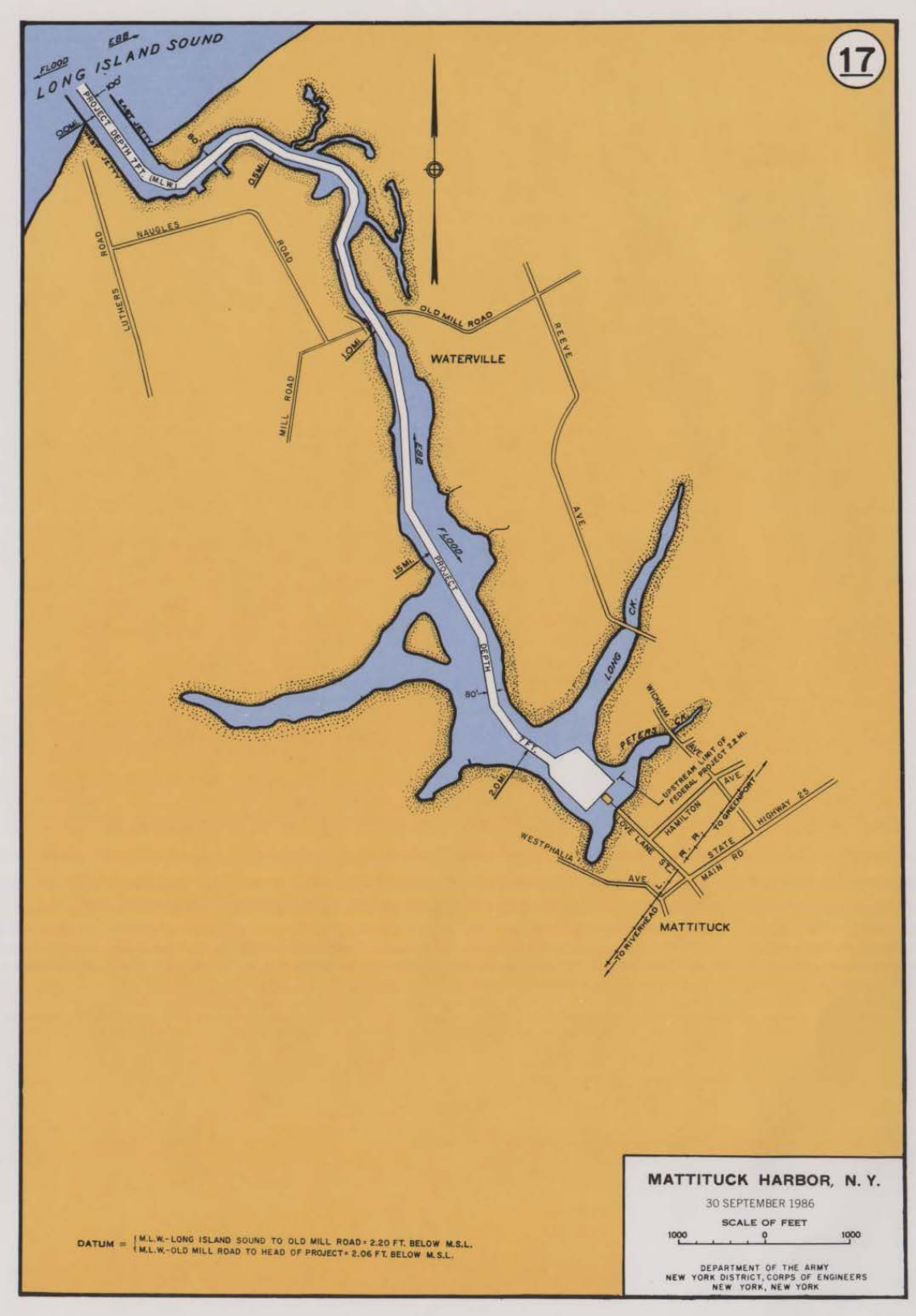
Suffolk County Northeast Shore Dredging Center

Mattituck Harbor and Inlet FNP, Mattituck, NY

Mattituck Harbor's FNP provides for a 7-foot deep by 100-foot entrance channel, thence 80 feet wide, extending from Long Island Sound for about two miles into the wharves at Mattituck. At the head of the channel, an anchorage, 7 feet deep, 460 by 570 feet wide exists in the FNP. There are also two riprap jetties (East and West) that extend into the Long Island Sound on either side of the channel. The Federal project was authorized in 1896 and modified in 1935 (extension of the West jetty) and 1964 (creation of a 7-foot deep anchorage area). See Project Map 17 for details.

Mattituck Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1896	Channel -7 Feet by 100 Feet Wide from Long Island Sound into Wharves at Mattituck, with two stone jetties at the inlet.	Channel completed 1914
1935	Extension of the West Jetty by 250 Feet	Oct 1937 – June 1938
1964	Improvement Dredging to Create -7-Foot Deep Anchorage at the Head of Navigation	Sept – Oct 1965

Project Map 17: Mattituck Harbor FNP



Mattituck Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
1914	Improvement dredging of 7-foot channel and construction of east and west jetties	Unknown
June – Nov 1921	Maintenance Dredging to Remove Shoals at Entrance from 500'-1400' Upstream from Outer End of West Jetty	13,468 cy
Sept – Oct 1927	Maintenance Dredging of the First 1800' of the Entrance Channel	49,186 cy
Nov 1935 – May 1936	Maintenance Dredging of the Channel	50,785 cy
Oct 1937 – Aug 1938	Repairs to the Outer 400' and 250' Extension of the West Jetty	New Work: 8,162 tons of stone Maintenance: 1,833 tons of stone
Sept – Nov 1938	Maintenance Dredging of the Entrance Channel to 7-Foot Depth	18,312 cy
Sept – Nov 1946	Maintenance Dredging of the Entrance Channel to 7-Foot Depth	53,893 cy
Aug – Sept 1946	Repairs to 110' of Jetty and Construction of 100' Extension Shoreward of East Jetty	1,300 tons stone
Oct – Nov 1950	Maintenance Dredging of the Entrance Channel to 7-Foot Depth	22,913 cy
Aug – Sept 1955	Maintenance Dredging of the Entrance Channel to 9-Foot Depth	31,552 cy
Aug – Oct 1961	Maintenance Dredging of the Entrance Channel to 9-Foot Depth	43,550 cy
Sept – Oct 1965	Improvement Dredging of the Anchorage Area and Upstream End of Channel to -7 Feet MLLW	40,980 cy
Sept – Oct 1965	Maintenance Dredging of the Channel from Long Island Sound to Old Mill Road	6,285 cy
27 March – 29 July 1975	Repairs to the East Jetty	13,500 tons stone

9 May – 25 May 1980	Maintenance Dredging of the Entrance Channel to -7 Feet	24,137 cy
2 Oct – 23 Oct 1990	Maintenance Dredging to -7 Feet of the First 0.4 Miles of the Entrance Channel	13,241 cy
2004	Maintenance Dredging of Entrance Channel	13,785 cy

Great & Little Peconic Bays Dredging Center

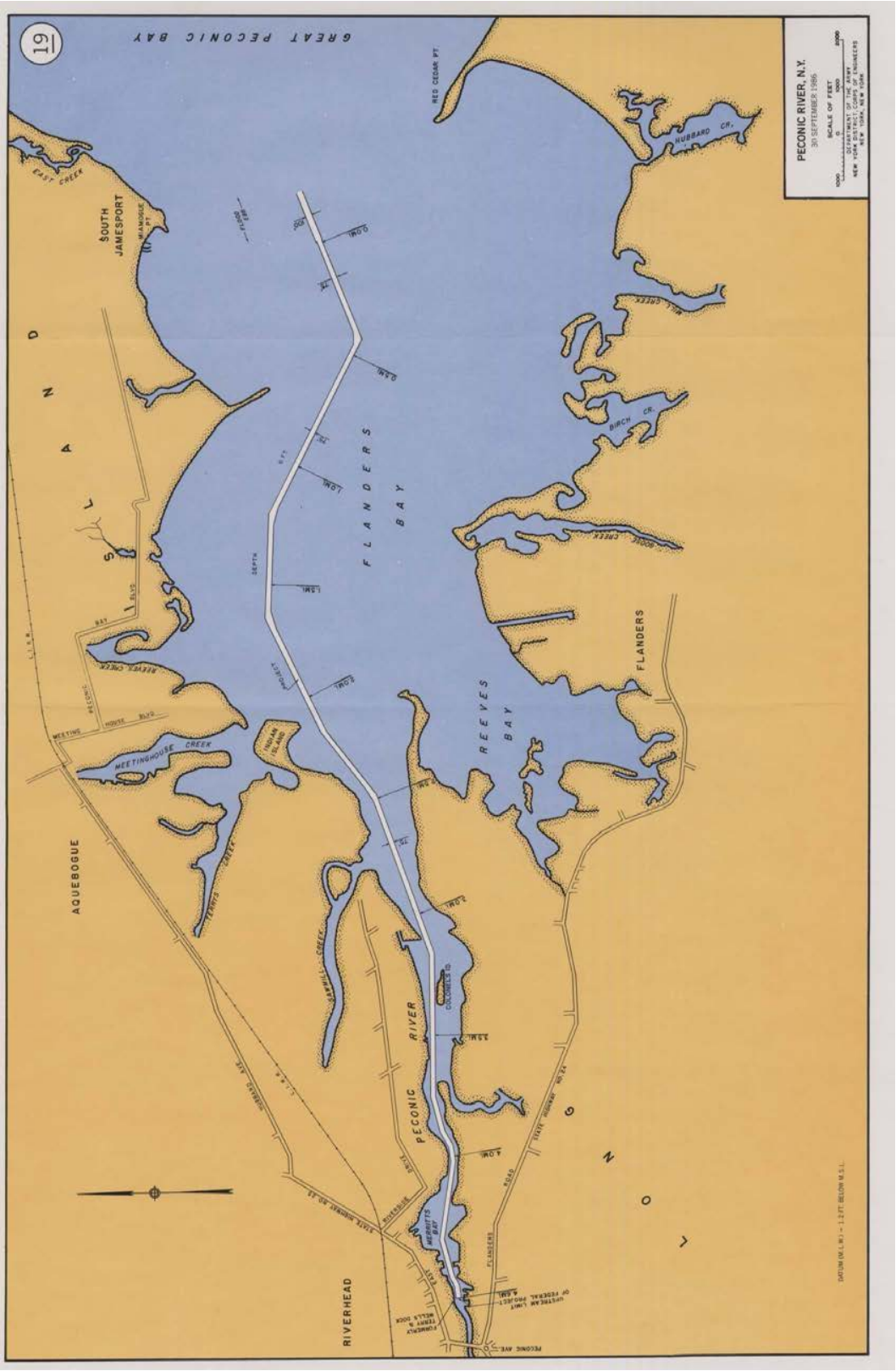
Peconic River FNP, Riverhead, NY

The Peconic River FNP was initially authorized by the River and Harbor Act of 1871. Authorization provided for a channel, 6 feet deep by 100 feet wide, extending from deep water in the Great Peconic Bay westerly for a distance of 1,100 feet, thence the same depth with a reduced width of 75 feet to about 1,100 feet below Peconic Avenue. The total length of the channel is about 4.6 miles. See Project Map 19 for features.

Peconic River List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1871	Channel -6 Feet by 100 Feet Wide from Great Peconic Bay for 4.6 Miles	Unknown

Peconic River Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
August – Oct 1871	Improvement dredging of high points at three principal shoal reaches to depths of -4 to -5 feet with disposal on-shore.	Dredge paid by the hour.
March 1936	Maintenance Dredging of the Entire Project to 6-Foot Depth, 60 feet wide	42,366 cy
July – Aug 1936	Complete Maintenance Dredging of the 6-Foot MLW by 60-foot wide Channel	34,050 cy
March – June 1942	Maintenance Dredging of the Channel to 6-Foot MLW Depth	59,830 cy
May – July 1948	Maintenance Dredging of the Channel from Flanders Bay to the Head of Project to 6-Foot Depth	83,916 cy

Project Map 19: Peconic River FNP



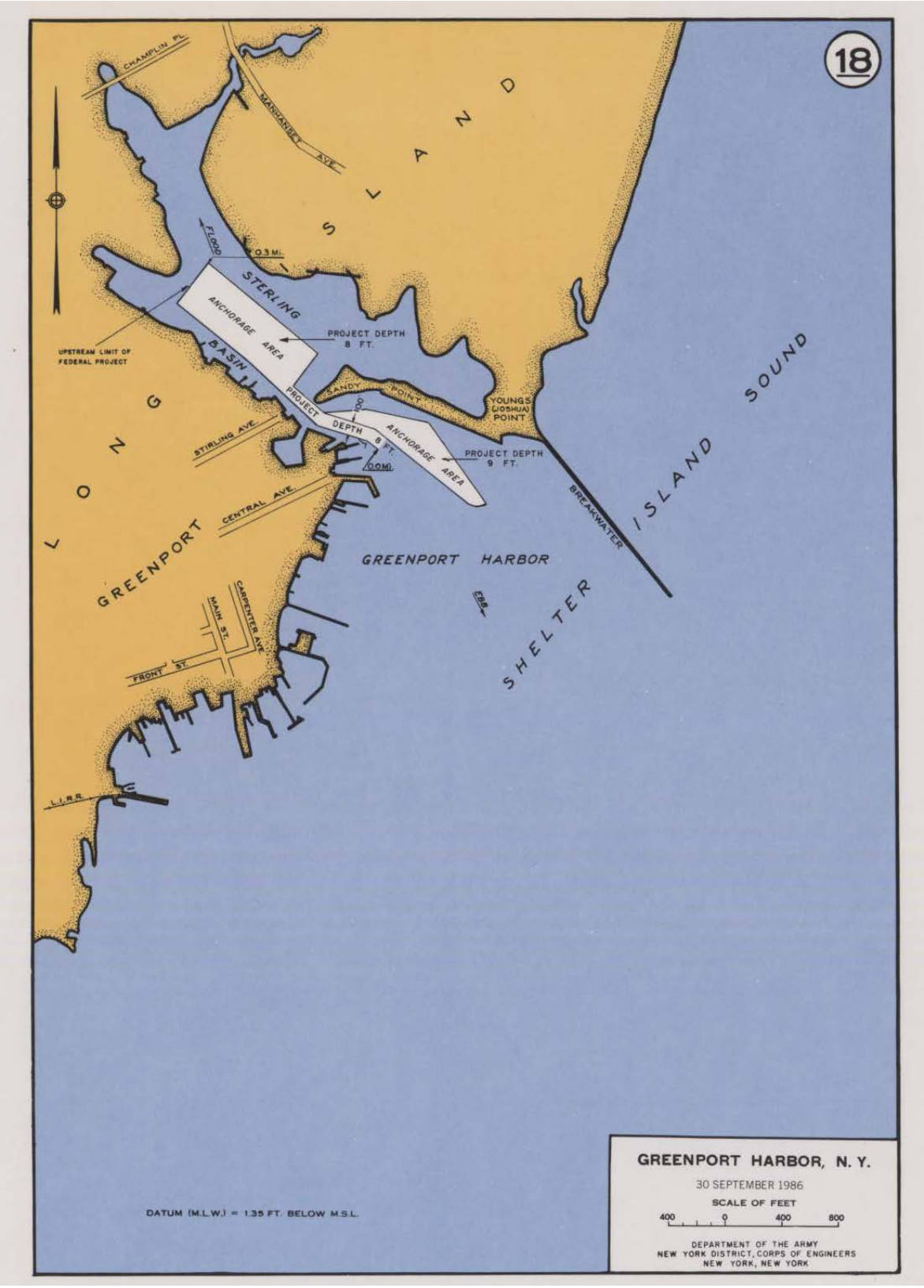
Shelter Island Sound - Gardiner's Bay Dredging Center

Greenport Harbor FNP, Greenport, NY

The Greenport Harbor FNP provides for two anchorages (8 feet and 9 feet), an 8-foot deep by 100-foot wide channel connecting the anchorages, and a breakwater. This project was adopted in 1882 and modified in 1890 and 1937. The breakwater was the only portion of the FNP authorized in 1882; the channel and anchorages were added in the 1937 modification. The 9-foot anchorage is located at the mouth of Sterling Basin in Greenport Harbor outside of Sandy Point and is 5-acres in extent. The 8-foot anchorage area is located inside of Sterling Basin and is 360 feet wide by 1,000 feet long. A breakwater extending from Young's Point into Shelter Island Sound for a distance of 1,570 feet is also part of the FNP. See Project Map 18.

Greenport Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1881	Stone breakwater southeasterly from Joshua's Point 1,570 feet long, +5 feet MHW, 5-foot top width.	1883 – Sept 1893
River & Harbor Act of 1890	A 9-foot MLW by 5-acre anchorage in the lee of the breakwater and an 8-foot by 60-foot wide channel into the entrance to Sterling Basin.	Completed 1893
River & Harbor Act of 1937	Improvement Dredging of 8-foot channel and anchorage in Sterling Basin	Jan – March 1939

Project Map 18: Greenport Harbor FNP

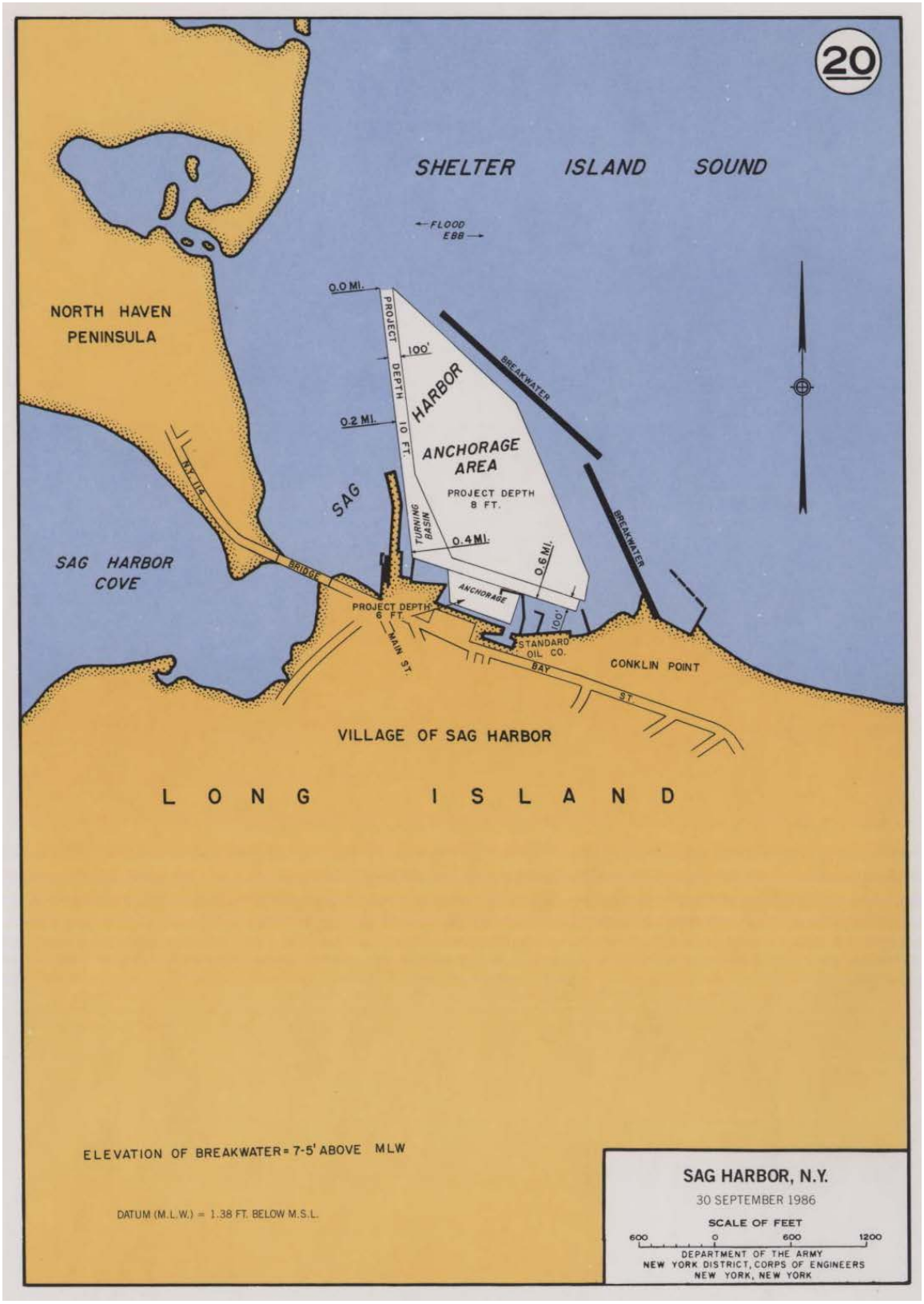


Greenport Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
1883 – July 1888	Construction of Joshua's Point breakwater.	14,775 tons stone placed thru July 1888.
FY 1889	Continue Construction of Joshua's Point breakwater.	3,400 tons placed under contract
FY 1890-1893	Complete Construction of Joshua's Point breakwater.	Unknown
1890-1893	A 9-foot MLW by 5-acre harbor anchorage in the lee of the breakwater and 8-foot by 60-foot wide entrance channel to Sterling Basin.	Unknown
Jan – March 1939	Improvement Dredging of the Anchorage Area in Sterling Basin and the Approach Channel to 8-Foot Depth	106,872 cy
Nov 1940 – April 1941	Repairs to 645 Linear Feet of the Breakwater	3,292 tons stone

Sag Harbor FNP, East Hampton & Southampton, NY

The Sag Harbor FNP was initially authorized by the River and Harbor Act of 1902. The FNP provides for a breakwater, extending from Conklin Point in a northwest direction for a total length of 3,180 feet, built to a height of 8 feet above mean low water, with a top width of 5 feet and side slopes of 1 to 1. The project was modified by the R&H Act of 1935 to add an entrance channel (10 feet deep, 100 feet wide by 3,200 feet long) from Shelter Island Sound to the Standard Oil Co, a turning basin (10 feet deep), and two anchorage areas (one large, 8 feet deep between the channel and the breakwater; the second smaller, 6 feet deep between the Village Wharf and the Sag Harbor Yacht Club Pier). See Project Map 20. The dredged navigation features of this FNP were deauthorized by the Water Resources Development Act of 1992, leaving the breakwater as the only Federally-maintained portion of this FNP.

Project Map 20: Sag Harbor FNP



Sag Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1902	Breakwater Extending 3,180 Feet Northwest to Protect the Harbor	Unknown
River & Harbor Act 1935	Improvement of Sag Harbor by Providing an Entrance Channel 10-Feet Deep, 100 Feet Wide and 3,200 Feet Long from Shelter Island Sound to the Standard Oil Co, a Turning Basin 10 Feet Deep, an Anchorage Area, 8 Feet Deep Between the Channel and the Breakwater, and a Small Anchorage, 6 Feet Deep Between the Village Wharf and the Sag Harbor Yacht Club Pier	Unknown
Water Resources Development Act 1992	Deauthorization of the Improvements Authorized by the R&H Act of 1935	Deauthorization

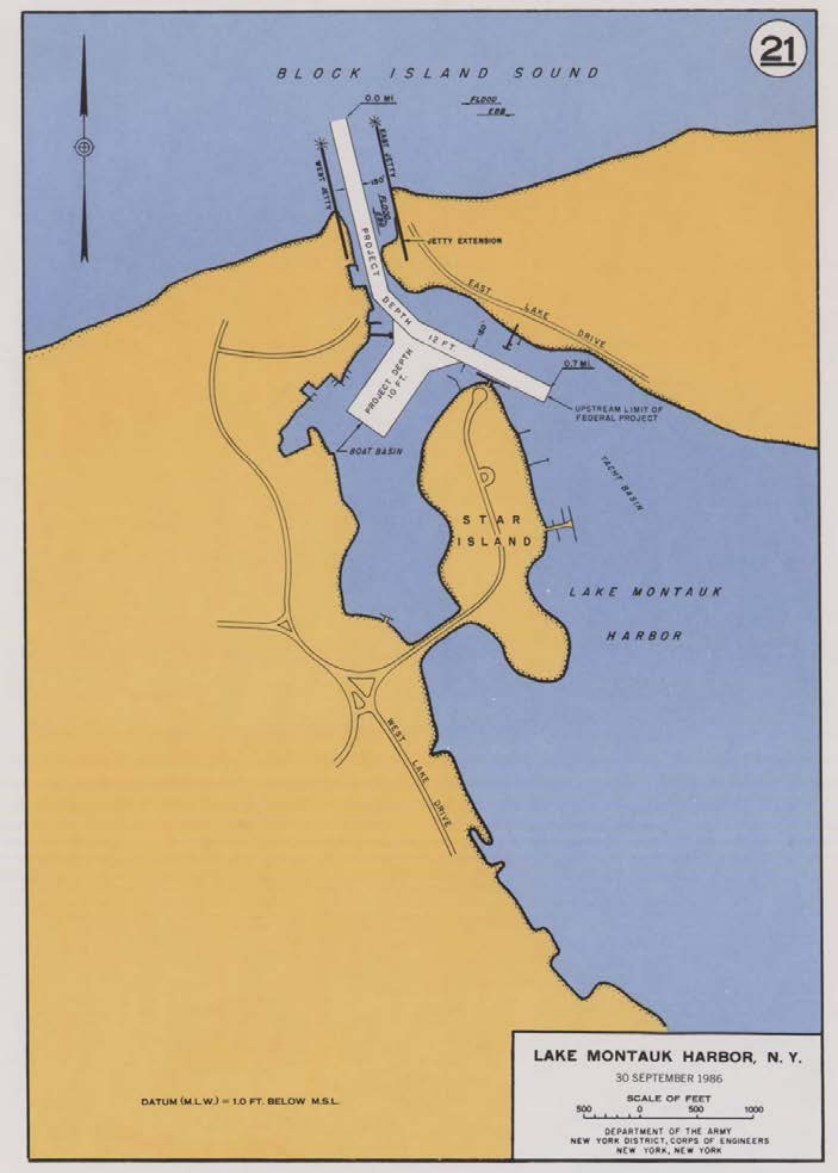
Sag Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
1902-1907	Breakwater Extending 3,180 Feet Northwest to Protect the Harbor	Unknown
May – June 1937	Improvement Dredging to Create an Entrance Channel, 10-Feet Deep; the Large (8-Foot Deep) Anchorage Area; and the Small (6-Foot Deep) Anchorage Area	1,843 tons rock removed
May – Sept 1937	Continued Improvement Dredging to Create the Small Anchorage Area to 6-Foot Depth	177,812 cy
June 1963	Rehabilitation of the Breakwater	2,190 tons stone
June – July 1963	Rehabilitation of the Breakwater	1,429 tons stone

Montauk Dredging Center

Lake Montauk Harbor FNP, Montauk, NY

Lake Montauk Harbor's FNP was authorized by the Rivers and Harbors Act of 1945 and consists of a channel, 12 feet deep by 150 feet wide, extending from the 12-foot contour line in Block Island Sound to the same depth in the yacht basin of Star Island; a boat basin (10 feet deep, 400 feet wide and 900 feet long) located northwest of Star Island; repair and extension shoreward of the East and West jetties; and addition of sport fishing facilities on top of both jetties. See Project Map 21 for details.

Project Map 21: Lake Montauk Harbor FNP



Lake Montauk Harbor List of Authorizations		
Authorization	**Work Authorized & Constructed**	**Construction Dates**
River & Harbor Act of 1945	Channel -12 Feet by 150 Feet Wide from Block Island Sound to Star Island Yacht Basin, Boat Basin -10 Feet Northwest of Star Island, and Repair and Extension Shoreward of the East and West Jetties	1942 for Jetties 1942-1943 for Channel and Basin

Lake Montauk Harbor Project Construction & Maintenance History		
Work Dates	**Work Accomplished**	**Quantities**
Aug – Nov 1942	Jetty Construction	Unknown
Sept – Oct 1942	Improvement Dredging of the 12-Foot Channel	19,381 cy
Dec 1942 – Jan 1943	Improvement Dredging of the 12-Foot Channel	57,020 cy
U.S. Navy 1945	Maintenance Dredging of Entrance Channel for U.S. Navy with U.S. Navy Funds	14,900 cy
Sept 1950	Maintenance Dredging of the 12-Foot Entrance Channel	41,818 cy
July – Sept 1955	Maintenance Dredging of the 12-Foot Entrance Channel	34,546 cy
1958	Maintenance Dredging of the 12-Foot Entrance Channel	Unknown
April – May 1962	Maintenance Dredging of the 12-Foot Entrance Channel	36,205 cy
Aug – Oct 1965	Maintenance Dredging of the 12-Foot Entrance Channel	28,541 cy
14 Aug – 16 Sep 1968	Improvement Dredging of the 10-Foot Anchorage	110,385
15 July – 4 Aug 1969	Maintenance Dredging of the 12-Foot Boat Basin in East Hampton	41,874 cy
5 Jun – 21 Jun 1972	Maintenance Dredging of the 12-Foot Entrance Channel	36,219 cy

Jun – 27 July 1975	Maintenance Dredging of the 12-Foot Entrance Channel	25,933 cy
9 Jan – 17 Jan 1984	Maintenance Dredging of the 12-Foot Entrance Channel	21,875 cy
2011	Maintenance Dredging of the 12-Foot Entrance Channel	12,000 cy

LONG ISLAND SOUND

FINAL
DREDGED MATERIAL MANAGEMENT PLAN
AND FINAL PROGRAMMATIC
ENVIRONMENTAL IMPACT STATEMENT

APPENDIX C

HARBOR CHARACTERIZATION

Appendix C – Harbor Sediment Characterization
Table of Contents

1.0 Introduction C-1
2.0 Block Island Dredging Center C-3
2.1 Block Island Harbor of Refuge FNP, New Shoreham, RI C-3
2.2 Great Salt Pond FNP, New Shoreham, RI C-3
3.0 Fishers Island Sound-Little Narragansett Bay Dredging Center C-4
3.1 Pawcatuck River FNP, Little Narragansett Bay, Stonington, CT C-4
3.2 Watch Hill Cove FNP, Stonington, CT C-4
3.3 Little Narragansett Bay FNP, Stonington, CT C-4
3.4 Stonington Harbor FNP, Stonington, CT C-5
3.5 Dodson Boat Yard, Stonington Harbor C-5
3.6 Mystic Harbor FNP, Groton & Stonington, CT C-5
3.7 Brower's Cove Marina, Mystic Harbor C-6
3.8 Brewer's Yacht Yard at Mystic, Mystic Harbor C-6
3.9 Gwenmor Marina, Mystic Harbor C-7
3.10 Mystic Shipyard, Mystic Harbor C-7
3.11 Bruce Avery, West Cove, Mystic Harbor C-7
3.12 Noank Village Boat Yard, Mystic River C-7
4.0 Fishers Island Dredging Center C-8
4.1 Hay (West) Harbor FNP, Fishers Island, NY C-8
4.2 Z&S Fuel Service, Inc., Hay (West) Harbor, Fishers Island C-8
5.0 New London Area Dredging Center C-8
5.1 New London Harbor FNP, New London, CT C-8
5.1.1 40-Foot MLLW Main Ship Channel C-8
5.1.2 23-Foot MLLW Waterfront Channels and Anchorages C-9
5.1.3 Shaws Cove C-9
5.2 Thames River FNP, New London & Groton, CT C-9
5.2.1 39-Foot MLLW Channel to Navy Submarine Base and Maneuvering Area C-9
5.2.2 25-Foot MLLW Channel to Norwich and Turning Basin C-10
5.3 Thames Shipyard and Repair Company, Thames River, New London C-10
5.4 United States Navy, Thames River, Groton C-10
5.5 Electric Boat Corp., Thames River, Groton C-11
6.0 Niantic Area Dredging Center C-11
6.1 Niantic Bay and Harbor FNP, East Lyme & Waterford, CT C-11

6.2 Niantic Bay Yacht Club, Niantic Bay C-12
6.3 Point o' Woods Beach Association, Threemile River, South Lyme C-12
7.0 Connecticut River Dredging Center C-12
7.1 Hartford Bar- Connecticut River FNP, Hartford, CT C-12
7.2 Claybanks Upper Bar- Connecticut River FNP, Hartford, CT C-12
7.3 Claybanks Bar- Connecticut River FNP, Hartford, CT C-12
7.4 Wethersfield Shoal- Connecticut River FNP, Wethersfield, CT C-12
7.5 Wethersfield Cove- Connecticut River FNP, Wethersfield, CT C-13
7.6 Cys Hollow Bar- Connecticut River FNP, Wethersfield, CT C-13
7.7 Naubuc Bar (Pratt's Ferry Bar)- Connecticut River FNP, Wethersfield, CT C-13
7.8 Press Barn Bar- Connecticut River FNP, Glastonbury, CT C-13
7.9 Crow Point Bar- Connecticut River FNP, Glastonbury, CT C-13
7.10 Glastonbury Upper Bar- Connecticut River FNP, Glastonbury, CT C-13
7.11 Glastonbury Two Piers Bar- Connecticut River FNP, Glastonbury, CT C-14
7.12 Dividend Bar- Connecticut River FNP, South Glastonbury, CT C-14
7.13 CT Department of Transportation, Rocky Hill – Glastonbury Ferry, CT River, Glastonbury C-14
7.14 Brownstone Bar- Connecticut River FNP, North Cromwell, CT C-15
7.15 Pistol Point Bar- Connecticut River FNP, North Cromwell, CT C-15
7.16 Gildersleeve Island Shoal- Connecticut River FNP, Gildersleeve, CT C-15
7.17 Cromwell Bar- Connecticut River FNP, Cromwell, CT C-15
7.18 Portland (Wilcox Island) Bar- Connecticut River FNP, Portland, CT C-15
7.19 Mouse Island Bar- Connecticut River FNP, Middletown, CT C-16
7.20 United Technologies Corporation, Pratt and Whitney, Connecticut River, Middletown C-16
7.21 Bodkin Rock- Connecticut River FNP, Portland, CT C-16
7.22 Paper Rock Shoal- Connecticut River FNP, Portland, CT C-16
7.23 Cobalt Shoal- Connecticut River FNP, East Hampton, CT C-16
7.24 Sears Shoal Upper Bar- Connecticut River FNP, East Hampton, CT C-16
7.25 Sears Shoal- Connecticut River FNP, East Hampton, CT C-16
7.26 Scoville Rock Bar- Connecticut River FNP, Middletown, CT C-17
7.27 Higganum Creek Bar- Connecticut River FNP, Haddam, CT C-17
7.28 Rock Landing Bar- Connecticut River FNP, Haddam, CT C-17
7.29 Haddam Island Bar- Connecticut River FNP, Haddam, CT C-17
7.30 Salmon River Bar- Connecticut River FNP, Haddam, CT C-18
7.31 Warners Quarry Bar- Connecticut River FNP, Haddam, CT C-18
7.32 Eddy Rock Shoal- Connecticut River FNP, East Haddam, CT C-18

7.33 Potash Bar- Connecticut River FNP, Lyme, CT C-18
7.34 Chester Creek Bar- Connecticut River FNP, Chester, CT C-18
7.35 Devils Reef Bar- Connecticut River FNP, Lyme, CT C-18
7.36 Brockway Bar- Connecticut River FNP, Essex, CT C-19
7.37 Eightmile River- Connecticut River FNP, Hamburg, CT C-19
7.38 Essex Cove- Connecticut River FNP, Essex, CT C-19
7.39 Essex Shoal- Connecticut River FNP, Essex, CT C-19
7.40 Chandlery at Essex, Connecticut River, Essex C-19
7.41 Essex Island Marina, Connecticut River, Essex C-20
7.42 Essex Yacht Club, Connecticut River, Essex C-20
7.43 Middle Cove Marina, Connecticut River, Essex C-20
7.44 Town of Essex, Connecticut River, Essex C-21
7.45 Essex Boat Works, Connecticut River, Essex C-21
7.46 Calves Island Bar- Connecticut River FNP, Old Lyme, CT C-21
7.47 Robert Staab, Connecticut River, Old Lyme C-21
7.48 Saybrook Railroad Reach- Connecticut River FNP, Old Saybrook, CT C-22
7.49 Saybrook Shoal- Connecticut River FNP, Old Saybrook, CT C-22
7.50 North Cove- Connecticut River FNP, Old Saybrook, CT C-23
7.51 Saybrook Outer Bar- Connecticut River FNP, Old Saybrook, CT C-24
7.52 Between the Bridges Marina, Connecticut River, Old Saybrook C-24
7.53 Harbor One Marina, Connecticut River, Old Saybrook C-24
7.54 Indian Town Association, Connecticut River, Old Saybrook C-25
7.55 Island Cove Marina, Connecticut River, Old Saybrook C-25
7.56 RAP Riverside Drive, LLC, Connecticut River, Old Saybrook C-25
7.57 Saybrook Point Marina, Connecticut River, Old Saybrook C-26
8.0 Clinton - Westbrook Area Dredging Center C-26
8.1 Patchogue River FNP, Westbrook, CT C-26
8.2 Brewers Pilots Point Marina, Patchogue River, Westbrook C-27
8.3 Harry's Marine Repair, Patchogue River, Westbrook C-28
8.4 Duck Island Harbor FNP, Westbrook, CT C-28
8.5 Duck Island Yacht Club, Duck Island Harbor, Westbrook C-28
8.6 Clinton Harbor FNP, Clinton, CT C-28
8.7 New Harbor Marina, Clinton Harbor, Clinton C-29
8.8 Harborside Marina, Clinton Harbor, Clinton C-29
8.9 Cedar Island Marina, Hammonasset River, Clinton C-29

8.10 Clinton Town Marina, Hammonasset River, Clinton C-30
8.11 Clinton Yacht Club, Hammonasset River, Clinton C-30
9.0 Guilford - Branford Area Dredging Center C-30
9.1 Guilford Harbor FNP, Guilford, CT C-30
9.2 Bayberry Creek Marina, West River, Guilford C-31
9.3 Guilford Yacht Club, Guilford Harbor, Guilford C-31
9.4 Town of Guilford, Guilford Harbor, Guilford C-32
9.5 Stony Creek Harbor FNP, Branford, CT C-33
9.6 Branford Harbor FNP, Branford, CT C-33
9.7 Pine Orchard Yacht Club, Branford Harbor, Branford C-34
9.8 Indian Neck Yacht Club, Branford Harbor, Branford C-34
9.9 Branford Landing Marina, Branford Harbor, Branford C-35
9.10 Goodsell Point Marina, Branford Harbor, Branford C-35
9.11 Bruce and Johnson's West, Branford Harbor, Branford C-35
9.12 Branford Yacht Club, Branford Harbor, Branford C-36
10.0 New Haven Area Dredging Center C-36
10.1 New Haven Harbor FNP- 35-foot Main Entrance Channel, New Haven, CT C-36
10.2 West River - New Haven Harbor FNP, New Haven, CT C-37
10.3 Mill River - New Haven Harbor FNP, New Haven, CT C-37
10.4 Quinnipiac River - New Haven Harbor FNP, New Haven, CT C-37
10.5 Gulf Oil, New Haven Harbor, New Haven C-38
10.6 Gateway Terminal, New Haven Harbor, New Haven C-38
10.7 Magellan Terminals, New Haven Harbor, New Haven C-38
10.8 Lloyd Terminal, Inc., New Haven Harbor, New Haven C-39
10.9 New Haven Terminal, Inc., New Haven Harbor, New Haven C-39
10.10 Motiva Enterprises LLC, New Haven Harbor, New Haven C-39
10.11 Harbor Point Marina, Morris Cove, New Haven Harbor, New Haven C-40
10.12 Pequonnock Yacht Club, New Haven Harbor, New Haven C-40
10.13 City Point Yacht Club, New Haven Harbor, New Haven C-40
11.0 Housatonic River/Milford Area Dredging Center C-41
11.1 Milford Harbor FNP, Milford, CT C-41
11.2 Milford Boat Works, Inc., Wepawaug River, Milford C-41
11.3 City of Milford, Milford Harbor, Milford C-42
11.4 Housatonic River FNP, Stratford to Ansonia, CT C-42
11.4.1 18-Foot MLLW Channel below I-95 ..... C-42

11.4.2 7-Foot MLLW Channel above 1-95 to Derby C-42
11.5 Caswell Cove, Housatonic River, Milford C-43
11.6 Pootatuck Yacht Club, Housatonic River, Stratford C-43
11.7 Brewer Stratford Marina, Housatonic River, Stratford C-43
12.0 Bridgeport Area Dredging Center C-44
12.1 Bridgeport Harbor FNP, Bridgeport, CT C-44
12.1.1 35-foot MLLW Entrance Channel and Main Channel C-47
12.1.2 Inner Harbor, Maneuvering Areas, and Anchorages C-49
12.2 Pequonnock River FNP- Bridgeport Harbor, Bridgeport C-49
12.3 Yellow Mill Channel FNP- Bridgeport Harbor C-50
12.4 Johnsons Creek FNP- Bridgeport Harbor C-50
12.5 Derecktor Shipyards, Bridgeport Harbor, Bridgeport C-50
12.6 Black Rock Harbor FNP, Bridgeport, CT C-50
12.7 Cedar Marina, Black Rock Harbor, Bridgeport C-51
12.8 Black Rock Yacht Club, Black Rock Harbor, Bridgeport C-51
12.9 Town of Fairfield, Black Rock Harbor, Bridgeport C-51
12.10 Southport Harbor FNP, Fairfield, CT C-51
12.11 Jessica and John Illuzzi, Southport Harbor, Fairfield C-53
12.12 Pequot Yacht Club, Southport Harbor, Fairfield C-53
12.13 Stuart Bell, Southport Harbor, Fairfield C-53
13.0 Norwalk Area Dredging Center C-54
13.1 Westport Harbor & Saugatuck River FNP, Westport, CT C-54
13.2 Burritt's Landing Association, Saugatuck River, Westport C-55
13.3 Cedar Point Yacht Club, Saugatuck River, Westport C-55
13.4 Joseph Guimond, Saugatuck River, Westport C-56
13.5 Sydney Weiner, Saugatuck River, Westport C-56
13.6 Norwalk Harbor FNP, Norwalk, CT C-56
13.7 Bermuda Lagoon, Norwalk Harbor, Norwalk/Westport C-57
13.8 Bloom Brothers Marina, Inc., Norwalk Harbor, Norwalk C-58
13.9 Norman Bloom, Norwalk Harbor, Norwalk C-58
13.10 Robert Bloom, Norwalk Harbor, Norwalk C-58
13.11 Norwalk Boat Club, Norwalk Harbor, Norwalk C-58
13.12 Greyrock at Oyster Bend Marina, Norwalk Harbor, Norwalk C-59
13.13 Hillard Bloom Shellfish, Inc., Norwalk Harbor, Norwalk C-59
13.14 Ischoda Yacht Club, Norwalk Harbor, Norwalk C-59

13.15 Norwalk Harborview Condominiums, Norwalk Harbor, Norwalk C-60
13.16 Covelee Association, Norwalk Harbor, Norwalk/Westport C-60
13.17 East Norwalk Boat and Yacht Club, Norwalk Harbor, Norwalk C-60
13.18 Shore and Country Club, Charles Creek, Norwalk C-61
13.19 Norwalk Yacht Club, Wilson Cove, Norwalk Harbor, Norwalk C-61
13.20 Northwest Marine, Norwalk Harbor, Norwalk C-61
13.21 St. Ann Club Marina, Norwalk Harbor, Norwalk C-62
13.22 Wilson Point Harbor FNP, Norwalk, CT C-62
13.23 Fivemile River FNP, Darien & Norwalk, CT C-62
13.24 Five Mile River Works, Five Mile River, Darien C-63
13.25 Douglas Campbell, Five Mile River, Darien C-63
13.26 Darien Boat Club, Goodwives River, Darien C-63
14.0 Stamford Area Dredging Center C-63
14.1 Westcott Cove FNP, Stamford, CT C-63
14.2 Halloween Yacht Club, Westcott Cove, Stamford C-64
14.3 Ponus Yacht Club, Stamford C-64
14.4 Stamford Harbor FNP, Stamford, CT C-64
14.4.1 18-foot MLLW Entrance Channel and Outer Anchorage C-64
14.4.2 12-foot MLLW East Branch Channel and Basin C-65
14.4.3 15-foot MLLW West Branch Channel and Basin C-65
15.0 Greenwich Area Dredging Center C-65
15.1 Mianus River FNP, Greenwich, CT C-65
15.2 Cos Cob Marina, Mianus River, Mianus C-67
15.3 Mianus River Boat and Yacht Club, Mianus River, Mianus C-67
15.4 The River Club of Greenwich, Mianus River, Greenwich C-68
15.5 Greenwich Harbor FNP, Greenwich, CT C-68
15.6 AEMB Holdings, Greenwich Harbor, Greenwich C-69
15.7 Belle Haven Club, Long Island Sound, Greenwich C-69
15.8 Green Fields Property Holdings, Captain Harbor, Greenwich C-70
15.9 Phillip Hadley, Jay Levine and Richard and Ruthanne Ruzika, Greenwich Cove, Greenwich C-70
15.10 Town of Greenwich, Grass Island Municipal Marina, Greenwich Harbor C-70
16.0 Port Chester - Rye Area Dredging Center C-71
16.1 Port Chester Harbor FNP, Rye, NY C-71
16.2 Milton Harbor FNP, Rye, NY C-71
16.3 Poningo Neck Apartments, Milton Harbor, Rye C-72

16.4 Town of Rye, Milton Harbor, Rye C-72
16.5 Westchester County Department of Public Works, Long Island Sound, Rye C-72
16.6 Westchester County Department of Parks, Recreation, and Conservation, Long Island Sound, Rye C-72
17.0 Mamaroneck - New Rochelle Area Dredging Center C-72
17.1 Mamaroneck Harbor FNP, Mamaroneck, NY C-72
17.2 Oscar Davis, Mamaroneck Harbor, Mamaroneck C-73
17.3 Ruediger Flik, Mamaroneck Harbor, Mamaroneck C-73
17.4 Bennett Golub, Mamaroneck Harbor, Mamaroneck C-73
17.5 Orienta Condo Association, Mamaroneck Harbor, Mamaroneck C-73
17.6 Orienta Yacht Club, Mamaroneck Harbor, Mamaroneck C-73
17.7 Shore Acres Point, Corp., Mamaroneck Harbor, Mamaroneck C-73
17.8 Village of Mamaroneck, Mamaroneck Harbor, Mamaroneck C-73
17.9 Indian Cove Property Owners Association, Mamaroneck Harbor, Mamaroneck C-74
17.10 John J. Leitner, Indian Creek, Mamaroneck Harbor C-74
17.11 Greacen Point Group, Pirate's Cove, Mamaroneck C-74
17.12 Eric Rosenfeld, Larchmont Harbor, Larchmont C-74
17.13 Bay Head Group, Larchmont Harbor, Larchmont C-74
17.14 Larchmont Yacht Club, Larchmont Harbor, Larchmont C-74
17.15 Ann and Ken Herman, Larchmont Harbor, Larchmont C-74
17.16 Village of Larchmont, Larchmont Harbor, Larchmont C-75
17.17 Echo Bay FNP, New Rochelle, NY C-75
17.18 Daniel S. Sperandio, Neptune Cove, New Rochelle C-75
17.19 New Rochelle Harbor FNP, New Rochelle, NY C-75
17.20 Castaways Yacht Club, New Rochelle Creek, New Rochelle C-76
17.21 Wright Island Marina, New Rochelle Creek and Harbor, New Rochelle C-76
17.22 New York Athletic Club, Long Island Sound, New Rochelle C-76
18.0 Eastchester Bay Area Dredging Center C-76
18.1 Eastchester Creek FNP, Bronx, NY C-76
19.0 Manhasset & Little Neck Bays Area Dredging Center C-77
19.1 Little Neck Bay FNP, Bayside & Douglaston, NY C-77
19.2 New York City Department of Parks and Recreation, Alley Creek, Bayside C-77
19.3 U.S. Merchant Marine Academy, Little Neck Bay, Kings Point C-77
19.4 Kennilwood Owners Association, Manhasset Bay, Kings Point C-77
19.5 Town of North Hempstead, Leeds Pond, Plandome Manor C-77

19.6 Harvey Sandler, Manhasset Bay, Plandome Manor C-77
19.7 Port Washington Water Pol, Manhasset Bay, Port Washington C-78
19.8 Town of North Hempstead Department of Public Works, Manhasset Bay, Port Washington .. C-78
19.9 Luro Holding Corp./Anthony Luro, Manhasset Bay, Manorhaven C-78
19.10 Capri East Marina, Inc., Manhasset Bay, Manorhaven C-78
20.0 Hempstead Harbor Area Dredging Center C-78
20.1 Hempstead Harbor FNP, Roslyn, NY C-78
20.2 Exxon Mobil Glenwood Landing Terminal, Hempstead Harbor, Glenwood Landing C-79
20.3 Town of Oyster Bay, Hempstead Harbor, Sea Cliff C-79
20.4 Glen Cove Creek FNP, Glen Cove, NY C-79
20.5 City of Glen Cove, Glen Cove Creek, Glen Cove C-80
20.6 Glen Cove Marina, Glen Cove Creek, Glen Cove C-80
21.0 Oyster Bay - Cold Spring Harbor Area Dredging Center C-80
21.1 Lattington Harbor Property Owners Association, Frost Creek, Lattington Harbor C-80
21.2 Town of Oyster Bay, Oyster Bay Harbor, Oyster Bay C-80
21.3 New York Department of Environmental Conservation, Oyster Bay Harbor, Oyster Bay C-80
21.4 Fort Hill Beach Association, Oyster Bay, Lloyd Bay C-80
21.5 Seawanhaka Yacht Club, Oyster Bay, Centre Island C-80
21.6 Town of Oyster Bay Department of Public Works, Oyster Bay, Centre Island C-81
21.7 Village of Lloyd Harbor, Cold Spring Harbor, Lloyd Harbor C-81
21.8 Lloyd Cove Association, Cold Spring Harbor, Lloyd Harbor C-81
21.9 Laval Properties, Cold Spring Harbor, Lloyd Harbor C-81
22.0 Huntington & Northport Bay Area Dredging Center C-81
22.1 Huntington Harbor FNP, Huntington, NY C-81
22.2 Knutson Marina, Huntington Harbor, Huntington C-82
22.3 Wyncote Yacht Club, Huntington Harbor, Huntington C-82
22.4 Thomas A. Knutson Jr. Rev. Trust, Huntington Harbor, Huntington C-82
22.5 Suffolk County Department of Public Works, Centreport Harbor & Northport Harbor, Huntington & Northport C-82
22.6 Northport Harbor FNP, Huntington, NY C-82
22.7 Harbour Point Homeowners Association, Northport Bay, Huntington C-82
22.8 Herbert Heyman, Northport Bay, Asharoken C-83
23.0 Smithtown Bay & Stonybrook Harbor Area Dredging Center C-83
23.1 Town of Smithtown, Nissenquogue River, Kings Park C-83
23.2 Suffolk County Department of Public Works, Nissenquogue River, Porpoise Channel, and Stony Brook Harbor C-83

24.0 Port Jefferson - Mount Sinai Dredging Center C-83
24.1 Port Jefferson Harbor FNP, Brookhaven, NY C-83
24.2 Town of Brookhaven, Port Jefferson, Brookhaven C-84
24.3 Bayles Dock Marina, Port Jefferson, Brookhaven C-84
24.4 Long Island Lighting Co., Port Jefferson, Brookhaven C-84
24.5 Mariners End Corporation, Port Jefferson, Brookhaven C-84
24.6 Town of Brookhaven Department of Parks and Recreation, Port Jefferson and Mount Sinai Harbor, Brookhaven C-84
24.7 DF Marina LLC, Port Jefferson, Brookhaven C-84
25.0 Suffolk County Northeast Shore Area Dredging Center C-85
25.1 Mattituck Harbor and Inlet FNP, Mattituck, NY C-85
25.2 Sebastian's Cove Property Owners Association, Mattituck Creek, Mattituck C-85
25.3 Town of Riverhead, Hallocks Pond, Northville C-85
26.0 Great & Little Peconic Bays Dredging Center C-85
26.1 Suffolk County Department of Public Works, Various Locations C-85
26.1.1 Cedar Beach Creek, Little Peconic Bay, Southold C-86
26.1.2 Corey Creek, Hog Neck Bay, Little Peconic Bay, Southold C-86
26.1.3 Richmond Creek, Hog Neck Bay, Little Peconic Bay, Southold C-86
26.1.4 Little Creek, Little Peconic Bay, East Cutchogue C-86
26.1.5 Mud Creek, Great Peconic Bay, Cutchogue C-86
26.1.6 West Creek, Great Peconic Bay, Cutchogue C-86
26.1.7 Schoolhouse Creek, Great Peconic Bay, New Suffolk C-86
26.1.8 Deep Hole Creek, Great Peconic Bay, Mattituck C-86
26.1.9 James Creek, Great Peconic Bay, Mattituck C-87
26.1.10 Brushes Creek, Great Peconic Bay, Laurel C-87
26.1.11 Hawks Creek, Great Peconic Bay, Jamesport C-87
26.1.12 Miamogue Lagoon, Great Peconic Bay, Riverhead C-87
26.1.13 Dreamers Cove, Great Peconic Bay, Aquebogue/Riverhead C-87
26.1.14 Red Creek Pond, Great Peconic Bay, Southport C-87
26.2 Anthony & Marie Vitale, Cedar Beach Creek, Southold C-87
26.3 Ted Dowd, Fair Haven Inlet, Southold C-88
26.4 Lohn Patrick, Corey Creek, Southold C-88
26.5 Cove Condominium Homeowners Association, Corey Creek, Southold C-88
26.6 Laughing Waters Property Owners Association, Corey Creek, Southold C-88
26.7 Nassau Point Lagoon Association, Wunneweta Pond, Cutchogue C-88
26.8 Wunneweta Pond Association, Wunneweta Pond, Cutchogue C-88

26.9 Alan Cardinale, Jr, Wunneweta Pond, Cutchogue C-88
26.10 Peter Izzo & Arnold Blair, Horseshoe Cove, Cutchogue C-89
26.11 Curran Frank, Haywater Cove, Cutchogue C-89
26.12 Thomas Samuels, Haywater Cove, Cutchogue C-89
26.13 Johanna Smith, Haywater Cove, Cutchogue C-89
26.14 Glendalough Properties, Inc, Cutchogue Harbor, Cutchogue C-89
26.15 Michael Slade, Wickham Creek, Cutchogue C-89
26.16 Louis M. Bacon, Cutchogue Harbor, New Suffolk C-89
26.17 Nora Tuthill Glueck, Schoolhouse Creek, New Suffolk C-90
26.18 Thomas Cavanaugh, Little Peconic Bay, Cutchogue C-90
26.19 Belvedere Property Management, Inc., Little Peconic Bay, Robins Island C-90
26.20 Neil McGoldrick, Halls Creek, Mattituck C-90
26.21 Strong's Marina, James Creek, Mattituck C-90
26.22 Edgemere Park Association, Brushes Creek, Laurel C-90
26.23 Great Peconic Bay Yacht Basin, Inc., Hawks Creek, South Jamesport C-90
26.24 Peconic River FNP, Riverhead, NY C-90
26.25 Town of Riverhead, Peconic River, Riverhead C-91
26.26 Sylvan-Royal Canal Association, Flanders Bay, Riverhead C-91
26.27 Baywoods Property Owners, Flanders Bay, Riverhead/Aquebogue C-91
26.28 Edward and Patricia Hocker, Meetinghouse Creek, Riverhead/Aquebogue C-91
27.0 Shelter Island Sound & Gardiner's Bay Dredging Center C-91
27.1 Reydon Shores Property Owners, Southold Bay, Southold C-91
27.2 Paradise Point Association, Inc, Southold Bay, Southold C-91
27.3 John H. Mulholland & Michael P. Bontje, Southold Bay, Southold C-91
27.4 Suffolk County Department of Public Works, Goose Creek, Southold C-92
27.5 Al Koke, Jockey Creek, Southold C-92
27.6 Joseph Cornacchia, Jockey Creek, Southold C-92
27.7 Suffolk County Department of Public Works, Jockey Creek, Southold C-92
27.8 John Lynch, Dug Canal, Southold C-92
27.9 Howard Zehner PE, Sage Basin, Southold C-92
27.10 Town of Southold, Goldsmith's Inlet, Long Island Sound, Southold C-92
27.11 Greenport Harbor FNP, Greenport, NY C-92
27.12 Ruth White, Greenport Harbor, Greenport C-93
27.13 Aquafood Property Limited Partnership, Greenport Harbor, East Marion C-93
27.14 Gusatave and Carol Wade, Stirling Basin, Greenport C-93

27.15 JAAP W Hilbrand, Stirling Basin, Greenport C-93
27.16 John J. Casillo, Fordham Canal, Greenport C-93
27.17 Thomas Aprea Jr, Spring Pond, East Marion C-93
27.18 Town of Southold, Marion Lake, East Marion C-93
27.19 Town of Shelter Island Department of Public Works, Dering Harbor, Shelter Island C-94
27. 20 Village of Dering Harbor, Dering Harbor, Shelter Island C-94
27.21 Silver Beach- Shelter Island Association, Inc, Crab Creek, Shelter Island Heights C-94
27.22 Suffolk County Department of Public Works, Various Locations C-94
27.22.1 Silver Beach Lagoon, Shelter Island C-94
27.22.2 West Neck Harbor, Shelter Island C-94
27.22.3 Dickerson Creek, Shelter Island C-94
27.22.4 Coecles Harbor, Shelter Island C-94
27.22.5 Northwest Creek, East Hampton C-95
27.22.6 Three Mile Harbor, East Hampton C-95
27.23 Shorewood Farm, Inc, Clark Creek, Shelter Island C-95
27.24 David Persson, Coecles Harbor, Shelter Island C-95
27.25 Town of Southampton Trustess, Fresh Pond, North Haven C-95
27.26 Sag Harbor FNP, Sag Harbor, NY C-95
27.27 Breakwater Yacht Club, Sag Harbor Bay, Sag Harbor C-95
27.28 BJD Enterprises LTD BDAS East Point Marina, Three Mile Harbor, East Hampton C-96
27.29 Clearwater Beach Group Property Owners Association, Hog Creek, Springs C-96
27.30 Lionhead Beach Civic Association, Hog Creek, Springs C-96
27.31 Devon Yacht Club, Napeague Bay, Amagansett C-96
27.32 U.S. Department of Agriculture, Orient Point Harbor, Orient Point C-96
27.33 U.S. Department of Homeland Security, Plum Gut Harbor and Orient Point Harbor, Southold & Orient Point C-96
28.0 Montauk Area Dredging Center C-97
28.1 Lake Montauk Harbor FNP, Montauk, NY C-97
29.0 Summary C-98
30.0 Sources C-103

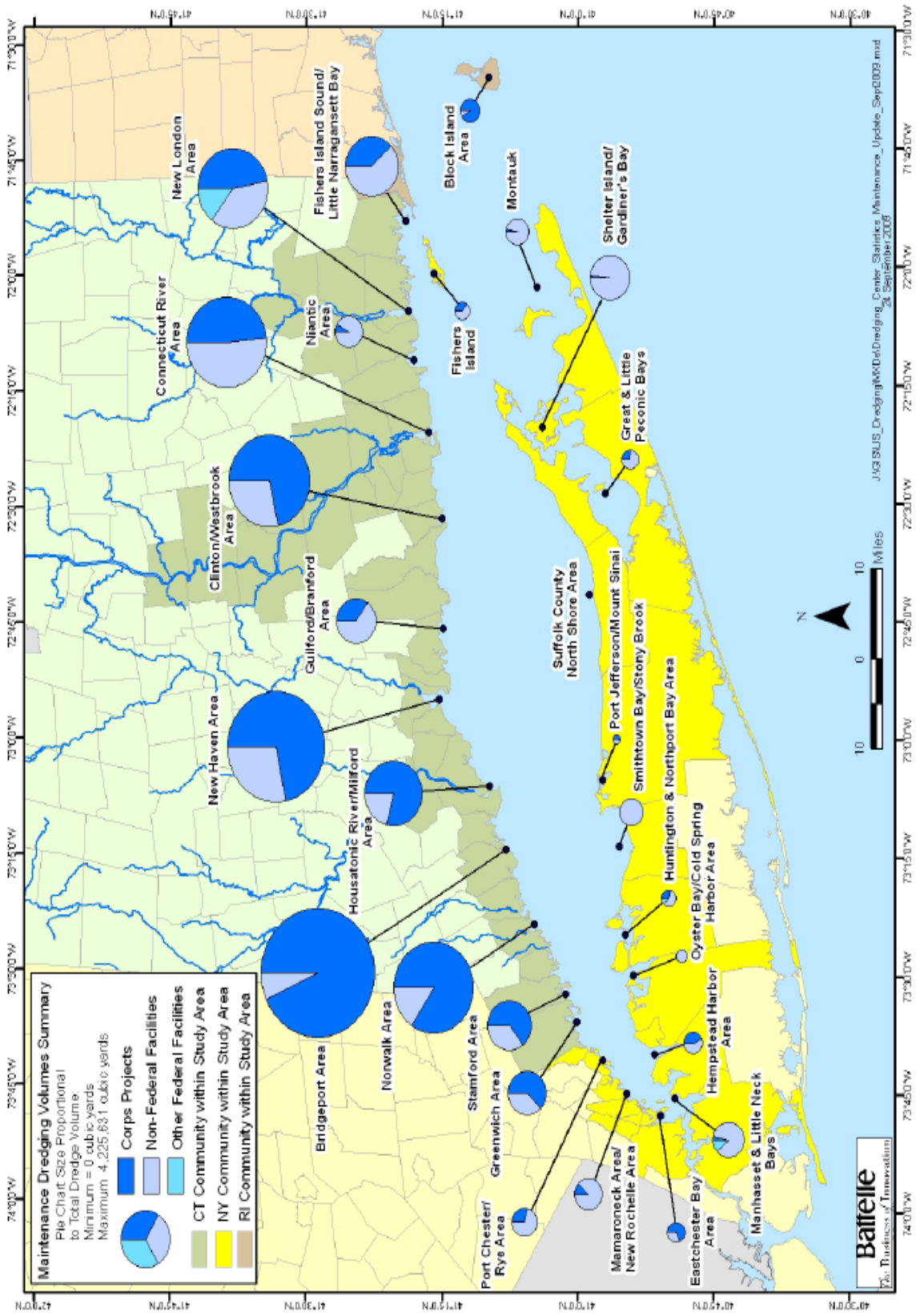
1.0 Introduction

This report describes past and current sediment testing of U.S. Army Corps of Engineers (USACE) Federal navigation projects (FNP) and Non-Corps projects in and around Long Island Sound (LIS). It details historical information from the projects such as material type, suitability determinations for placement, and the placement method/site the project used. The report is organized by dredging centers which were developed as part of the Dredging Needs Evaluation conducted earlier under the Dredged Material Management Project. Figure 1 shows the dredging centers for Long Island Sound. The projects shown in "blue" are USACE Federal Navigation Projects. Projects shown in "red" are non-USACE navigation projects. All project depths referenced for FNPs are in feet below mean lower low water (MLLW).

Information for this report was obtained from USACE sediment sampling and testing data reports, environmental assessments, suitability determinations of both USACE and non-USACE projects, Congressional Annual Reports, and State agencies. The USACE is unable to track or record projects that utilize upland placement as their method of dredged material disposal due to the fact that no permit from the USACE is required. That information will not be presented in this report unless provided by a State agency. Furthermore, because non-USACE projects have permits that last several years in many cases, it is sometimes unknown if the projects described in the report has been undertaken or completed.

Historic information, such as what is presented in this report, is a good indicator of sediment composition within each harbor. This allows for the identification of possible alternatives that might be proposed for the sediment in the future. However, historic information is not always reliable nor will it be used alone in determining placement alternatives for dredged material. Testing will be required prior to all future dredging projects to determine the physical, chemical and biological characteristics of the sediments. Then, alternatives would be evaluated to determine the appropriate placement. Detailed descriptions of the project features and depths as well as possible placement alternatives for each FNP are described in the LIS Dredged Material Management Plan.

Figure 1. Long Island Sound Dredging Centers



2.0 Block Island Dredging Center

2.1 Block Island Harbor of Refuge FNP, New Shoreham, RI

Maintenance dredging of the Block Island Harbor of Refuge -15-foot MLLW entrance channel and -15-foot MLLW inner basin of the FNP occurred in 2014. Approximately 8,300 cy of sand was removed by the U.S. hopper dredge, *Currituck*, and placed at a nearshore site adjacent to Crescent Beach on Block Island. The same occurred in 2013, when approximately 30,000 cy of sand was removed. The entrance channel shoals rapidly and generally requires maintenance dredging every two to three years. Previous maintenance of the entrance channel and inner basin occurred in June 2012 when approximately 20,000 cy of sand was removed and placed nearshore adjacent to Crescent Beach; the entrance channel was also dredged in 2011, 2009, and 2006 with nearshore placement adjacent to Crescent Beach (USACE, 2013a). Grain size analysis of sediments within the entrance channel (1973, 1975, 1986, 1988, 1991, 1992, 1998, and 2011) showed that the material was mainly composed of medium and fine sand and contained very little fine material (none present in the 2011 sampling) (USACE, 1980a; USACE, 2013a).

Although portions of the project have been maintained more recently the entire FNP (-15-foot MLLW entrance channel, -15-foot MLLW anchorage area, and -15-foot MLLW inner basin) was last maintained in 2000. At that time approximately 40,000 cy of material was dredged and placed nearshore off of Crescent Beach (USACE, 2013a). Future shoal material from the Block Island Harbor of Refuge FNP will likely be sand, compatible for beach renourishment or nearshore placement.

2.2 Great Salt Pond FNP, New Shoreham, RI

Maintenance dredging of the -18-foot MLLW deep Federal channel in Great Salt Pond occurred in 2013. At that time, roughly 17,000 cy of sandy material was removed and placed nearshore adjacent to Sachem Pond in the Longwood Cove area on the Northwest side of the island. Sediments from the FNP were sampled in September 2001 for grain size analysis. Sediments from the Great Salt Pond channel are poorly graded medium (81.2%) to fine-grained (13.9%) sands with low (< 0.5%) silt content. Chemical bulk sediment analysis of channel sediments was not conducted because sandy sediments with low (<15 %) fines content are unlikely to contain significant levels of contaminants. Additionally, the material is not located near known significant sources of contaminants (USACE, 2009).

Maintenance dredging was also completed in 2012 with previous dredging projects occurring in 2010, 2009, 2004, 1982, 1972 and 1963. An emergency dredging effort was performed in 2000 to remove hazardous shoals (Annual Report, 2000). For the more recent dredging events, the beach compatible sand was placed on the beach or in the nearshore site adjacent to Sachem Pond. Dredging in 1972 and 1963 placed the dredged material at a site in Block Island Sound located about 1,700 yards west of the South Jetty Light (USACE, 1971a). Future material from the Great Salt Pond FNP will likely be beach compatible sand that could be used for beach nourishment or nearshore placement for bar nourishment.

3.0 Fishers Island Sound-Little Narragansett Bay Dredging Center

3.1 Pawcatuck River FNP, Little Narragansett Bay, Stonington, CT

The Pawcatuck River channel is part of the Little Narragansett Bay FNP. The river enters from the eastern side into Little Narragansett Bay and the FNP provides for a -10-foot MLLW deep channel extending up the Pawcatuck River for about 3 miles. This channel has not been dredged since 1948 when about 91,500 cy of material was removed. In the Annual Report from 1949 it was said that mud and sand made up the material removed from the Pawcatuck River. The material was placed at the Stonington Disposal Site in Fishers Island Sound (USACE, 1948).

3.2 Watch Hill Cove FNP, Stonington, CT

In 1949-1950, the Watch Hill Cove FNP was dredged to its authorized -10-foot MLLW dimensions. Approximately 206,000 cy of dredged material was removed by a hydraulic pipeline dredge and placed on the Napatree beach, near the project site (AR, 1950). Information about sediment type or chemistry is not available for this event; however, it can be inferred from the placement site that the material was beach compatible sand.

3.3 Little Narragansett Bay FNP, Stonington, CT

The section of the Little Narragansett Bay FNP that runs through Little Narragansett Bay; specifically the section of the FNP that extends from south of Stonington Point to just west of Wequetequock Cove (Sandy Point area) were maintenance dredged in 2014-2015. Roughly 60,000 cy of sandy material was removed from the -10-foot MLLW channel by a pipeline cutterhead dredge with the material placed on the washover area of Sandy Point Island. Prior to that, the 10-foot MLLW channel was dredged Sept 1996 through January 1997 and the dredged material was placed on Sandy Point Island (USACE, 2014a).

The channel sediments in the Little Narragansett Bay FNP were most recently examined in June 2003. It was found that the material in the channel west of Wequetequok Cove was sandy (93% sand or higher) with at most 2% fines. The material in the channel east of Wequetequok Cove was more variable with a range of 20 to 80% sand and 6 to 80% fines. Additional sampling of the silty material occurred in May 2004 for bulk chemistry and biological testing. Approximately 50,000 cy of the silty dredged material from this portion of the channel was deemed suitable for unconfined aquatic placement at the New London Disposal Site or the Rhode Island Sound Disposal Site in 2003 (USACE, 2014a).

Grain size analysis from 1995 drew the same conclusion about the channel material west of Wequetequok Cove. Analysis determined that the dredged material on the Sandy Point (western) end of the Little Narragansett Bay FNP was composed predominantly of sand (75% to 89%) and gravel (10-25%). Material from the eastern portion of the channel was not scheduled to be dredged at that time and therefore, was not tested. These sediments were suitable to be hydraulically dredged and piped to Sandy Point Island for barrier island nourishment (USACE, 1996a).

Testing conducted in 1984 also indicated that sediments from the western portion of the FNP were fine sand with less than 1% fines (silt and clay). No bulk chemistry testing was done at that time either and disposal occurred at Sandy Point Island by the use of a hydraulic pipeline dredge (USACE, 1986a). In 1975, grain size analysis showed that the material ranged from silty medium to fine sand and gravelly, coarse to medium sand. As for bulk chemistry, no significantly high levels of contaminants were present in samples taken in 1975 and 1971 (USACE, 1980a).

3.4 Stonington Harbor FNP, Stonington, CT

Approximately 28,500 cy of material was dredged and placed at the Stonington Dumping Grounds for improvement dredging in 1956-1957 (AR, 1957). No grain size information was available about this event. An annual report from 1874 described the sediment in the upper harbor as closely packed sand, while the lower harbor was characterized by soft mud (AR, 1874). Updated information from an April 1990 Reconnaissance Report described the sediments in Stonington Harbor as sandy-gravel to sandy-silt (USACE, 1990).

3.5 Dodson Boat Yard, Stonington Harbor

Recent dredging of the Dodson Boat Yard occurred in 2012 when about 12,900 cy of suitable material was removed and placed at CLDS. This site was also dredged in 2011. At that time, 1,730 cy of material was taken out and placed at CLDS. In 2004, the Dodson Boat Yard put forward a project to dredge about 16,000 cy of sand (60.9% sand) and silty material (39.1% fines) from their boat basin with the intention of disposing the material either at NLDS or CLDS. Bulk chemistry test results showed that the project materials contained higher levels of metals, specifically cadmium, mercury, copper, lead and zinc, than the NLDS reference site materials.

In comparison to the CLDS reference site materials, only one sample from the project area showed higher concentrations of contaminants of concern (cadmium, copper and mercury). The PAHs were near or below the contaminant concentrations found at both the NLDS and CLDS reference sites in all of the project sediment samples tested. For PCBs and pesticides, the contaminant concentrations in the project fell near or below the analytical detection limits in all of the project sediment samples tested. Based on these results, it was determined that the proposed dredged material was not suitable for unconfined open water disposal at the NLDS or CLDS sites. The material could be deemed suitable for unconfined aquatic disposal, pending the results of biological testing and State water quality certification.

3.6 Mystic Harbor FNP, Groton & Stonington, CT

The Mystic Harbor FNP is being maintenance dredged in 2014-2015. An estimated volume of 250,000 cy will be removed from the two channels (12-foot and 15-foot MLLW) and anchorage in the FNP (USACE, 2014b). The 12-foot MLLW channel was last maintained in 1941. Dredging of the other project features (15-foot MLLW channel; 9-foot MLLW anchorage; and 9-foot MLLW turning basin) was last accomplished with the improvement work completed in 1957.

Sampling and testing of the sediments in Mystic Harbor was completed in 2009. The disposal areas evaluated were NLDS and RISDS. In total, twenty-six sediment cores were taken for

analysis and combined into eight composites. Grain size analysis showed that the samples were comprised predominantly of silt and clay with the amount varying between 55-90% among composite groups. Fine sands and medium sands were also present in all composites in lesser percentages. Total organic carbon (TOC) was at moderate levels (ranging from 1.1% - 3.4%) in all composites with a trend of increasing TOC from the mouth of the river upstream to the head of the FNP. Bulk chemistry test results which include metals, PCBs/pesticides, and PAHs indicate that the samples in the Mystic River generally have low levels of contaminants, with the exception of the two composites located at the head of the FNP which had moderate levels of mercury (0.954 and 1.04 ppm) (USACE, 2014b).

Bioassay/bioaccumulation tests were used to determine the suitability of the material for unconfined open water disposal. Woods Hole Group (2010) prepared the report to document the methods and results of the three biological tests performed. The three tests included: 1) a ten-day acute exposure solid phase assay; 2) an acute suspended particulate phase assay; and 3) a 28-day solid phase sediment bioaccumulation test. Mean survival for all three tests in comparison to reference site values was acceptable for unconfined open water disposal.

In total, there were 9 contaminants of concern which were bioaccumulated at levels greater than in the reference animals at NLDS. Because of the presence of significant bioaccumulation, the EPA ran a risk-assessment model of the bioaccumulation results. It was determined that the disposal of the material as proposed would not cause any significant undesirable effects. This material was approved by the USACE and EPA for unconfined aquatic disposal at NLDS or RISDS (USACE, 2014b).

3.7 Brower's Cove Marina, Mystic Harbor

In 2005, the Brower's Cove Marina boat basin and a portion of the marina's channel were proposed to be dredged in Mystic, CT. This would produce a volume of about 10,000 cy of sand (62.2% sand) and silty material (37.8% fines) that was to be sent to NLDS for disposal. Bulk chemistry test results showed that all but two of the metals tested were below or near the contaminant concentrations found at the NLDS reference site. Specifically, cadmium concentrations were between five and eleven times the NLDS reference value in all samples and copper concentrations exceeded the NLDS reference site values by almost four times. For PAHs, PCBs and pesticides, the contaminant concentrations in the project fall near or below the analytical detection limits in all of the project sediment samples tested.

Due to the elevated cadmium and copper concentrations, these sediments were not suitable for unconfined open water disposal at NLDS. The material could be deemed suitable for unconfined open water disposal or disposal with management, pending the results of future biological testing and State water quality certification.

3.8 Brewer's Yacht Yard at Mystic, Mystic Harbor

Brewer's Yacht Yard at Mystic planned a project in 2009 to remove roughly 14,000 cy of fine-grained material from the Mystic River in order to expand their marina. Upon examining the results of bulk chemistry testing, it was found that the project's sediments contained low concentrations of PCBs, pesticides, metals and PAHs in comparison to reference materials taken

from NLDS. Based on these results, the material was found suitable for unconfined open water disposal at NLDS.

3.9 Gwenmor Marina, Mystic Harbor

In 2013, roughly 2,500 cy of dredged material was removed from the Gwenmor Marina and placed at CLDS. Gwenmor Marina planned an earlier project in 2001 to dredge approximately 3,400 cy of sandy material (26.6% - 56.7% fines) from their boat basin with the aim to dispose the material at CSDS. Examination of the bulk chemistry test results revealed that the project's sediments contained sufficiently elevated levels of metals relative to the CSDS reference sediments. It was determined that the dredged material was not suitable for disposal at CSDS, but when compared to NLDS reference sediments, the project was found suitable for unconfined aquatic disposal at NLDS.

3.10 Mystic Shipyard, Mystic Harbor

A project to dredge roughly 775 cy of material from the Mystic Shipyard was put forward in 2002 with the intention to dispose the material at NLDS. Chemical testing of the project's sediments revealed relatively high concentrations of copper, cadmium, mercury, lead and zinc. PCB, pesticide and PAH results were all less than the analytical detection limits. Due to the elevated concentrations of metals, the material was determined to be not suitable for unconfined aquatic disposal at NLDS.

3.11 Bruce Avery, West Cove, Mystic Harbor

A project from 2004 proposed that approximately 4,000 cy of primarily silty material (95.8% fines) be dredged from a marina in Noank, CT with the intent to dispose of the material either at NLDS or CLDS. Examination of the results of bulk sediment chemistry revealed concentrations in the metal contaminants of concern that exceeded NLDS's reference site concentrations for cadmium and copper. However, results from chemistry analyses of the dredged material in comparison to the CLDS reference site indicated that metal concentrations fell at or below the concentrations of all metals at CLDS. For PAHs, PCBs and pesticides, the values fell near or below the analytical method detection limits in all of the project sediment samples tested. The material was determined to be suitable for unconfined open water disposal at CLDS, but not suitable for unconfined open water disposal at NLDS.

3.12 Noank Village Boat Yard, Mystic River

The Noank Village Boat Yard was dredged in 2013; about 450 cy of material was removed and placed at CLDS. The site was dredged earlier in 2012 and in 2011 as well. About 9,000 cy and 600 cy of material were taken to CLDS for disposal during those events. In 2009, it was proposed that 9,000 cy of material be dredged from the Noank Village Boat Yard that year. Proposed disposal sites were CLDS and NLDS. Due to the higher levels of cadmium in comparison to reference materials, the project material was not suitable for unconfined aquatic disposal at NLDS. However, the regulatory agencies indicated that if the applicant agreed to complete this project early in the dredging season and dispose the material from around the

NVB-1 and NVB-3 composite first, followed by the balance of the materials, then it was determined by the USACE and EPA that all of the sediments could be placed at CLDS.

4.0 Fishers Island Dredging Center

4.1 Hay (West) Harbor FNP, Fishers Island, NY

West Harbor and Hay Harbor are two distinctly different harbors both located on Fishers Island. West Harbor (formerly known as Big Hay Harbor), site of the Federal Navigation Project authorized in 1930 is located along the northern shore of the Island, while Hay Harbor (formerly known as Little Hay Harbor) is located along the western shore. The FNP name of Hay (West) Harbor is a quirk of the Congressional legislation authorizing the study and project. The actual FNP is located at West Harbor.

This project was last improved in 1931 when roughly 23,400 cy of material was removed to return the channel to its authorized 14-foot MLLW depth. No disposal site or sediment characterization information for this event is available.

4.2 Z&S Fuel Service, Inc., Hay (West) Harbor, Fishers Island

In 2009, it was proposed that 16,000 cy of material be dredged from a 2.1 acre area in West Harbor, Fishers Island, NY. Proposed disposal areas were NLDS, CLDS, or WLDS disposal sites. Seven sediment cores were taken and combined into four composite samples. The concentrations of contaminants were below/slightly higher than detection limits, which were acceptable. The material was approved by the USACE and EPA for unconfined open-water disposal at any of the three disposal sites considered.

5.0 New London Area Dredging Center

5.1 New London Harbor FNP, New London, CT

5.1.1 40-Foot Main Ship Channel

In 1984, sediment samples were obtained from the -40-foot MLLW main ship channel in the New London Harbor FNP for physical and chemical analyses. All samples were dominated by silt/clay material. Percentages for fine silt/clay ranged from 66%-100% with an average of 92.9%. None of the bulk chemical analyses performed on the samples indentified contaminated sediments and all samples had lower concentrations for all parameters relative to the reference site materials (USACE, 1985a). This channel was most recently improved by the US Navy in 1980 (AR, 1980). About 3,260,000 cy of suitable fine-grained material was taken out and placed at NLDS.

The -40-foot MLLW main channel in New London Harbor was also tested for grain size and bulk chemistry in 1971 and 1975. In 1971, grain size was found to be primarily silt/clay with an average of 75.3% total fines and in 1975 this was reiterated when the average for percent fines

was found at 95.3% total fines. None of the samples from these years showed significantly higher values for any potential contaminants (USACE, 1980a). Sediments were deemed suitable for disposal at the NLDS for maintenance dredging in 1976 (USACE, 1976a).

5.1.2 23-Foot Waterfront Channels and Anchorages

There is no recent information regarding the waterfront channels and anchorages in New London Harbor. The last time this channel was improved was in 1943 when 316,800 cy was removed (AR, 1943). The material was fine-grained and suitable for disposal at NLDS. It is expected that future projects in the waterfront channels will encounter fine-grained material.

5.1.3 Shaw's Cove

According to available information, the Shaw's Cove channel was last maintained in 1934. About 19,000 cy of "ordinary material" was removed (AR, 1934). No information regarding sediment type, chemistry, or disposal site is available.

5.2 Thames River FNP, New London & Groton, CT

5.2.1 39-Foot Channel to Navy Submarine Base and Maneuvering Area

A Navigation Assessment Study from 2000 described the sediments present in the shallow area west of Trading Cove dike in the Thames River as olive black or gray, silty sand. Fines ranged from about 2.5% to 65%; average fines from all sixteen samples collected was about 23%. Selected sediment cores were composited for subsequent chemical analyses. No pesticides were detected above the target detection limits in any of the samples. PCBs were detected above the target detection limits in three samples. PAHs were found in several of the sediment samples. Elevated levels of perylene were found in some samples; however, it is possible that the source of perylene is due to the presence of decaying organic matter and not from an anthropogenic source. The results of these physical and chemical tests indicated a need for biological sampling in order to determine the suitability of the dredged material for unconfined open water disposal in Long Island Sound (USACE, 2000).

In 1996, the U.S. Navy submitted a Completion Report for dredging of the Thames River at the Naval Submarine Base. Dredged materials under the construction contract were classified as either contaminated material (present in the berthing areas and adjacent channel) or capping material (present in the channel south of the piers). In the end a total of 1,029,000 cy of material was removed and placed at NLDS including the capping material. Maintenance dredging of the ARDM Basin, Pier 15 at the U.S. Navy Submarine Base was conducted in 1986. The dredged material in the channel basin was described as being organic clayey silt. Disposal for this event also took place at NLDS and the material was required to be capped with clean sediments (Gahagan and Bryant Associates, 1996).

An Environmental Assessment from July 1985 on the Thames River and New London Harbor channel detailed a sediment sampling effort that was completed in 1984 for planned maintenance dredging of the Thames River FNP. Eleven sediment samples were taken from the project footprint for chemical and physical analyses. All eleven samples were dominated by fine

silt/clay material. Fines ranged from 66% to 100% with a mean of 92.9%. None of the bulk chemistry tests performed on the samples identified contaminated sediments and all PCBs and DDT values were low. Unconfined aquatic disposal at the New London Disposal Site was approved for the dredging operation. Emergency dredging of the New London Approaches in 1984 also sent material to NLDS for disposal. This material consisted of sand, gravel, silt, clay, stones, flat iron, angle iron, conduit, cables and other miscellaneous debris (USACE, 1985a).

5.2.2 25-Foot Channel to Norwich and Turning Basin

This portion of the Thames River FNP was last maintained in 1966 when about 237,400 cy of material was placed at NLDS (AR, 1966). Information regarding sediment chemistry and grain size were not obtained for this event.

5.3 Thames Shipyard and Repair Company, Thames River, New London

An estimated volume of 11,400 cy of dredged material was placed at CLDS in 2013-2014 as part of a dredging project at the Thames Shipyard. Prior to that in 2012, the Thames Shipyard had their yard dredged by removing about 5,300 cy of material with disposal at CLDS. Chemical analysis of the project's sediments showed higher levels of heavy metals, PAHs, and PCBs than reference site values. The material was approved for disposal at CLDS with capping.

5.4 United States Navy, Thames River, Groton

In 2009, the U.S. Navy proposed a project to dredge several of their berthing areas and to make a confined aquatic disposal (CAD) cell south of the project in the Thames River. Approximately 170,000 cy of fine-grained material was dredged from the berthing areas and placed in the CAD cell. In order to make the CAD cell, the Navy removed about 257,000 cy of material from the location specified for the CAD footprint. They used the upper 2' of the material as a cap for the CAD cell by retaining approximately 19,300 cy by storing it in barges until the operation was complete. The underlying 237,000 cy of parent material which was predominately silts and clays (41.2 % to 56.8% silt and 42.2% to 57.8% clay) was transported and placed at CLDS. Because the material from the CAD cell area is similar to that found in CLDS, the sediments were found suitable for unconfined open water disposal at CLDS. The material coming from the berthing areas, which was contaminated, was not suitable for disposal at CLDS and had to be placed into the CAD cell.

The U.S. Navy conducted a similar project in 2005 and dredged in the vicinity of Piers 6, 10, 12 and 31, and created a CAD cell in the Thames River FNP. A volume of about 153,000 cy of contaminated material was removed from around the piers and placed the constructed CAD cell. To create the CAD cell, approximately 220,000 cy of material was removed. The contaminated material dredged from the top 2' of the CAD cell (approximately 17,400 cy) was stored in barges until the excavation of the CAD cell was complete, at which point it was placed in the CAD cell. The CAD cell was filled and then capped with approximately 14,300 cy of glacial sediment taken from the uncontaminated underlying sediments within the CAD cell footprint.

The remaining 187,700 cy of glacial material from the CAD cell footprint was predominantly silt and clay (85.5% - 99.7% fines) and was placed at the New London Disposal Site. Review of the grain size data, the sampling logs and the chemistry data show that this material was parent material from the glacial period. It was substantially the same as the sediment at NLDS. Therefore, materials were deemed suitable for unconfined open water disposal at NLDS. The sediments in the vicinity of Piers 6, 10, 12 and 31 were fine-grained estuarine sediments as were those at the surface of the CAD cell site and they were placed into the CAD cell. The material dredged from around the piers was contained within the CAD cell; therefore material was suitable for disposal as planned. The material dredged from the top 2' of the CAD cell area, approximately 17,400 cy was dredged and placed in the CAD cell. Once the dredged material that was not suitable for unconfined ocean placement was placed into the CAD cell, the material was allowed to consolidate and then the CAD cell was capped. This cap was made from approximately 14,300 cy of glacial sediment taken from below the surficial layer of the CAD cell. Because the sediment used as capping material was dredged from the CAD cell and was glacial material that had not been exposed to industrial contaminants, it met the requirements for the CAD cell cap without further testing.

5.5 Electric Boat Corp., Thames River, Groton

In 2013, roughly 28,000 cy of material was removed from the shipyard of the Electric Boat Corp and placed at CLDS. This project was required to be completed earlier in the dredging season in order for the material to be capped by other project material. Prior to that, the Electric Boat Corp. proposed a project to dredge about 4,000 cy of sand (31.3%) and silty material (68.7%) from their shipyard in 2006 with the intention to place the material at NLDS. Chemical testing of the sediments showed that the material contained contaminant concentrations that exceeded the NLDS reference site values for cadmium, copper, mercury, lead and zinc. For PAHs, the contaminant concentrations in the project fell near or below the NLDS reference site levels in all but one of the project sediment samples tested. Tests for pesticides and PCBs showed that contaminant concentrations in the project fell near or below the analytical detection limits in all of the project sediment samples tested. Therefore, materials were not suitable for unconfined open water placement at NLDS. However, biological testing and State water quality certification could determine if project materials were suitable for unconfined aquatic placement.

6.0 Niantic Area Dredging Center

6.1 Niantic Bay and Harbor FNP, East Lyme & Waterford, CT

Niantic Harbor was last dredged in 1970 when the 6 and 8-foot MLLW channels were created. Sediment testing at that time indicated the dredged materials were organic silts, sands, and gravelly sands. No chemical analyses were reported for this event and disposal took place at the Niantic Dumping Ground in the Long Island Sound (USACE, 1970). Environmental sampling undertaken in 1977 showed the sediments to be made up of primarily silty sand with 21.2% mean total fines. None of the samples tested for bulk chemistry presented significantly higher values for any parameters (USACE, 1980a).

6.2 Niantic Bay Yacht Club, Niantic Bay

In 2002, the Niantic Bay Yacht club proposed to dredge approximately 6,300 cy of predominantly sand and silty material (44% - 92% fines) from its boat basin with the aim to place the material at NLDS. Concentrations of metals, PCBs, PAHs, and pesticides in the sediments taken from the project site were only slightly above values from the NLDS reference materials and analytical reporting limits. For this reason, the materials were deemed suitable for unconfined open water placement at NLDS.

6.3 Point o' Woods Beach Association, Threemile River, South Lyme

The Point o' Woods Beach Association planned to dredge about 800 cy of primarily sand and gravel (1.4 to 1.7% fines) from their entrance channel and boat basin in the Threemile River in 2009. This material would be placed above the high tide line on the adjacent beach, dewatered, and then capped by sand. Two samples were composited and analyzed for metals, SVOCs and VOCs. The majority of the contaminants of concern were below reporting limits and upland placement was approved as planned.

7.0 Connecticut River Dredging Center

7.1 Hartford Bar- Connecticut River FNP, Hartford, CT

The Hartford Bar in the Connecticut River consists of a -15-foot MLLW channel and was last maintenance dredged in 1980. Sediment chemistry and physical characteristics test results were not located for the 1980 dredging event, but the material was found suitable for placement in-river or upland along the banks of the river near the bar (USACE, 1979a).

7.2 Claybanks Upper Bar- Connecticut River FNP, Hartford, CT

Claybanks Upper Bar in Hartford is a -15-foot MLLW channel in the Connecticut River. This channel was most recently dredged in 1973 when material was found suitable to be placed in-river or upland along the banks of the river near the bar (AR, 1973).

7.3 Claybanks Bar- Connecticut River FNP, Hartford, CT

The Claybanks Bar is a -15-foot MLLW channel in the Connecticut River connecting to the Clay Banks Upper Bar. It was last maintained in 1984 when 2,700 cy of sediment was removed. No testing information about the material was found, but sediment was deemed suitable for placement in-river or upland along the banks of the river (USACE, 1985b).

7.4 Wethersfield Shoal- Connecticut River FNP, Wethersfield, CT

The -15-foot MLLW channel at Wethersfield Shoal is located in Wethersfield, CT. This channel was most recently dredged in 1955. Approximately 5,500 cy of sandy material was suitable for placement upland along the banks of the Connecticut River (USACE, 1955).

7.5 Wethersfield Cove- Connecticut River FNP, Wethersfield, CT

In 2011, sediment samples were taken from the entrance channel of Wethersfield Cove and tested for physical and chemical characteristics in support of proposed maintenance dredging that took place in 2014. Most samples contained fine sand with silt and organic material (average values of 63% fine sand and 30% silt and/or clay), though one sample presented less fines and more fine gravel and coarse sand. All samples revealed test results that were low for PAHs, PCBs, pesticides, and metals. TOC concentrations ranged from 0.3 to 2.53%. This material was deemed suitable for placement in the Connecticut River south of Gildersleeve Island (USACE, 2013b). It is feasible to assume that future dredging of this portion of the FNP will yield mixed sand and fine-grained material.

7.6 Cys Hollow Bar- Connecticut River FNP, Wethersfield, CT

The -15-foot MLLW channel at Cys Hollow Bar in the Connecticut River was last maintained in 1982. Material was deemed suitable for placement in-river or upland along the banks of river near the bar, but no sediment characteristic data were found for this event (USACE, 1982a).

7.7 Naubuc Bar (Pratt's Ferry Bar)- Connecticut River FNP, Wethersfield, CT

The Naubuc Bar is another -15-foot MLLW channel in the Connecticut River. It was dredged most recently in 1984 when roughly 5,800 cy of material was removed and found suitable for placement either in the river or upland along the banks of the river (1985b). Information about sediment grain size or chemistry could not be located for this event.

7.8 Press Barn Bar- Connecticut River FNP, Glastonbury, CT

There are several Federally-maintained channels in the Connecticut River in Glastonbury, CT. The most northern of these is the -15-foot MLLW channel at Press Barn Bar. This channel was last dredged in 1982. No data regarding sediment chemistry or physical characteristics was located, but material was found suitable for in-river placement or upland disposal along the banks of the river (USACE, 1982a).

7.9 Crow Point Bar- Connecticut River FNP, Glastonbury, CT

The Crow Point Bar is another -15-foot MLLW channel in the Connecticut River in Glastonbury. Maintenance of the channel was last completed in 1911 when about 1,000 cy of dredged material was removed. Sediments were deemed suitable for placement either upland along the river bank or in-river (AR, 1911).

7.10 Glastonbury Upper Bar- Connecticut River FNP, Glastonbury, CT

The -15-foot MLLW channel at Glastonbury Upper Bar was most recently dredged in 1987. Roughly 17,000 cy of sediment was taken out and suitably placed in the Connecticut River (AR,

1987). No information on the physical or chemical makeup of the dredged material was located for this event.

7.11 Glastonbury Two Piers Bar- Connecticut River FNP, Glastonbury, CT

The Glastonbury Two Piers Bar was also dredged in 1984. About 29,400 cy of material was removed from the -15-foot MLLW channel and deemed suitable to be placed in-river (USACE, 1985b). No chemical or physical data about the sediment was able to be located for this event though.

7.12 Dividend Bar- Connecticut River FNP, South Glastonbury, CT

In 1999, it was proposed that approximately 61,700 cy of material be dredged from the Dividend Bar reach in the Connecticut River. An area to the west was also proposed to have improvement dredging, to create a channel that required the removal of approximately 42,800 cy of material. The disposal area was in-river off of Gildersleeve Island. Three sediment samples were taken for analysis and combined into two composites. Both samples consisted of sands and gravel. Sample O had elevated levels of PAHs, so a biological sampling plan was developed in 2002. Nine sediment cores were taken and combined into three composites.

There were no significant concentrations of contaminants found. Statistical analysis indicated that there was a significant difference between the survivorship of the amphipods exposed to the reference sediments and the amphipods exposed to the project site sediment. However, the difference between the average survivorship of the amphipods exposed to the reference and project site sediments was 13.8%, lower than the 20% threshold allowed in the testing protocol. Statistical analysis also indicated that there was no significant difference between the survivorship of the midges and oligochaetes exposed to the reference sediments and the midges and oligochaetes exposed to the project site sediment. Therefore, the material proposed to be dredged was predicted not to be acutely toxic to benthic organisms. Based on these findings, the material was found to be suitable for unconfined aquatic placement at Gildersleeve Island. However, this project has not yet taken place.

7.13 CT Department of Transportation, Rocky Hill – Glastonbury Ferry, CT River, Glastonbury

In 2005, it was proposed that approximately 4,000 cy of material be dredged from the Rocky Hill Landing and Glastonbury Landing in the Connecticut River. Approximately 80 cy would be dredged from the Rocky Hill Landing, approximately 150 cy from the Glastonbury Landing and approximately 3,800 cy from a shoal at the approach to the Glastonbury Ferry Slip. This material was proposed to be mechanically dredged and placed either in the Connecticut River south of Gildersleeve Island or at CSDS.

Eight sediment cores were taken for analysis. The sediments were predominantly sands and gravels, with fines ranging from 0.4% (at the shoal) to 39.4% (at Glastonbury Landing). The Connecticut Department of Energy and Environmental Protection required chemical testing of

the material. Test results showed the sediments contained higher levels of heavy metals which made the dredged material unsuitable for open water disposal in the Long Island Sound or in-river. Project material was required to be capped at CLDS or sent upland for disposal.

7.14 Brownstone Bar- Connecticut River FNP, North Cromwell, CT

In 1955, approximately 6,600 cy of dredged material was removed for maintenance dredging of the Brownstone Bar. This material was found suitable for upland disposal (USACE, 1955). No sediment characterization information was located for this dredging event.

7.15 Pistol Point Bar- Connecticut River FNP, North Cromwell, CT

In 2002, roughly 49,600 cy of primarily sand was removed from the Pistol Point Bar and placed downstream of Gildersleeve Island in the Connecticut River. Sampling and testing of the project's sediments occurred in 1999 and 2000. Grain size results from 1999 indicated that the material ranged from approximately 73% to 92.5% fine sand, with the bulk of the remaining material medium sand. Generally, the results of the metals and PCB congener tests indicated low concentrations in the sediments; however, concentrations of PAHs were found to be slightly elevated (USACE, 2002a). As a result, additional biological testing was required.

In 2000, additional samples were collected and analyzed for bulk chemistry and biological toxicity. The results indicated that concentrations of PAHs in the sediments were not as high as the previous results. The new data showed that the sediments from Pistol Point Bar did not result in toxicity to the test organisms. Based on these findings, the material was found suitable for unconfined placement at a riverine area south of Gildersleeve Island. A similar project in 1993 removed approximately 100,000 cy of sandy material from Pistol Point Bar which was deposited in the same riverine area south of Gildersleeve Island (USACE, 2002a).

7.16 Gildersleeve Island Shoal- Connecticut River FNP, Gildersleeve, CT

The -15-foot MLLW channel at Gildersleeve Island Shoal was last maintained in 1958. In that year, approximately 13,000 cy of dredged material was removed and placed upland (USACE, 1957). Sediment chemistry and grain size were not obtained for this event.

7.17 Cromwell Bar- Connecticut River FNP, Cromwell, CT

In 1982, the -15-foot MLLW channel at Cromwell Bar was dredged. This project represents the most recent maintenance of this channel. No sediment characterization information of the sediment was able to be located; however, material was found suitable for placement in-river or upland along the banks of the Connecticut River (USACE, 1982a).

7.18 Portland (Wilcox Island) Bar- Connecticut River FNP, Portland, CT

In 1984, roughly 28,000 cy of material from maintenance dredging of the Portland Bar was deemed suitable for in-river disposal (USACE, 1985b). Physical and chemical sediment data was not found for this project.

7.19 Mouse Island Bar- Connecticut River FNP, Middletown, CT

The Mouse Island Bar consists of a -15-foot MLLW deep channel in Middletown, CT. It was last maintained in 1984. Approximately 1,600 cy of material was removed (USACE, 1985b). No chemistry or physical characteristics of the sediment are available for that event, but material was found suitable for placement in-river or upland along the banks of the Connecticut River.

7.20 United Technologies Corporation, Pratt and Whitney, Connecticut River, Middletown, CT

The United Technologies Corporation in Middletown, CT proposed a project in 2010 to dredge approximately 2,000 cy of mostly sand and gravel (5.5% and 9.1% fines) from around their cooling water intakes and place the material at CSDS. Bulk chemistry test results showed that all of the concentrations of contaminants of concern were less than or slightly higher than the means plus twice the standard deviations of those chemicals in the CSDS reference site. Thus, the material was found suitable for unconfined aquatic placement at CSDS.

7.21 Bodkin Rock- Connecticut River FNP, Portland, CT

Maintenance dredging of the Bodkin Rock 15-foot channel was last completed in 1982 (USACE, 1982a). Material was suitable for upland or in-river disposal, but no sediment data was located for this project.

7.22 Paper Rock Shoal- Connecticut River FNP, Portland, CT

The Paper Rock Shoal is a -15-foot MLLW channel in Portland, CT. This project was most recently dredged in 1984 when 18,300 cy of material was removed and suitably placed in the Connecticut River (USACE, 1985b).

7.23 Cobalt Shoal- Connecticut River FNP, East Hampton, CT

Cobalt Shoal was also maintained in 1984. Approximately 18,300 cy of material was dredged from the shoal in that year (USACE, 1985b). Chemical and physical sediment data was not located for this dredging event, but the material was found suitable for in-river placement at the time.

7.24 Sears Shoal Upper Bar- Connecticut River FNP, East Hampton, CT

The Sears Shoal Upper Bar in East Hampton, CT consists of a channel -15-foot MLLW deep. This channel was last dredged in 1984 when roughly 20,268 cy of dredged material was removed and placed in the Connecticut River for disposal (USACE, 1985b).

7.25 Sears Shoal- Connecticut River FNP, East Hampton, CT

In 2000, it was proposed that about 42,100 cy of material be dredged from the Sears Shoal Channel in the Connecticut River. The proposed placement site was a nearby in-river site,

located south of the area to be dredged. Three sediment cores were taken for analysis and two of those samples combined into one composite. The sediments were predominantly sands and gravel with no silt or clay. All metal concentrations were less than the means plus twice the standard deviations of the reference site data with the exception of cadmium. However, similar concentrations of cadmium were found throughout the Connecticut River so the presence of higher levels of cadmium did not raise concern. The concentrations of PCBs and pesticides in the samples were all below detection limits. Therefore, material was found to be suitable for unconfined in-river placement. The proposed project has yet to be undertaken.

7.26 Scoville Rock Bar- Connecticut River FNP, Middletown, CT

The Federally-maintained -15-foot MLLW channel at Scoville Rock Bar was last dredged in 1982 (USACE, 1982a). Although no physical or chemical data regarding sediment characteristics were obtained from that event, the material was suitable for placement upland or in the Connecticut River.

7.27 Higganum Creek Bar- Connecticut River FNP, Haddam, CT

The Higganum Creek Bar was dredged most recently in 1994. At that time, the -15-foot MLLW deep channel was dredged to authorized dimensions and material was placed in-river (AR, 1994).

7.28 Rock Landing Bar- Connecticut River FNP, Haddam, CT

In 2000, it was proposed that approximately 28,800 cy of material be dredged from the Rock Landing Bar Channel in the Connecticut River. The proposed dredged material placement site was a nearby in-river site, located south of the area to be dredged. Three sediment cores were taken for analysis and combined into two composites. The sediments to be dredged were predominantly sands and gravel with little or no silt and clay. All metals concentrations were less than the means plus twice the standard deviations of reference site data with the exception of cadmium. However, similar concentrations were found throughout the Connecticut River.

The concentrations of PCBs and pesticides were all below detection limits in Sample I and almost all below detection limits in Sample GH. The concentrations in Sample GH of the PCBs that were above the detection limits were only somewhat higher and were similar to concentrations in sediments from Saybrook Outer Bar and Dividend Bar. If these concentrations were similar in such distant sampling stations, it is reasonable to assume that they would be similar between the proposed dredging and placement sites. Therefore, the material was found suitable for unconfined in-river placement as proposed. However, this project has not yet taken place.

7.29 Haddam Island Bar- Connecticut River FNP, Haddam, CT

In 1983 the Haddam Island Bar in the Connecticut River was dredged to its authorized dimensions of -15-foot MLLW deep. Although information regarding sediment chemistry or physical make-up of the dredged material could not be located, material was deemed suitable for placement in the Connecticut River (USACE, 1983).

7.30 Salmon River Bar- Connecticut River FNP, Haddam, CT

The Salmon River Bar in the Connecticut River consists of a -15-foot MLLW deep channel. This channel was last maintained in 1984 when about 18,000 cy of suitable material was removed and placed at an in-river site (USACE, 1985b).

7.31 Warners Quarry Bar- Connecticut River FNP, Haddam, CT

The Federally-maintained channel at Warners Quarry Bar was most recently dredged for maintenance purposes in 1984. At that time, roughly 23,300 cy of material was removed and placed at a site in the Connecticut River (USACE, 1985b). No sediment characterization data for this event were available.

7.32 Eddy Rock Shoal- Connecticut River FNP, East Haddam, CT

Eddy Rock Shoal is a part of the Connecticut River FNP. This -15-foot MLLW deep channel was last dredged in 1982 (USACE, 1982a). There was no information located about sediment chemistry or physical characteristics of the dredged material; however, the material was deemed suitable for placement in-river or upland along the banks of the river near the bar.

7.33 Potash Bar- Connecticut River FNP, Lyme, CT

The Federal project at Potash Bar in the Connecticut River consists of a -15-foot MLLW channel, 150 feet wide along the eastern slope of the bar at Selden Neck and north of Selden Creek. In 1984, this portion of the Connecticut River FNP was proposed to be dredged along with other Connecticut River Bars. Grain size analysis was run on only one sample which contained primarily sand (0.7% fines). No other testing was required on this sample since it met category exclusion due to the high percentage of sand. Approximately 32,200 cy of material was removed from this area in the Connecticut River and placed in-river at Gildersleeve Island (USACE, 1985b).

7.34 Chester Creek Bar- Connecticut River FNP, Chester, CT

The Chester Creek Bar has not been maintained since 1916. At that time, the channel was dredged to its authorized -15-foot MLLW dimensions by the removal of about 3,600 cy of material. Dredged material was placed either in-river or upland (AR, 1917).

7.35 Devils Reef Bar- Connecticut River FNP, Lyme, CT

The Devils Reef Bar has not been maintained for many years. The last time it was dredged was in 1892 when approximately 6,100 cy of material was taken out and placed upland or in the Connecticut River (AR, 1893). No chemical or physical characteristics of the dredged sediment were located.

7.36 Brockway Bar- Connecticut River FNP, Essex, CT

The Federal project at Brockway Bar in the Connecticut River consists of a -15-foot MLLW channel, 150 feet wide along the northern slope of the bar. Brockway Bar was last dredged in 1987 as part of a maintenance project that removed 57,000 cy of shoal material from Calves Island, Brockway, Glastonbury, Two Piers, and Pistol Point Bars with placement in-river (AR, 1987). In 1974, grain size analysis of one sample from the Brockway Bar revealed that the sample contained predominantly sand with 0.5% fines (USACE, 1980a). No other tests were required to be run on this sample.

7.37 Eightmile River- Connecticut River FNP, Hamburg, CT

Improvement dredging of the Eightmile River occurred in 1911. Approximately 54,500 cy of material was removed. In the Annual Report from that year it was said that "ordinary material" was removed; no placement site for the dredged material was listed (AR, 1912).

7.38 Essex Cove- Connecticut River FNP, Essex, CT

The Essex Cove FNP consists of two anchorages (one 8-foot deep and the other 10-foot deep) and a 10-foot channel in the Connecticut River at Essex. This project was improved in 1976 when approximately 36,500 cy of material was dredged and placed upland on Nott Island for disposal (AR, 1976). Information about sediment type and chemistry was not located.

7.39 Essex Shoal- Connecticut River FNP, Essex, CT

Essex Shoal is mainly a recreational project in the Connecticut River at Essex. Essex Shoal was last dredged in 1991 along with several other Connecticut River Lower Bars. A total of 75,100 cy of dredged material from Essex Shoals, Calves Island Bar, and Saybrook Outer Bars was placed at the Cornfield Shoals Disposal Site (AR, 1992). Testing of the area's sediments occurred in 1974 and consisted of both grain size and chemical analyses. One of the samples in the main river channel showed an abnormally high value for vanadium in comparison to reference sediments. All other samples showed no significantly higher values for any parameters tested. As for grain size, the material was primarily coarse-grained with a mean percent fine value of 41.8% (USACE, 1980a).

7.40 Chandlery at Essex, Connecticut River, Essex

A project to dredge approximately 4,300 cy of material in Essex, CT was proposed in 2004 with the aim to place the dredge material at CSDS or CLDS. Examination of the bulk chemistry test results revealed that the sediments had higher concentrations of cadmium, copper, mercury and lead in comparison to the levels found at CSDS. The project's sediments were also compared to the CLDS reference site sediments and it was found that three metals (cadmium, copper and mercury) in the project's sediments exceeded the levels in the disposal site reference materials. In all of the project sediment samples, the PAHs tested were near or below the means of the CSDS and CLDS reference values. For PCBs and pesticides, the values fell near or below the detection limits in all of the project sediment samples tested. Due to the relatively higher

concentrations of metals in the project samples, the material was found not suitable for unconfined open water placement at the CSDS or CLDS.

7.41 Essex Island Marina, Connecticut River, Essex

In 2008, the Essex Island Marina planned a project to dredge approximately 12,000 cy of sandy and silty material (76.2% - 79.5% fines) from their boat basin. The proposed placement for the material was the Cornfield Shoals Site. Bulk chemistry test results indicated that the material in the southern area of the boat basin was contaminated with cadmium, copper and mercury, as well as two pesticides. Alternatively, the northern area of the basin did not show contamination. The sediments from the northern area were deemed suitable for unconfined open water placement at CSDS. However, the sediments from the southern region of the boat basin were not found suitable for unconfined open water placement at CSDS. Biological testing of the southern area's sediments and receiving State water quality certification could determine that all of the material is in fact suitable for unconfined open water placement.

7.42 Essex Yacht Club, Connecticut River, Essex

A project to dredge roughly 6,700 cy of primarily silty material (65.7% - 95.9% fines) from around a dock area was proposed by the Essex Yacht Club in 2006. It was proposed to place the dredged material at either CSDS or NLDS. The sediments were found not suitable for open water disposal at CSDS because they possess elevated cadmium, copper and PAH levels compared to the CSDS reference site. The sediments were also not suitable for unconfined open water placement at NLDS because of the elevated cadmium and PAH levels. However, these sediments were suitable for placement at NLDS with the appropriate material management. To this end, if placement at NLDS were sought, the dredged materials would require capping with suitable material. Pending the results of biological testing and State water quality certification, project material could be found suitable for unconfined aquatic placement.

7.43 Middle Cove Marina, Connecticut River, Essex

The Middle Cove Marina was most recently dredged in 2011. At that time, about 2,700 cy of material was removed and placed at CLDS. In 2007, it was proposed that 7,700 cy of primarily silt and clay (95.1% - 96.8% fines) be dredged from the Middle Cove Marina. Placement locations considered were CSDS, CLDS, and WLDS. Ten sediment cores were taken from the project area and composited into three samples for analysis. In all three composites, cadmium, copper, chromium, mercury, nickel and zinc were elevated in comparison to the CSDS reference values. Also, three pesticides (trans-chlordane, Endosulfan I and II) were over the CSDS reference concentrations. PAHs were near or below CSDS values. In comparison to the CLDS reference site, cadmium was present in high concentrations. PAHs and pesticides were all near or below the CLDS reference site values or analytical detection limits. Cadmium was also high in one composite compared to WLDS concentrations and PAHs were all near or below the WLDS reference site values. Total PCB levels were present at low levels in all three composites. Due to these findings, this material was found not suitable for unconfined open water placement at CSDS or CLDS. However, it was deemed suitable by the USACE and EPA for unconfined open water placement at WLDS.

7.44 Town of Essex, Connecticut River, Essex

The Town of Essex most recently dredged Middle and North Cove in 2011. At that time, roughly 2,500 cy of material was removed and placed at CLDS. In 2005, the Town of Essex proposed to dredge 7,500 cy of material from the Middle and North Cove in Essex, CT. Bulk sediment chemistry analysis was conducted in reference to two proposed placement site options: CLDS and CSDS. Two out of four samples were between three and four times the cadmium level at CSDS and were not approved for unconfined open-water placement at this site. The cadmium level for one of the samples was three times the level at CLDS, but the unsuitable percentage was a small enough volume that the remaining suitable material could be used to cap the contaminated material. Thus, the material was approved by the USACE and EPA for unconfined open-water placement at CLDS following special management.

7.45 Essex Boat Works, Connecticut River, Essex

The Essex Boat Works marina was last dredged in 2011 when about 2,400 cy of material was taken out and placed at CLDS. Due to elevated levels of PCBs compared to the reference site sediments, the material was required to be capped at CLDS.

7.46 Calves Island Bar- Connecticut River FNP, Old Lyme, CT

The most recent dredging of the Connecticut River Lower Bars, including Calves Island Bar, occurred in 1991. About 75,100 cy of dredged material from the Connecticut River Lower Bars was found suitable for placement at CSDS (AR, 1992). Dredging also took place in 1971 and 1978 at Calves Island Bar, Saybrook Shoals, and Saybrook Outer Bars. A total of approximately 132,900 cy of material that was medium to fine sand was placed at CSDS in 1978 (AR, 1978). The main Connecticut River shipping channel through Calves Island Bar underwent sediment sampling and testing in 1974 and again in 1977. None of the samples from either event gave any significantly higher values for any contaminants of concern. Grain size analysis revealed that the project contains mostly sand with an average 0.35% fines (USACE, 1980a).

7.47 Robert Staab, Connecticut River, Old Lyme

In 2011, the property of Robert Staab was dredged by removing about 1,350 cy of material and placing it at the CLDS. A project to dredge about 1,350 cy of fine-grained material (82.9%, 90.9% and 19.4% fines) from the Connecticut River was also put forward by Robert Staab in 2009. The proposed placement areas were CSDS, NLDS, and CLDS. Seven sediment cores were taken from the project area and combined into 3 composite samples. When the project sediment concentrations were compared to the CSDS reference site concentrations, the majority were greater than the corresponding means plus twice the standard deviations. Cadmium was particularly higher in all the composites, while copper, mercury, ideno (1,2,3-cd) pyrene, pyrene and methoxychlor were particularly higher in composite ABC. Due to the elevated concentrations of multiple contaminants of concern, the material was not suitable for unconfined aquatic placement at CSDS.

Compared to the CLDS reference site concentrations, the majority of the project's values were less than the corresponding means plus twice the standard deviations. Cadmium and copper were higher than the reference site value in all the composites, although not otherwise particularly high. Mercury was slightly higher in Composite ABC. There were no reference site values for pesticides or PCBs for CLDS. DDD and DDE were detected in each sample and DDT was detected in samples DE and FG. Several PCB congeners were detected at concentrations several times the detection limit. Based on these results, the project material was found suitable for placement at CLDS if covered with cleaner sediments.

When the project sediment concentrations were compared to the NLDS reference site concentrations, the majority of the metals were higher than the corresponding reference means plus twice the standard deviations. However, cadmium and copper were higher than the reference site values in all the composites. The concentrations of the majority of the PAHs were less than the corresponding means plus twice the standard deviations. There were no reference site values for pesticides or PCBs for NLDS. DDD and DDE were detected in each sample and DDT was detected in samples DE and FG. Several PCB congeners were detected at concentrations several times the detection limit. Based on this data, the material was deemed suitable for placement at NLDS provided that the material was covered with cleaner sediments.

7.48 Saybrook Railroad Reach - Connecticut River FNP, Old Saybrook, CT

In 1984, this portion of the Connecticut River FNP was dredged along with other Connecticut River Bars including: Naubuc, Claybanks, Glastonbury, Two Piers, Dividend, Pistol Point, Portland, Mouse Island, Cobalt, Paper Rock, Sears, Sears Upper, Rock Landing Bar, Higganum Creek, Salmon River, Warners Quarry, Potash, Brockway, Calves Island, Railroad Reach and Saybrook Shoals. Approximately 460,000 cy of material was removed from these areas in the Connecticut River and placed in-river at Gildersleeve Island and at CSDS (USACE, 1985b). Data was not available to provide a picture of the sediment type or chemistry from this dredging event.

7.49 Saybrook Shoal - Connecticut River FNP, Old Saybrook, CT

In 1984, this portion of the Connecticut River FNP was dredged along with other Connecticut River Bars including: Naubuc, Claybanks, Glastonbury, Two Piers, Dividend, Pistol Point, Portland, Mouse Island, Cobalt, Paper Rock, Sears, Sears Upper, Rock Landing Bar, Higganum Creek, Salmon River, Warners Quarry, Potash, Brockway, Calves Island, Railroad Reach and Saybrook Shoals. Approximately 460,000 cy of material was removed from these areas in the Connecticut River and placed in-river at Gildersleeve Island and at CSDS (USACE, 1985b). Environmental sampling and testing took place in 1973 and 1977 for the Saybrook Shoals channel in the Connecticut River. None of the samples from both testing events showed any significantly higher values for any of the parameters tested. Grain size analysis from 1973 showed an average of 18.5% fines and in 1977 there was an average of 60.5% fines in the project samples (USACE, 1980a).

7.50 North Cove - Connecticut River FNP, Old Saybrook, CT

The most recent maintenance dredging of North Cove was completed in 2009 with 98,000 cy of material placed at CSDS and 75,000 cy of dredged material placed at CLDS. Sediment testing in 2000 of North Cove showed that the materials dredged from the channel were composed predominantly of fine-grained sediment (silt-clay). Bulk chemistry tests indicated that the sediments had low levels of contaminants and the material was found to be suitable for unconfined open water placement at both the CSDS and the CLDS (used as cap material there) (USACE, 2008a).

In 2003, it was proposed that 252,000 cy of material would be dredged from North Cove Federal Navigation Project. The area to be dredged was the 11' MLLW channel, 11' MLLW anchorage area, and 6' MLLW anchorage area. The proposed placement site was CSDS. Sixteen sediment samples were taken for analysis and four samples were combined into composites, with two samples to be analyzed individually. Bulk sediment chemistry analyses on the composited samples showed that the contaminants of concern were determined to be metals, all the PAHs and all the PCBs. Biological testing was undertaken to determine if the sediments were suitable for unconfined placement at CSDS. Statistical analysis indicated that there was no significant difference between the survivorships of the amphipods and mysid shrimp exposed to the reference sediment and the amphipods and mysids exposed to the sediment from either composite. Therefore, the materials proposed to be dredged were not considered acutely toxic to these amphipods and mysids (USACE, 2008a).

Bioaccumulation test results for the marine clam *Macoma nasuta* and the marine worm *Nereis virens* indicate many of the tissue concentrations of contaminants of concern (COCs) in organisms exposed to North Cove sediments were lower than those exposed to CSDS sediments. However, there were some bioaccumulated COCs that were reported to be statistically greater in organisms exposed to North Cove sediments. The metals copper and lead were statistically greater in organisms exposed to North Cove sediments compared to those exposed to CSDS sediments. Additionally, PCBs and PAHs were generally higher in the tissues exposed to North Cove sediments. These results, however, were still considered low. Mean survival rate of the worms exposed to the proposed dredged materials for 28 days ranged from 82% to 93%, while the mean survival rate for worms at the CSDS reference site was 79%. The mean survival for worms in the control treatment was 81%. Clam survival in the proposed dredge material ranged from 95% to 99%. The CSDS reference sediments had a clam survival rate of 95% and the control sediments had a clam survival rate of 95%. Based on the results of the bulk chemistry test and the bioassay/bioaccumulation test results, the USACE and EPA determined that the maintenance material from the North Cove Federal navigation channel was suitable for unconfined open water placement at CSDS (USACE, 2008a).

Dredged material from the North Cove FNP was deemed suitable for placement at CSDS in 1977, 1984, and 1992 as well. Grain size analysis from 1988 showed that sediments were primarily silt-clay (89-99% total fines). All samples tested for bulk chemistry indicated lower levels for all parameters in comparison to reference site material (USACE, 1991). In 1983, sediment analyses showed that the material in North Cove consisted of sandy-silt, silty-fine sand,

and organic debris. The levels of potential contaminants were lower than reference site values and the material was found suitable for placement at CSDS (USACE, 1984a).

7.51 Saybrook Outer Bar - Connecticut River FNP, Old Saybrook, CT

The channel through the Saybrook Outer Bar is the entrance channel to the Connecticut River shipping channel. In 1999, it was proposed that about 48,700 cy of material be dredged from 8-acre area in the Connecticut River at Saybrook Outer Bar. The proposed placement area was CSDS. Three composite samples were used for bulk chemistry and biological analysis. The difference between the mean survivorships of the amphipods exposed to the reference and Composite EF sediments was 33%, higher than the 20% threshold allowed. Therefore, the materials at Composite EF were considered acutely toxic to benthic organisms. The sediments in sample EF were sandy silt/clay, with 66% fines (Battelle, 2002). A retest of the project's sediments in 2003 showed that the previous results were not accurate, most likely due to lab handling error. The sediments at sample locations E and F (those that were considered acutely toxic from previous testing) along with all other project sediments were suitable for unconfined aquatic placement as proposed. However, this project has not yet taken place.

The Saybrook Outer Bar was last dredged in 1991 along with several other Connecticut River Lower Bars. A total of 75,100 cy of dredged material from Essex Shoals, Calves Island Bar, and Saybrook Outer Bars was placed at the Cornfield Shoals Disposal Site (AR, 1992). Chemical and physical tests from 1973 and 1977 in the Saybrook Outer Bar portion of the Connecticut River revealed that the project sediments did not contain higher levels of any contaminants of concern in comparison to reference values. The mean amount of fines present in the project area in 1973 was 59.4% and in 1977 was 81% (USACE, 1980a).

7.52 Between the Bridges Marina, Connecticut River, Old Saybrook

Between the Bridges Marina was most recently dredged in 2011. Roughly 23,500 cy of suitable material was removed and placed at CSDS. In 2005, it was proposed that 11,300 cy of primarily silty material (86.2 % - 92.6% fines) be dredged from the between the Bridges Marina and placed at either CSDS, NLDS, or CLDS. The material was deemed unsuitable for unconfined open water placement at CSDS, NLDS, and CLDS because of elevated cadmium, copper, zinc and mercury concentrations. However, the material could have been approved for unconfined open water placement pending biological testing and State water quality certification.

7.53 Harbor One Marina, Connecticut River, Old Saybrook

The Harbor One Marina put forward a project in 2011 to remove approximately 24,500 cy of predominantly silty material (87.9% to 96.4% fines) from their boat basin and a portion of the river at the mouth of the basin. This material was proposed to be sent to CSDS for placement. Examination of the chemical test results of the project's sediments in comparison to the CSDS reference site sediments revealed that concentrations of metals, PAHs, PCBs and pesticides were all below or near the values from the placement site. Materials were found suitable for unconfined open water placement at CSDS as planned. Dredging took place in 2013.

7.54 Indian Town Association, Connecticut River, Old Saybrook

The Indian Town Association proposed to dredge roughly 10,100 cy of material from a new entrance channel in the Indian Town Harbor in 2010. The material was predominantly sands and gravels, with 6.1%, 3.4%, and 4.2% fines. Chemical analysis of the sediments showed that metal concentrations were all below the means plus twice the standard deviations of the contaminant concentrations found at the CSDS reference area. For PCBs and pesticides, the contaminant concentrations in the project were all below or just above the detection limits. The concentrations of all PAHs, except for two, were below the means plus twice the standard deviations at the reference site and the two exceptions were only slightly higher than the CSDS values. Based on these findings, material was deemed suitable for unconfined aquatic placement at CSDS. The channel was dredged in 2011 and approximately 19,800 cy were placed at CSDS.

A similar project to dredge the Indian Town Harbor was put forward in 2008 to remove approximately 24,500 cy of sand and silty material (9.4% - 80.5% fines). Examination of bulk chemistry test results show that all metals and PAH concentrations were below or near the CLDS, CSDS, and NLDS reference sites. For pesticides and PCBs, the contaminant concentrations in the project sediments fell near or below the reporting limits in all of the project sediment samples tested. Therefore, the project's sediments were found suitable for unconfined open water placement at CLDS, CSDS, and NLDS.

An estimated volume of roughly 22,000 cy of primarily sandy and silty material (42.8% - 90.9% fines) was planned to be dredged from the Indian Town Harbor in 2003 as well. Placement was planned for CSDS. According to results from bulk chemistry analysis, the concentrations of metals, PCBs, PAHs and pesticides were below the CSDS reference values or analytical reporting limits. The material was deemed suitable for unconfined open water placement at CSDS.

7.55 Island Cove Marina, Connecticut River, Old Saybrook

In 2005, the Island Cove Marina proposed a project to dredge about 700 cy of material in Old Saybrook, CT. Bulk sediment chemistry analyses revealed that the concentrations of metals, PAHs, PCBs, and pesticides in one sample were below or near the values found for the CLDS and CSDS reference sites. The second sediment core contained higher concentrations of cadmium in comparison to both CSDS and CLDS reference site values. It was determined that the sediments in the first sample were suitable for unconfined open water placement at CSDS or CLDS, but sediments from the second sediment sample were not. The material from the second sample could be approved for unconfined open water placement depending on biological testing results and State water quality certification of the material.

7.56 RAP Riverside Drive, LLC, Connecticut River, Old Saybrook

A volume of roughly 3,000 cy of primarily silt and clay was planned to be removed from the boat basin at RAP Riverside Drive, LLC in 2009. This material was intended to be sent to CSDS, NLDS, or CLDS. Three sediment samples were taken from the boat basin for chemical analysis. In comparison to the CSDS reference site materials, the project sediments presented

higher concentrations of PAHs, metals and pesticides. Therefore, the material was not suitable for placement at CSDS. One of the project's samples contained higher levels of several metals and PAHs when compared to the NLDS reference material. However, two of the samples that were composited did not exhibit any higher levels. For this reason it was determined that the sediments represented by RAP-A and RAP-B were suitable for unconfined placement at NLDS, but the sediments represented by RAP-C were not. When the project data was compared to that of CLDS, only mercury in composite RAP-A&B and cadmium, copper and mercury in sample RAP-C were higher than the reference site values and only cadmium and mercury in Sample RAP-C were more than two times higher. Therefore, it was determined that all of the material was suitable for unconfined placement at CLDS as long as the applicant followed sequential dredging and placement of the material.

7.57 Saybrook Point Marina, Connecticut River, Old Saybrook

The Saybrook Point Marina planned a project in 2011 to dredge approximately 8,900 cy of predominantly silt and clay from their boat basin with the aim to place the material at the CSDS. After chemical testing, it was found that the project sediments were similar to those present at CSDS. All contaminants of concern (metals, PCBs, PAHs and pesticides) were below reporting limits. Thus, the material was found suitable for unconfined open water placement at CSDS. About 16,000 cy of suitable material was dredged from Saybrook Point Marina in 2012 and placed at CSDS.

8.0 Clinton - Westbrook Area Dredging Center

8.1 Patchogue River FNP, Westbrook, CT

In 2012, the 8-foot MLLW entrance channel and anchorage of the Patchogue River FNP were maintenance dredged. Approximately 34,000 cy of material was mechanically removed and placed at the CSDS. The Patchogue River can be broken up into two areas for purposes of sediment classification. An Environmental Assessment completed in May 2011 indicated that material from the entrance channel consisted primarily of sand, whereas material from the anchorage area was predominantly silty. Sediment analysis for this effort was completed in 2004 when it was found that sediments taken from sites just outside of the inlet to Long Island Sound were composed of roughly 75% sand and 25% fine silt (silt and clay). In and around the convergence of the rivers, sediments consist of coarse sand and gravel and the upper reaches of the Patchogue channel near the boat basin, material was predominantly silt and clay. The entire Patchogue River FNP was sampled, tested and found suitable for unconfined open water placement at CSDS (USACE, 2011a).

In 2011, roughly 15,000 cy of material was dredged from a 3 acre area in the outer entrance channel of the Patchogue River FNP. The placement site was a subtidal area off Hammonasset Beach. This material was hydraulically dredged and transported by the USACE hopper dredge, *Currituck*. In 2010, sediment sampling showed that a portion of the outer entrance channel was determined to be suitable for placement off Hammonasset Beach. Sediment samples were found to consist of sand (USACE, 2010a).

The Patchogue River entrance channel was also dredged in 2010. About 7,300 cy of material was taken out by the USACE hopper dredge, *Currituck*, from an 1.8 acre area in the entrance channel and placed in the nearshore bars off of Hammonasset State Beach. The dredged material was predominantly sand with the following values: sample A was 62%, sample B was 81%, and sample C was 91%. Bulk chemistry data showed that all concentrations of contaminants were lower or below detection limits (USACE, 2010a).

Physical and chemical tests of the sediments in the Patchogue River FNP were also conducted in 1991. Bottom sediments taken throughout the Federal channel and along the beach areas west of the inlet contained varying proportions of sand, silt and clay. Stations located just outside (south) of the inlet were composed of both sand and silt in roughly equal proportions. The relatively high silt concentrations suggest that riverine sediments were deposited in this area. Sediments changed from coarse sand and gravel around the convergence of the rivers, to silt and clay along the upper reaches of the channel near the boat basin. Bulk chemistry testing showed that all values were within the limits of what would be considered Class I material (low), according to guidelines established for sediment classification in the state of Connecticut. This material was deemed suitable for placement at the CSDS in Long Island Sound (USACE, 1993a).

As previous data indicates, the entrance channel has been made up of sand that has been typically suitable for nearshore placement off of Hammonasset State Beach. The inner channel and anchorage were found to be mixed sand and fine-grained material that has historically been suitable for placement at the CSDS.

8.2 Brewers Pilots Point Marina, Patchogue River, Westbrook

In 2012, there was a request to dredge about 7,600 cy of predominantly silty material (69.7% - 93.9% fines) from the boat basin at Brewers Pilots Point Marina with the aim to place the dredged material at CSDS or CLDS. After chemical testing it was determined that the material was suitable for unconfined open water placement at CSDS or CLDS. The results from the bulk chemistry analyses showed that the metals and PAHs were below or near the contaminant concentrations found at both the CLDS and CSDS reference sites. For PCBs and pesticides, the contaminant concentrations in the project fell near or below the analytical detection limits in all of the project sediment samples tested. Dredging took place in 2013, when about 10,200 cy of material was taken out and placed at CLDS.

A suitability determination for a similar project at the Brewers Pilot Point Marina was issued in 2005, when it was proposed that roughly 17,300 cy of silty material (84% - 90.9% fines) be removed from a series of small boat basins at the marina. Placement was planned at either CSDS or CLDS. The materials were found suitable for unconfined open water placement at CLDS (with some management), but not at CSDS. Bulk chemistry analyses revealed that cadmium and copper concentrations exceeded the CSDS reference site values. Therefore, the project sediments were not suitable for unconfined open water placement at CSDS.

Chemistry test results showed that each metal contaminant of concern for ten of the twelve core samples were near or below the CLDS reference site concentrations. So, the sediments represented by ten of the twelve samples were deemed suitable for unconfined open water

placement at CLDS. However, the two samples showing elevated levels of cadmium and mercury were not suitable for unconfined open water placement. These sediments (totaling approximately 6,000 cy) required management for placement at CLDS. In order to minimize impact of the contaminated sediments on CLDS, this material needed to be sequenced before the remainder of the project.

8.3 Harry's Marine Repair, Patchogue River, Westbrook

The harbor at Harry's Marine Repair was most recently dredged in 2013. At that time, about 2,400 cy of material was removed from the harbor and placed at the CSDS. Similarly, in 2007, a project to dredge about 1,500 cy of material from the boat basin at Harry's Marine Repair was put forward with the aim to place the material at the CSDS or CLDS. In comparison to both CLDS and CSDS reference site materials, the project's sediment chemistry showed no elevated concentrations of metals, PCBs, PAHs, or pesticides. Based on these results, it was determined that the material was suitable for unconfined open water placement at both CSDS and CLDS.

8.4 Duck Island Harbor FNP, Westbrook, CT

Duck Island Harbor is a harbor of refuge consisting of breakwaters and an anchorage area. It was last dredged in 1949 when about 132,500 cy of material was removed. No chemical testing was reported at the time, but the material was said to be mud and sand in the 1949 Annual Report (AR, 1949). No placement site was specified in that report.

8.5 Duck Island Yacht Club, Duck Island Harbor, Westbrook

In 2004, the Duck Island Yacht Club put forward a project to dredge approximately 1,500 cy of sand and silty material (73% fines) from their boat basin with the aim of placing the material at CSDS. Examination of the bulk chemistry results in comparison to the CSDS reference values revealed metal contaminant concentrations near or below the contaminant concentrations found at the CSDS reference site. The PAHs, pesticides and PCBs tested were near or below analytical reporting limits in all samples. Therefore, the dredged materials represented by the project sediments were deemed suitable for unconfined open-water placement as proposed at CSDS.

8.6 Clinton Harbor FNP, Clinton, CT

In 2012, approximately 49,400 cy of sand was hydraulically pipeline dredged from the Clinton Harbor 8-foot MLLW entrance channel and placed on Hammonasset State Beach. Material from the inner harbor (about 2,000 cy) was found suitable for placement at the CSDS the same year, but that portion of the project was not completed. Clinton Harbor can be divided in two areas for the purposes of sediment classification. Based on test results from 2010, 2003, and 2001 the sediment present in the 8-foot entrance channel was primarily clean sandy material that has historically been found suitable for a variety of beneficial uses, such as beach nourishment, or for placement in an open water site. In contrast, sediments in the anchorage area of Clinton Harbor were found to be predominantly silt. Chemical testing of the 8-foot MLLW entrance channel's sediments in 2010 showed that the material was clean, fine sand (grain size ranging from 56.4% - 91.6% fines) that was deemed suitable for placement as beach re-nourishment on Hammonasset

State Beach. Bulk chemistry and biological testing in 2003 showed that the anchorage area's sediments were suitable for open water placement at the CSDS and not appropriate for beach or bar nourishment (USACE, 2010b).

The 8-foot entrance channel of Clinton Harbor was dredged in 2011 and 2010. In both years, the USACE hopper dredge, *Currituck*, was used to remove about 9,000 cy of sand (2011) and 16,000 cy of sand (2010) from the FNP. Material was placed in the nearshore area off of Hammonasset State Beach in both cases. A separate portion of the Clinton Harbor FNP consisting of the inner 8-foot MLLW channel and anchorage area were maintenance dredged in 1982. About 27,000 cy of fine-grained material was removed using a mechanical bucket dredge and placed at CSDS (USACE, 2010b).

Grain size analysis was also conducted in 1971, 1975, and 1980 at Clinton Harbor. The results from 1971 gave a mean value of 31.1% fines; results from 1975 showed a mean fine percent value of 31.7; and in 1980 it was shown that the mean value of percent fines was 0.0 (there were only two samples taken) so overall the material was found to be primarily sand across all years. Bulk chemistry results from 1971 coincide with the results from 2010, 2003, and 2001 in that the navigation channel sediments did not contain higher values for any parameters; however, the anchorage area sediments had relatively high values for lead, mercury, and zinc (USACE, 1980a).

8.7 New Harbor Marina, Clinton Harbor, Clinton

The New Harbor Marina put forward a project in 2002 to remove roughly 24,500 cy of material from the entrance channel to the marina as well as around the marina's docks. The proposed placement site was the CSDS. Results from bulk chemistry analyses of the project's sediments indicated that there were no higher levels of any contaminants of concern with regard to metals, PCBs, PAHs and pesticides in comparison to reference sediments. The material was deemed suitable for unconfined aquatic placement at CSDS.

8.8 Harborside Marina, Clinton Harbor, Clinton

An estimated volume of 5,500 cy of sand and silty material (61.8% - 68% fines) was proposed to be dredged from the boat basin at the Harborside Marina in 2006. The bulk chemistry results showed that the metals, PAHs, pesticides and PCBs in all samples were below or near the contaminant concentrations found at the CSDS reference site. Therefore, all of the project sediments were found suitable for unconfined open water placement at CSDS.

8.9 Cedar Island Marina, Hammonasset River, Clinton

An estimated volume of 20,000 cy of sand and silty material (75.6% - 81.8% fines) was planned to be removed from the Hammonasset River near its confluence with Clinton Harbor in 2004. The proposed placement site was CSDS. After examining the bulk chemistry results, it was determined that the material was suitable for unconfined open water placement at CSDS. The project's sediments did not contain any higher concentrations of metals, PCBs, PAHs, or pesticides in comparison to the reference material from CSDS.

8.10 Clinton Town Marina, Hammonasset River, Clinton

In 2008, a project was proposed to dredge about 6,300 cy of primarily silty material (82.3% - 98.1% fines) from the Clinton Town Marina with placement planned at CSDS. Chemical testing of the project's sediments indicated that metal concentrations were below or near the contaminant concentrations found at the CSDS reference site, except for copper. For all project sediments, the PAH concentrations were below the CSDS reference values. For PCBs and pesticides, the contaminant concentrations in the project sediments fell near or below the analytical reporting limits. Materials from this project were found suitable for unconfined open water placement at CSDS.

8.11 Clinton Yacht Club, Hammonasset River, Clinton

The Clinton Yacht Club put forward a project in 2012 to dredge the Yacht Club's entrance channel in the Hammonasset River. A total volume of roughly 25,000 cy of predominantly silt and clay (64.5% - 97.8% fines) was removed and sent to CLDS in 2013. Examination of the project's sediment chemistry test results revealed that PCBs and pesticides were below or near the analytical detection limits for all samples. In comparison to the CLDS reference material, the project samples were found to be below or slightly above the means plus twice the standard deviations. Based on this information, the material was determined suitable for unconfined open water placement at CLDS. Due to elevated levels of cadmium, copper and mercury in the project samples compared to the CSDS reference site, it was determined that the material was not suitable for unconfined aquatic placement at CSDS.

9.0 Guilford - Branford Area Dredging Center

9.1 Guilford Harbor FNP, Guilford, CT

In 2014-2015, the 6-foot MLLW entrance channel, the Sluice Creek channel, and the East River channel of the Guilford Harbor FNP are planned to be dredged. Removal of approximately 48,100 cy of silty material will be accomplished by a mechanical bucket dredge. This material will be sent to CLDS for placement. Approximately, 4,300 cy of sandy material will also be removed from the FNP by a mechanical bucket dredge, but this material was suitable for beach nourishment so it is planned to be placed nearshore off Hammonasset State Beach (USACE, 2014c).

To assess the physical and chemical features of the project area, 10 sediment cores were collected within the Federal navigation channel of Guilford Harbor to project depth using a vibracore. Sediment sampling was performed in August 2013. Due to similarities in grain size, eight composite samples were formed for testing. Analysis for grain size, total organic carbon, metals, PCBs, PAHs and Pesticides was performed on the eight composite samples. Grain size results showed that fines (silt and clay) ranged from 0.99% in the East River channel to 62.5% in the entrance channel. The majority of the material was fine sand (44.1% mean) and silt (40.1% mean) with two samples containing higher percentages of medium sand and gravel (USACE, 2014c).

Biological testing included acute suspended particulate phase (SPP) evaluations using the mysid *Americamysis bahia*, the minnow *Menidia beryllina*, and the sea urchin *Arbacia punctulata*. Results showed that the undiluted SPP solutions prepared from the Guilford Harbor FNP, did not have a significant negative impact on survival for *Americamysis bahia* (mysid) or *Menidia beryllina* (minnow). Survival and developmental data from the *Arbacia punctulata* (urchin) assay showed that exposure of the urchin embryos to the SPP solutions generated from each of the composite sediment samples had negative effects on larval survival and development. However, embryo counts of *Arbacia punctulata* in the laboratory control treatment showed 91% of the embryos survived at the end of the assay. Of the original embryos, 89% were normally developed pluteus larvae. Embryo counts in the CLDS reference site showed 87% of the embryos survived and 86% were normally developed at the end of the assay. This meets the minimum test acceptability criteria of ≥70% embryo survival and ≥70% normal development in the laboratory control sample and is an indication that the test organisms were healthy and not stressed by handling. Based on the results of the bulk chemistry and the bioassay/bioaccumulation test results, the USACE and EPA determined that the maintenance material from the Guilford Harbor Federal navigation channel was suitable for unconfined open water placement at CLDS (USACE, 2014c).

Guilford Harbor was dredged previously in 1994. Grain size analysis from 1988 showed the sediments to be fine-grained (organic and sandy silt) and therefore unsuitable for beach nourishment purposes, and was required to be placed in an upland site. All of the samples tested for bulk chemistry showed lower levels of contaminants (USACE, 1992). Maintenance dredging also took place in 1982; grain size analysis from that time indicated that the sediments were fine sand and organic silt. This material was placed upland on the east bank of the West River by hydraulic pipeline dredging (USACE, 1981). Sampling and testing of the channel sediments conducted in 1972 and 1975 for bulk chemistry exhibited no significantly higher values for any parameters. Grain size analysis in 1972 showed on average that 80.1% of the sediments were fines. In 1975, grain size testing of the channel's sediments showed that 62.7% of the material was fines on average (USACE, 1980a).

9.2 Bayberry Creek Marina, West River, Guilford

In 2002, the Bayberry Creek Marina planned to remove roughly 3,500 cy of predominantly silty material (98% fines) from a boat berth in the West River with the intention to dispose the material at CLDS. Bulk chemistry analyses showed that the concentrations of contaminants of concern for all PCBs, PAHs, pesticides and metals were below or near the levels found for the CLDS reference material and analytical reporting limits. Based on these findings, it was determined that the material was suitable for unconfined open water placement at CLDS.

9.3 Guilford Yacht Club, Guilford Harbor, Guilford

The Guilford Yacht Club is currently planning to hydraulically dredge about 93,000 cy of sediment from the marina basin and entrance channel. This material is proposed to be placed in an upland dewatering area for placement. The Guilford Yacht Club was dredged in 2014 and 2013 as well. About 9,100 cy of dredged material was taken out and placed at CLDS in 2014 and in 2013, roughly 34,000 cy of material was removed and placed at CLDS as well. In 2010,

the Guilford Yacht Club dredged approximately 24,500 cy of silty material from Guilford Harbor with placement at CLDS. Chemical testing of the project's sediments showed that metals and PAHs were less than the values found for the CLDS reference materials with the exception of arsenic which was only slightly higher. For pesticides and PCBs, all were below the reporting limits or just slightly above. The material was found suitable for unconfined open water placement at CLDS in both 2010 and 2013.

A similar project to dredge the entrance channel to Guilford Harbor was put forward by the Guilford Yacht Club in 2007. An estimated volume of approximately 24,500 cy of mostly silty material (85.4% - 94.8% fines) was placed at CLDS. Bulk chemistry test results showed that the project's sediments were similar to the CLDS reference values and suitable for unconfined open water placement at CLDS.

The Yacht Club dredged its boat basin in 2006 as well. This action produced about 24,500 cy of primarily silty material (90.8% - 99% fines) with placement at CLDS. Due to higher concentrations of cadmium present in two of the project samples, unconfined open water placement at CLDS was allowed provided that the placement of the sediments represented by the two samples were completed first and then overlaid with the remaining materials.

In 2004, the Guilford Yacht Club proposed a project to dredge roughly 24,500 cy of predominantly silty material (75.9% - 84.4% fines) from its boat basin in the West River and the entrance channel leading into Guilford Harbor. The placement site specified was either WLDS or CLDS. After examining the results of bulk chemistry testing against values from reference sites at WLDS and CLDS, it was determined that the material was suitable for unconfined open water placement at WLDS, but not at CLDS unless special management was undertaken. Elevated concentrations of copper and cadmium in the project samples in comparison to the CLDS reference site required the use of a cap of suitable material in order to utilize the CLDS placement site. Unconfined open water placement could have occurred at WLDS without special management.

The boat basin and channel leading into Guilford Harbor was dredged previously by the Guildford Yacht Club. In 2001, approximately 24,500 cy of mostly silty material (72.5% - 90.4% fines) was removed with placement at CLDS. Chemical testing of the project's sediments showed that all core composites/samples demonstrated non-detects for PCBs, PAHs, and pesticides. For metals, only the concentration for arsenic exceeded the level found for the CLDS reference site materials and only marginally. Therefore, the material was deemed suitable for unconfined open water placement at CLDS.

9.4 Town of Guilford, Guilford Harbor, Guilford

In 2011, the Town of Guilford proposed to dredge approximately 18,300 cy of predominantly silt and clay (fines ranging from 67.3% to 99.6%) from their marina to be placed at the CLDS. Eight sediment cores were taken from the project site for chemical analysis. All of the contaminants of concern were less or slightly higher than the means plus twice the standard deviations at the CLDS reference area, with the exceptions of acenaphthylene, anthracene and fluorene in sample GTM-1A. Because those PAH values were elevated, it was suggested that the area represented by GTM-1A be dredged and placed first so that the rest of the material would isolate it from the

environment. Provided the applicant follow sequential dredging, materials were found suitable for unconfined open water placement at CLDS.

In 2004, the Town of Guilford proposed to dredge a portion of the Guilford Harbor Federal Navigation Project (FNP) in Guilford, CT. Approximately 7,800 cy of material was proposed to be removed and placed at CLDS. Grain-size analysis of the three samples from the project area revealed the following percentages of fine material: Sample I was 61.9%, Sample J was 83.1%, and Sample K was 68.7%. Chemical testing determined that the project material was contaminated with cadmium and not suitable for unconfined open-water placement. The cadmium concentrations were between two and three times the levels found at the CLDS reference site. The concentrations of PAHs, PCBs and pesticides fell near or below the analytical detection limits in all of the project sediment samples tested.

In 2001, another project was put forward to dredge about 6,300 cy of fine sand and silty material (61.9% - 83.1% fines) from the Town of Guilford Marina. The bulk chemistry results indicated that project sediments contained no elevated concentrations of contaminants of concern so the material was deemed suitable for unconfined aquatic placement at CLDS.

9.5 Stony Creek Harbor FNP, Branford, CT

In 1995, the 6-foot MLLW channel and anchorage of the Stony Creek Harbor FNP was maintenance dredged. Approximately 45,800 cy of material was removed by mechanical bucket dredge and placed at CLDS. Sediment samples from the project taken in 1992 contained 94% silt and clay, with the remainder primarily fine sand. Chemistry analyses showed that the material from the harbor and the entrance channel had lower concentrations of metals and PCBs in comparison to reference site material. This material was deemed suitable for unconfined open water placement at CLDS (USACE, 1993b).

The Stony Creek FNP was dredged in 1977 as well. Dredged material was placed in an unconfined manner at the New Haven Dumping Grounds. Sediment samples from the project area that were collected in 1975 were found to be primarily black organic silt. Bulk chemistry test results revealed relatively low levels of metals in all project samples (USACE, 1977a). Improvement dredging of the Stony Creek FNP occurred in 1970. About 76,000 cy of dredged material, consisting of largely organic silt with clay, was placed at the Branford Dumping Ground (USACE, 1969a).

9.6 Branford Harbor FNP, Branford, CT

Sediment testing conducted in 1987 showed that the material in the navigation channel of Branford River and the inner harbor was predominantly organic silty material made up of 87-97% fines, with somewhat coarser material (87% fines) located in the inner harbor. Chemical and biological testing indicated that the material was suitable for placement at CLDS following the identification of moderately higher concentrations of cadmium, copper, chromium, lead, arsenic, and zinc (USACE, 1987). An estimated 76,300 cy of dredged material was placed at CLDS for maintenance dredging in 1990.

Two previously-used upland sites were utilized in 1976 for the placement of roughly 72,000 cy of material from maintenance dredging in Branford Harbor. Grain size analysis from that year indicated that sediment composition throughout the river was dark gray, organic silt except near the mouth of the river where there was a greater percentage of sand (USACE, 1975). Chemical analysis of the material completed in 1974 and 1972 showed a general trend of higher concentrations of heavy metals upstream and lower concentrations near the mouth of the river. Sampling in 1972 showed abnormally higher values for arsenic throughout the channel; samples taken from the far upstream end of the project showed higher levels of zinc, vanadium, chromium, and volatile solids. Sampling conducted in 1974 showed above average values for percent total nitrogen, vanadium, and percent hydrogen in the inner harbor. Samples taken upstream showed above average values for vanadium, volatile solids, zinc, and arsenic (USACE, 1980a).

9.7 Pine Orchard Yacht Club, Branford Harbor, Branford

Dredging last took place at the Pine Orchard Yacht Club in 2013 when about 12,000 cy of material was removed and placed at the CLDS. Prior to that, the Yacht Club proposed a project to dredge approximately 14,000 cy of fine-grained material from their boat basin in 2009 with the aim to place the material at CLDS. Chemical analysis of the project's sediments showed that PCBs and pesticides presented values lower than detection limits or just slightly higher. For metal concentrations, cadmium was the only contaminant of concern that was higher than the reference values at CLDS, but it was only marginally higher. Based on these results, the sediments were found suitable for unconfined open water placement at CLDS. About 8,200 cy of material was actually removed in 2009 and placed at CLDS.

9.8 Indian Neck Yacht Club, Branford Harbor, Branford

An estimated volume of about 6,000 cy of sandy and silty material (57.6% - 91.7% fines) was planned to be removed from the boat basin at the Indian Neck Yacht Club in 2002. The proposed placement site was either WLDS or CLDS. Due to higher levels of arsenic, cadmium, chromium, copper, and mercury relative to the CLDS reference site materials, the project's sediments were not found suitable for unconfined open water placement at CLDS. In comparison to WLDS reference material, although there were some exceedances for metals, such as copper, chromium, and zinc, these levels were much less substantial than those enumerated for CLDS above. In fact, for both chromium and zinc, exceedances existed for only two of the five project samples, and it was felt that no exceedances for these metals would be demonstrated if the project was taken as a whole. None of the five samples demonstrated the presence of pesticides. Only nine of eighteen PCB congeners were detected and their concentrations were very low and just above the detection limits. These results posed no placement concerns for either the CLDS or WLDS placement sites. Similarly, concentrations of PAHs were consistently below the detection limit for all samples and posed no placement concern for either the CLDS or WLDS placement sites. The sediments were deemed suitable for unconfined open water placement at WLDS.

9.9 Branford Landing Marina, Branford Harbor, Branford

A project to dredge about 5,000 cy of primarily silty material (85.4% - 96.7% fines) from the Branford Landing Marina alongside the Federal channel was proposed in 2008 with the intention to dispose of the dredged material at CLDS. Chemical and physical testing of the sediment showed that the material was suitable for unconfined open water placement at CLDS.

In 2001, the Branford Landing Marina completed a similar project to dredge approximately 5,000 cy of sand and silty material (62% - 73% fines) from a dock area. Bulk chemistry analyses revealed that contaminant levels for all metals (except nickel) were elevated in comparison to the placement site reference materials. PCBs, PAHs, and pesticides presented low values of no concern. The sediments were found unsuitable for unconfined open water placement at CLDS due to the elevated metal concentrations.

9.10 Goodsell Point Marina, Branford Harbor, Branford

The Goodsell Point Marina put forward a project to dredge the marina's boat basin in 2009. A volume of roughly 10,900 cy of predominantly silty material would be removed and sent to CLDS for placement. Examination of the chemical testing results determined that PCBs, PAHs, pesticides and metals were all below detection limits or lower than the concentrations of reference materials. The project sediments were deemed suitable for unconfined aquatic placement at CLDS.

In 2003, the Goodsell Point Marina proposed to dredge approximately 14,500 cy of primarily silty material (82.2% - 94.6% fines). After chemical testing of the sediment, it was determined that the material was suitable for unconfined open water placement at CLDS provided the applicant follow a sequential placement process. An area immediately adjacent to the Bartlett Dock that was contaminated with metals and several PAHs was required to be dredged and placed first then followed by the balance of the materials.

9.11 Bruce and Johnson's West, Branford Harbor, Branford

Recent dredging of Bruce and Johnson's West Harbor occurred in 2012 when about 14,000 cy was removed and placed at CLDS. Earlier in 2012 another 15,000 cy was removed and placed at CLDS. A project to dredge roughly 25,000 cy of primarily silt/clay (96.5% to 97.3% fines) from the western portion of Bruce and Johnson's Marina was also planned in 2011. Sediment testing confirmed that none of the concentrations of metals or PAHs were greater than the CLDS reference area. Further, all of the concentrations of pesticides and PCBs were less than the reporting limit or were only slightly higher. Thus, material was found suitable for unconfined open water placement at CLDS.

A project to dredge about 24,800 cy of primarily silty material (86% - 99.8% fines) from the western portion of Bruce and Johnson's Marina was proposed in 2008 with the aim to place the dredged material at the CLDS. Physical and chemical testing of the sediments indicated that the material was suitable for unconfined open water placement at CLDS. For all project sediments, examination of the bulk chemistry results showed that the metals and PAHs were below or near

the contaminant concentrations found at the CLDS reference site. Also, the contaminant concentrations for PCBs and pesticides fell near or below the analytical detection limits in all of the project sediment samples tested.

9.12 Branford Yacht Club, Branford Harbor, Branford

In 2008, sediment testing for grain size and bulk chemistry was completed for a project to dredge approximately 24,000 cy of predominantly silty material (94.1% - 99.3% fines) from the boat basin at the Branford Yacht Club. The proposed placement site was WLDS or CLDS. Bulk chemistry analyses of the project sediments indicated that contaminants of concern were below or near the contaminant concentrations found at the WLDS and CLDS reference sites. Therefore, materials to be dredged were found suitable for unconfined open water placement at CLDS and WLDS.

10.0 New Haven Area Dredging Center

10.1 New Haven Harbor FNP- 35-foot Main Entrance Channel, New Haven, CT

In 2014, approximately 650,000 cy of material was removed from the -35-foot MLLW main entrance channel and turning basin at the New Haven Harbor FNP and placed at CLDS. The main channel and the turning basin were tested for sediment quality in 2010. Grain size from the individual samples indicated that the material consisted primarily of silt and fine sand. The grain size results of the composites were generally in the range of 60-78% silt, 19-24% clay, and 1-11% very fine sand. PCBs were detected in most of the sediment composites at levels greater than the target detection limits. PAHs and metals were detected above the target detection limits in all sediment composites and a general trend of increasing concentrations occurred from outer to inner harbor locations for all eight of the metals (USACE, 2013c).

Biological testing of the project samples showed that the material was not acutely toxic to mysid shrimp or amphipods. In the bioaccumulation tests, the bent-nosed clam (*Macoma nasuta*) significantly accumulated contaminants while the clam worm (*Nereis virens*) did not. The bent-nosed clam showed significant accumulation of arsenic and copper in two composites. In total, there were two contaminants of concern which were bioaccumulated at levels greater than in the reference animals. Because of the presence of significant bioaccumulation, the EPA ran a risk-assessment model of the bioaccumulation results. For these compounds, the toxicological significance of bioaccumulation from the sediment into benthic organisms was evaluated. It was determined that the placement of the material as proposed would not cause any significant undesirable effects. The 10-day bioassay test showed no negative impacts of the dredged material. Based on these findings, the project material was found suitable by the USACE and EPA for unconfined aquatic placement at CLDS (USACE, 2013c). However, the Connecticut Department of Energy and Environmental Protection specified that sequential dredging from the inner harbor to the mouth of the navigation channel take place so as to cover the inner harbor sediments with the cleaner outer harbor material.

Sediment quality for the -35-foot MLLW main channel and turning basin was tested in 2000 as well. Grain size results of the composites were generally in the range of 40 – 50% silt, 40– 50% clay, and 1-3% fine sand (USACE, 2002b). Bulk chemistry results were similar to those reported in 2010. PCBs were detected in most of the sediment composites at levels greater than the target detection limits. PAHs and metals were detected above the target detection limits in all sediment composites. Approximately 630,900 cy of dredged material was mechanically dredged and placed at CLDS in 2004 (USACE, 2002b). The 35-foot MLLW main entrance channel was also dredged in 1994. Testing indicated the same grain size and bulk chemistry results as those presented above with placement of 837,500 cy of dredged material at CLDS for that event (USACE, 1993c).

10.2 West River - New Haven Harbor FNP, New Haven, CT

Sediment testing of the West River section of the New Haven Harbor FNP last occurred in 1988 for proposed maintenance dredging. Project material consisted of predominantly silt and clay, averaging 89% fines. Chemical testing revealed that the sediments had higher levels of lead and copper, but did not have any other significantly high values for parameters. This material was deemed suitable for placement at the CLDS; dredging was accomplished in 1989 with the removal of approximately 107,100 cy of dredged material (USACE, 1986b).

10.3 Mill River - New Haven Harbor FNP, New Haven, CT

The Mill River section of the New Haven Harbor FNP was last dredged in 1982 when approximately 192,400 cy of material was removed from the Mill and Quinnipiac Rivers (AR, 1982). Environmental sampling took place in 1980 for grain size. Grain size analysis indicated the sediments were primarily organic sandy silt. A chemistry and bioaccumulation analysis was undertaken in 1981-1982 and revealed that the Mill River sediments contained relatively high concentrations of heavy metals and PCBs, but the sediments did not cause significant biological effects to grass shrimp (*Palaemonetes pugio*), hard clams (*Mercenaria mercenaria*), and sandworms (*Nereis virens*) so material was deemed suitable for placement at CLDS in 1982 (ERCO, 1981; USACE, 1982b). The placement mound was later capped when biological impacts were observed at the placement site.

10.4 Quinnipiac River - New Haven Harbor FNP, New Haven, CT

The Quinnipiac River FNP was last maintained in 1982 when about 192,400 cy of material was removed from the Mill and Quinnipiac Rivers (USACE, 1982b). Grain size analysis from 1980 showed that the material in the Quinnipiac River FNP was mostly organic sandy silt. A biological evaluation of the sediments in the Quinnipiac River FNP was prepared by the Energy Resources Company, Inc (ERCO) in 1980 to test for toxicity to marine organisms. Results showed that dredged material was ecologically acceptable to be placed at CLDS due to the fact that survival rates of all organisms met or exceeded reference site values. Copepods (*Acartia tonsa*), mysid shrimp (*Neomysis americana*), Atlantic silversides (*Menidia menidia*), grass shrimp (*Palaemonetes pugio*), hard clams (*Mercenaria mercenaria*), and sandworms (*Nereis virens*) were tested for toxicity in that evaluation (ERCO, 1980). Bulk chemistry testing from 1986 exhibited low values for all parameters tested except for copper which was abnormally high

in comparison to reference site material (USACE, 1986b). Material was deemed suitable for placement at CLDS for maintenance dredging undertaken in 1982 (USACE, 1982b).

10.5 Gulf Oil, New Haven Harbor, New Haven

In 2013, about 33,800 cy of material was removed from the berth of Gulf Oil in New Haven Harbor and sent to CLDS for placement. This material was used to cap another project's (Electric Boat Corp.) sediments that were placed at CLDS previously. Earlier, an estimated volume of 15,000 cy of predominantly silty material (83.3% - 91.6% fines) was proposed to be dredged from the berth at Gulf Oil in 2008. Chemical testing of the project's sediments revealed that copper and one PAH were higher than the CLDS reference values. It was determined that the material was suitable for unconfined open water placement at CLDS, but the operation was required to take place early in the dredging season so that other material would cover the contaminated material.

10.6 Gateway Terminal, New Haven Harbor, New Haven

In 2013, the Gateway Terminal had roughly 38,600 cy of material taken out of their terminal in New Haven Harbor and placed at CLDS. The Gateway Terminal was also dredged in 2012. About 21,000 cy of sand and silty material (5.7% - 85.5% fines) from two berths of the Gateway oil terminal was removed and placed at CLDS. Examination of the project's sediments showed that metals were near or below the contaminant concentrations found at the CLDS reference site. One of the composites showed elevated levels for two PAHs in comparison to the CLDS reference site materials. For PCBs and pesticides, the contaminant concentrations in the project fell near or below the analytical detection limits in all of the project sediment samples tested. Based on these findings, the material was deemed suitable for unconfined open water placement at CLDS if placed in a phased manner.

A similar project was planned ten years earlier in 2002. The plan called for approximately 11,000 cy of mostly sandy material (25% fines) to be removed from around a pier. Due to the higher levels of PAHs found in comparison to reference site material, the project material was deemed unsuitable for placement at CLDS.

10.7 Magellan Terminals, New Haven Harbor, New Haven

Approximately 6,000 cy of dredged material was removed from several of the terminals at Magellan Terminals and suitably placed at CLDS in 2013. An earlier project was proposed by Magellan Terminals in 2006 to dredge about 16,000 cy of material from around a terminal on East Street in New Haven Harbor. Four sediment cores were taken for analysis and compared to the Central and Western Long Island Sound placement site reference site data. Bulk chemistry results showed that most of the metals were below or near the contaminant concentrations found at WLDS. However, two of the metals exceeded the CLDS reference values. The cadmium concentration was almost eight times higher and the copper concentration was four times higher the CLDS reference values. The material proposed to be dredged was not suitable for unconfined open-water placement at CLDS. However, the material was deemed suitable for unconfined open-water placement at WLDS.

In 2005, Magellan Terminals proposed to dredge approximately 3,000 cy of material from around one of their terminals on Forbes Avenue in New Haven, CT. The proposed placement area was CLDS. Four sediment cores were taken for analysis. Due to the relatively high levels of contaminants of concern, these sediments were deemed unsuitable for unconfined open water placement at CLDS. The material could be deemed suitable for unconfined open water placement, pending the results of biological testing and State water quality certification.

10.8 Lloyd Terminal, Inc., New Haven Harbor, New Haven

A project to dredge approximately 2,200 cy of primarily sandy material (56.6% fines) from the mouth of the Quinnipiac River was proposed by Lloyd Terminal, Inc in 2002. Placement at CLDS was planned. Bulk chemistry analysis revealed that pesticides, PAHs and PCBs were below detection or at very low levels. On the other hand, virtually all project results for metals substantially exceeded the reference values. Thus, the material was found unsuitable for unconfined open water placement; however, placement was approved at CLDS with the use of 15,000 cy of suitable cap to cover the dredged material.

10.9 New Haven Terminal, Inc., New Haven Harbor, New Haven

A project to remove roughly 14,000 cy of primarily silty material (85.3% - 88.5% fines) from around a dock and a pier at the New Haven Terminal was planned in 2002. According to bulk chemistry results, the project's sediments were contaminated with relatively high concentrations of PAHs. Though the concentrations of metals, PCBs and pesticides were lower than reference site material, project material was deemed not suitable for unconfined open water placement at the CLDS due to the high levels of PAHs. The material could be deemed suitable for unconfined open water placement pending the results of biological testing and State water quality certification.

10.10 Motiva Enterprises LLC, New Haven Harbor, New Haven

Recent dredging of the Motiva terminal occurred in 2014. At that time, roughly 1,600 cy of dredged material was taken out of the terminal and placed at CLDS. In 2012, approximately 2,300 cy of suitable material was removed from the Motiva Enterprises LLC terminal and placed at CLDS as well. Motiva Enterprises planned a similar project in 2011 to dredge approximately 780 cy of fine-grained material from their terminal in New Haven Harbor. The plan called for placement of the dredged material at CLDS. According to bulk chemistry test results, the project samples did not contain any high levels of metals, PCBs or pesticides in comparison to the CLDS reference site. PAHs though, were elevated. Seven of the fifteen PAHs are two to twenty-one times the means plus twice the standard deviations. For this reason, the project's sediments were not suitable for unconfined aquatic placement at CLDS. The material could be deemed suitable for unconfined open water placement pending the results of biological testing and State water quality certification.

In 2004, it was proposed that 12,700 cy of primarily silty material (97.5% - 98.8% fines) be dredged from a 4-acre area in New Haven Harbor by Motiva Enterprises. Dredged material was to be placed at CLDS as well. In all but one of the project sediment samples, the PAHs tested

near or below the means plus twice the standard deviations of the CLDS reference values. Based on these results, some of the sediments were not considered suitable for unconfined open water placement at CLDS. However, the rest of the material proposed to be dredged was considered suitable for unconfined aquatic placement at CLDS.

10.11 Harbor Point Marina, Morris Cove, New Haven Harbor, New Haven

A recent dredging event at Harbor Point Marina was in 2011; about 500 cy of material was removed and suitably disposed at CLDS. Prior to that project, in 2002 the Harbor Point Marina removed about 7,200 cy of sand (1.2% - 2.7% fines) from their boat basin in Morris Cove. Bulk chemistry analyses revealed that there were no exceedances for any contaminant concentration from the project relative to CLDS reference material. Furthermore, no pesticides and virtually no PCBs were detected in the project samples. The project's sediments were found suitable for unconfined open water placement at CLDS.

10.12 Pequonnock Yacht Club, New Haven Harbor, New Haven

In 2013-2014, the boat basin of the Pequonnock Yacht Club was dredged. This was accomplished by the removal of approximately 16,100 cy of dredged material that was sent to CLDS for placement. A volume of about 22,500 cy of fine-grained material was proposed to be removed by the Pequonnock Yacht Club in 2010 as well. The material was planned to be placed at CLDS. According to chemical testing of the project's sediments, the concentrations of most metals were more than twice as high as the means plus twice the standard deviations of the reference samples. The concentrations of cadmium, copper and mercury were notably higher as well. The concentrations of several PAHs were more than twice as high as the means plus twice the standard deviations of the reference samples. Also, detectable amounts of DDD, DDE and DDT were found in all the samples. The rest of the pesticides were all below detection limits. Furthermore, the concentrations of many PCB congeners were above the detection limits and many were more than twice the detection limits. Based on these findings, the material was found unsuitable for unconfined aquatic placement at CLDS.

10.13 City Point Yacht Club, New Haven Harbor, New Haven

In 2007, the City Point Yacht club planned a project to dredge approximately 7,400 cy of predominantly silty material (82.7% - 88.2% fines) from its boat basin in New Haven, CT. Placement of the material was planned at either CLDS or WLDS. Sediments were found unsuitable for unconfined open water placement at CLDS due to relatively high concentrations of copper, cadmium and mercury. However, the project sediments exhibited low concentrations of metals in comparison to the contaminant concentrations found at the WLDS reference site. For PAHs, the contaminant concentrations in the project fell near or below the analytical detection limits in all of the project sediment samples tested. PCBs and pesticides were found at lower levels in all sample cores. Thus, the material was deemed suitable for unconfined open water placement at WLDS, but not at CLDS.

11.0 Housatonic River/Milford Area Dredging Center

11.1 Milford Harbor FNP, Milford, CT

In 2003, it was proposed that 20,000 cy of material be dredged from the 10-foot MLLW entrance channel of the Milford Harbor FNP. Project material was found suitable for placement in the subtidal area off of Gulf Beach, but the project did not take place. Grain size analysis showed that the sediments in the 8-foot MLLW entrance channel of Milford Harbor consist of primarily fine (65%) and medium sand (18%) with some silt/clay (12%). Sediment chemistry data were not obtained (ATC, 1997).

Previously, Milford Harbor was sampled for sediment quality in 1985. Grain size analysis indicated that dredged material from the 10-foot MLLW entrance channel contained primarily medium to fine sand, however the inner harbor's sediments were predominantly sandy to silty clay. Chemical testing of those sediments showed that the entrance channel and outer harbor sediments presented relatively low concentrations for all parameters. Grain size and bulk chemistry for the entrance channel sediments indicated that they could be beneficially used for beach nourishment. The inner harbor sediments were found to have relatively high concentrations of cadmium and total percent fines as well as moderate to low levels of other contaminants, making them unsuitable for beach nourishment projects. Placement occurred at the CLDS for dredging operations in 1988 that removed approximately 88,400 cy of dredged material from the entire FNP (USACE, 1987b).

In 1980, only the 10-foot MLLW entrance channel at Milford Harbor was dredged. Bulk chemistry testing showed lower levels of all potential contaminants and grain size analysis determined the material to be primarily sand. Due to these reasons, material from the Milford Harbor entrance channel was able to be placed on Gulf Beach by a hydraulic pipeline dredge as a means of beneficial use for beach nourishment (USACE, 1980b). Sediment testing also occurred in 1975 and 1972 for Milford Harbor. The anchorage area and the 8-foot channel exhibited relatively high values for multiple contaminant parameters, but the entrance channel showed no significantly higher values. Analysis for grain size in those years indicated that the sediments were primarily fine grained (88-97% fines) in the inner 8-foot MLLW channel and anchorage area, but coarser in the 10-foot MLLW entrance channel (0-16% fines) (USACE, 1980a).

11.2 Milford Boat Works, Inc., Wepawaug River, Milford

A volume of roughly 3,300 cy of fine-grained material was removed from the boat basin in the Wepawaug River by Milford Boat Works, Inc in 2010. Bulk chemistry test results revealed that all three samples contained higher levels of copper than the CLDS reference material. Two samples contained higher concentrations of cadmium, and one sample showed higher levels of mercury. Dredged material was found suitable for placement at CLDS, but it was required that the project be completed early in the season so that subsequent placement operations would help cover the sediments and isolate them from the environment.

11.3 City of Milford, Milford Harbor, Milford

The Milford Lisman Landing Marina was recently dredged in 2013. About 3,200 cy of material was taken out and placed at CLDS to accomplish this project. A project was planned by the City of Milford in 2011 as well to dredge the Milford Lisman Landing Marina. This action would produce a volume of approximately 5,400 cy of fine-grained material (60.4% - 76.4% fines) to be sent to CLDS for placement. Five sediment cores were taken for chemical analysis. The results revealed that the metal concentrations were all below CLDS values. Two samples (D and E) presented a relatively higher concentration for one PAH species, dibenzo(a,h)anthracene. There are no CLDS reference area values for pesticides or PCBs, but all PCB and pesticide concentrations are less than or only slightly higher than the detection limits and present no concerns. The sediments were found suitable for unconfined open water placement at CLDS, provided that the area sampled by Samples D and E were placed before the rest of the project material.

The City of Milford put forward a different project in 2007 to remove roughly 11,900 cy of sand (3.3% - 42.8% fines) from the entrance channel to Milford Harbor. This dredging project consisted of two parts. The first area, labeled Option A, was the inner section of the entrance channel. The second area was the outer section of the entrance channel comprising part of the Milford Harbor Federal Navigation Project. The simultaneous dredging of both areas represented Option B. The proposed placement area was CLDS. Three sediment cores were taken for chemical analysis. Results showed no higher levels of any contaminants of concern except for one PAH species. The material was approved for unconfined aquatic placement at CLDS.

11.4 Housatonic River FNP, Stratford to Ansonia, CT

11.4.1 18-Foot Channel below Pope's Island

In 2012, it was proposed that 100,000 cy of sandy material be dredged from the lower Housatonic River FNP from shoal areas south of the Route 1 Bridge. Only about 59,000 cy of material was actually dredged in 2013. This action was completed by the USACE hopper dredge, *Currituck*. The placement area was a nearshore area off of Point No Point in Stratford, CT. Sediment grain size analyses from 2000 showed that the sediments were all predominantly sand, ranging from 0.4% fines to 8.7% fines. The Total Organic Carbon was quite low, ranging from 0.1% to 1.5%. The concentrations of PAHs ranged from below detection limits to 890 ppb. This material was deemed acceptable for placement in a nearshore environment for the purpose of beach nourishment off of Point No Point in Stratford, CT (USACE, 2012). Grain size analysis from 1971 indicated that the main channel sediments were primarily sand with an average of 20.5% total fines (USACE, 1980a).

11.4.2 7-Foot Channel above Pope's Island to Derby

Maintenance dredging of the -7-foot MLLW upper channel (above the lower end of Pope's Island) of the Housatonic River FNP last occurred in 1975 and 1976 when material was placed at three upland sites, two in Stratford and one in Milford. Approximately 133,600 cy of material was removed in 1975-1976; about 11,600 cy of that material was placed within the Short Beach

Park Area in the Town of Stratford; approximately 47,000 cy of the Housatonic dredged material was placed on a tract containing 6 acres within a larger tract of land owned by Frank E. Conine and William Troland in the Town of Stratford; and roughly 75,000 cy of dredged material was placed on a tract of land owned by Beard Sand and Gravel Company next to the Housatonic River in the City of Milford (USACE, 1975b). The Housatonic River sediments were tested in 1971 for physical and chemical characteristics in support of this dredging effort. Material was shown to contain average levels of contamination except along the Interstate 95 bridge where zinc and copper values were abnormally high. Grain size indicated that material ranged from gray sand with shell fragments at the mouth of the river to organic, silty sand at Carting Island marsh (USACE, 1975b).

11.5 Caswell Cove, Housatonic River, Milford

Caswell Cove was recently dredged in 2009 when about 500 cy of material was removed and placed at CLDS. An earlier project was proposed in 2007 to dredge approximately 24,600 cy of sand and silty material (55% - 83% fines) from the Caswell Cove marine basin and entrance channel. Bulk chemistry results showed that the material from composite samples taken from the entrance channel and boat basin was contaminated with copper, cadmium, dibenzo(a,h)anthracene, fluoranthene, ideno(123-cd)pyrene, and chromium. In one sample, all but one PAH (naphthalene) showed elevated levels. Due to these results, material was found unsuitable for unconfined open water placement at CLDS. Approximately 10,700 cy of the sediment was placed in a deep hole created by aggregate mining off Two Mile Island in the Housatonic River at Shelton, CT. Comparison with a reference sample showed the Caswell sediments were cleaner than the existing bottom sediments. The remaining 13,900 cy of sediments were placed at CLDS and capped.

11.6 Pootatuck Yacht Club, Housatonic River, Stratford

In 2012, the Pootatuck Yacht Club had 12,200 cy of material removed from its marina. Bulk sediment chemistry of the sandy (6% fines) sediments proposed for dredging exhibited PAH, pesticides, metals, and PCB concentrations at or slightly above the reference concentrations for CLDS and WLDS. Project material was placed at CLDS.

11.7 Brewer Stratford Marina, Housatonic River, Stratford

In 2013, the Brewer Stratford Marina had approximately 16,300 cy of material taken out of their boat basin. The dredged material was suitably placed at CLDS. Previously, an estimated volume of 10,200 cy of sand and silty material (23.9% - 74.2% fines) was proposed to be dredged from the Brewer Stratford Marina in 2004 with the intent to place the material at CLDS. It was found that most of the material (represented by eleven out of thirteen core samples) was not suitable for open-water placement at CLDS. However, some of the materials, represented by two of the thirteen cores (located to the east of Dock E), were suitable for unconfined open water placement at CLDS with special management. In eleven of the thirteen project sediment samples, the bulk chemistry results revealed contaminant concentrations that substantially exceeded the CLDS reference values for three of the metals tested (cadmium, copper and chromium). In eleven of the thirteen project sediment samples, the bulk chemistry results

revealed contaminant concentrations that substantially exceeded the CLDS reference values for all but two of the PAH compounds. PCB concentrations were elevated for most samples likely due to the proximity to the Raybestos NPL site. The material could have been deemed suitable for unconfined open water placement, pending the results of biological testing and State water quality certification.

12.0 Bridgeport Area Dredging Center

12.1 Bridgeport Harbor FNP, Bridgeport, CT

Bridgeport Harbor can be divided into two areas for purposes of sediment classification. Based on test results from 1973, 1975, 1976, 1982, and 1998 the sediments present in the inner harbor and anchorage area were primarily fine grained organic silt, whereas sediments in the outer harbor and entrance channel were predominantly coarser grained (USACE, 1980a; USACE, 1982c, USACE 2013c). Chemical and biological testing in 1982 for proposed improvement showed that the inner harbor sediments were moderately highly to highly contaminated and suitable for capped placement at CLDS (USACE, 1982c). Sediments in the entrance channel and outer harbor did not exhibit any significantly high values for any parameters in 1975 and 1976 and were found suitable for uncapped placement at CLDS in 1982, but no dredging has occurred in the FNP since 1964.

In 2013, NAE proposed to remove approximately 1,774,000 cy of dredged material to maintain the current authorized depths in the navigation channels, anchorages, and turning basin in Bridgeport Harbor, except for Johnsons Creek. This project has not occurred, but the following details the proposed project description, sediment suitability, and sediment characteristic information.

The project proposed would dredge material with a mechanical dredge and place it into scows for placement. Of that amount, approximately 666,000 CY of material was found suitable for unconfined ocean placement and the other 1,108,000 cubic yards was not suitable for unconfined ocean placement (see Table 1). The Federal base plan would place the unsuitable material into a Confined Aquatic Disposal (CAD) cell(s) located in Bridgeport Harbor and the Morris Cove borrow pit located in New Haven Harbor. The suitable material would be placed at the CLDS (CLDS), in the Morris Cove borrow pit, and used to cap the CAD cell(s).

The Southeast (SE) CAD Cell would be constructed in Bridgeport Harbor to the east of the navigation channel and just north of the breakwater. This CAD cell would be dredged to a depth of about 90 feet MLLW and would contain the majority of the contaminated (unsuitable) material dredged from Bridgeport Harbor, approximately 910,000 CY. The remainder of the unsuitable material from the harbor, as well as the top two feet excavated from the SE CAD Cell, would be placed at the Morris Cove borrow pit. Suitable material from the project would be used to provide a minimum two and 1/2 –foot to three-foot cap for the unsuitable material placed in the SE CAD Cell and the Morris Cove borrow pit. The remaining suitable material would be placed at the CLDS (Table 2).

TABLE 1. Dredging Quantities (CY) From the Navigation Channels and CAD Cell

Location	Suitable Material	Unsuitable Material	Overdepth (2 feet)	TOTAL
NAVIGATION CHANNELS (Depths in MLLW)				
Entrance Channel	302,500		363,100	665,600
Main Channel		399,000	188,000	587,000
35' East Anchorage		46,000	26,000	72,000
25' East Anchorage		8,100	18,200	26,300
35' Turning Basin		69,900	50,100	120,000
18' Inner Anchorage		4,700	6,400	11,100
18' West Anchorage		100	100	200
Yellow Mill Creek		93,500	33,400	126,900
Pequonnock River		130,300	34,400	164,700
Subtotal	**302,500**	**751,600**	**719,700**	***1,773,800***
SOUTHEAST CAD CELL				
Subtotal	**1,151,300**	**53,800**		***1,205,100***
TOTAL DREDGED MATERIAL QUANTITY BY TYPE				
			Total Suitable Material	**1,816,900**
			Total Unsuitable Material	**1,162,000**
			TOTAL DREDGING QUANTITY	***2,978,900***

TABLE 2. Quantities (CY) and Source of Dredged Material for Each Disposal Location

Source of Dredged Material	DISPOSAL LOCATIONS				
	CLIS	Southeast CAD Cell		Morris Cove	
	Suitable	Unsuitable	Suitable	Unsuitable	Suitable
Entrance Channel	442,400		73,200*		150,000*
Main Channel, Turning Basin, and Anchorages		620,400			
Pequonnock River		164,700			
Yellow Mill Creek		126,900			
Main Channel (remaining)				196,200	
Top 2' SE CAD				53,800	
SE CAD Cell	1,151,300				
Disposal Subtotals *cap material		**912,000**	**73,200***	**250,000**	**150,000***
	1,593,700	**985,200**		**400,000**	
TOTAL DISPOSAL QUANTITY					
2,978,900					

A total of approximately 2,978,900 CY of suitable and unsuitable material would be dredged from the Bridgeport Harbor navigation project features and to create the SE CAD Cell. See Table 1 above for a summary of the total amount and breakdown of the suitable and unsuitable material to be dredged from the CAD cell and access channel. Table 2 provides a summary of the proposed placement locations for the suitable and unsuitable material dredged from the project channel and anchorages and SE CAD Cell. This project has not moved forward; information for this proposal came from the Environmental Assessment in support of the Dredged Material Management Plan for Bridgeport Harbor (USACE, 2013d).

Samples were collected from 20 stations using a vibracore from the Bridgeport Harbor entrance channel, main ship navigation channel inside the breakwaters, and the 35-foot turning basin and anchorage area on August 22 to 24, 1998 for physical and chemical analysis. A stainless steel mini-box core was used to collect sediment required for performing biotoxicity evaluations (USACE, 2013d).

Bottom materials recovered inside the breakwaters from navigation features were primarily black silt to the full penetration depth with only two exceptions. At stations "A" and "B," adjacent to the ferry landing, a hard gray clay-silt was recovered in the core cutter indicative of the indigenous materials residing at depth (USACE, 2013d).

The entrance channel, located outside the breakwaters, was generally a dark gray to black silt overlying fine sand at depth. Fine sand was recovered at depth at stations "N" and "Q", the bottom eight inches of the core recovered from station "R" contained a large percentage of sand. Larger proportions of sand were observed further offshore in a southerly direction towards station "T" where gray silty sand with entrained shells was recovered. All the samples were analyzed for grain size (USACE, 2013d).

Samples were then analyzed for total organic carbon (TOC), metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc), polynuclear aromatic hydrocarbons (PAHs), pesticides, and polychlorinated biphenyl (PCB) congeners. Subsamples of C, F, and K, and CLDS were also analyzed for dioxin/furans. The results showed that pesticides were not generally detected in the samples at the specific detection limit. Many of the blank samples also detected dioxin/furans. Results showed levels generally above the CLDS reference sample (USACE, 2013d).

Based on the above results, biological (biotoxicity) testing of the sediments using composites "A", "BCD", "EF", "GHI", "J", "KL", "M", and "NQ" sediments were evaluated against the CLDS reference sediment. The 10-day amphipod bioassay test used whole sediment, while the 48-hour sea urchin, 96-hour fish, and 96-hour mysid shrimp test used sediment elutriate samples (USACE, 2013d).

Benthic Toxicity Test: Mean amphipod survival for the Long Island Sound (LIS) performance control was 81%. Mean amphipod survival for the CLDS reference sample was 80%. Survival of the Bridgeport Harbor test sediment samples ranged from 17% to 63%. When normalized to the to the CLDS reference sample, mean survival ranged between 21% and 79% (composite:

"A"-44%, "BCD"-30%, "EF"-57%, "GHI"-21%, "J"-26%, "KL"-48%, "M"- 79%, "NQ"-59%). Mean survival for "M" was not statistically different from mean survival for the CLIS reference sediment sample. Mean survival for composites, "A", "BCD", "EF", "GHI", "J", "KL", and "NQ" were statistically less than (p=0.05) and less than 80% of the CLIS reference sample amphipod survival. Except for sample "M" the rest of the material would not be acceptable for ocean water placement at CLDS (USACE, 2013d).

Water Column Test: Forty-eight hour tests using sea urchins *Arbacia punctulata*, 96-hour tests using the fish *Menidia beryllina*, and the 96-hour test using the mysid *Mysidopsis bahia* were conducted according to the scope of work titled "Laboratory Testing in Support of Environmental Assessment NAE O&M Projects" dated 23 July 1998. Testing was conducted in two test series of five replicates. Each sample was diluted (i.e. 10, 50, and 100%) using the CLIS dilution water. In addition, each test series included a CLDS dilution water treatment and a laboratory performance control (NSW) treatment for a total of seven treatments for each test series (USACE, 2013d).

Reduced development of the sea urchin was noted in full strength and 50% dilutions for all of the samples tested in Test Series 1. Reduced development was limited to full strength and 50% dilutions in all samples but CLDS, where only the full strength elutriate elicited a response in Test Series 2. In addition, for the "EF" elutriate, reduced normal development was evident even in the 10% dilution (USACE, 2013d).

Reduced survival for the fish was limited to full strength dilutions of "A", "BCD", "M" and "NQ" for Test Series 1. In Test Series 2, reduced survival was limited to full strength dilutions for "EF", "GHI", "J", and "KL" although 74% and 76% survival occurred in 59% dilutions of "EF" and "J", respectively. Survival was not reduced in the CLDS at any dilution (USACE, 2013d).

Reduced survival of the mysid in Test Series 1 was limited to full strength dilutions of "A", "BCD", "M" elutriates. In Test Series 2, reduced survival was limited to full strength dilutions of "EF", "J", "KL" elutriates. Survival was not reduced in the CLDS and "GHI" elutriates at any dilution (USACE, 2013d).

In summary, Bridgeport Harbor has sediment contaminant levels that are comparable to those found in other industrial harbors in the Northeast. The above tests indicated that material would not be suitable for ocean water placement based on the amphipod tests. Upon further evaluation of the biological test sample from the entrance channel "NQ", it was determined that the unusual variability among the five replicates warranted additional testing of the entrance channel material which can be found in the below section (USACE, 2013d).

12.1.1 35-Foot Entrance Channel and Main Channel

The last time the -35-foot MLLW Bridgeport Harbor main ship channel was dredged was in 1960. At that time about 347,000 cy of material was removed by hopper dredge and placed in an open water site. Prior to that, in 1957, approximately 191,600 cy of material was taken out of the main ship channel and in 1956, roughly 309,000 cy of dredged material was removed. Both of

these events were completed with the use of a hopper dredge and placed at the Bridgeport Disposal Site for placement (USACE, 2002c).

In 2013, NAE proposed to remove approximately 1,774,000 cy of dredged material to maintain the current authorized depths in the navigation channels, anchorages, and turning basin in Bridgeport Harbor, except for Johnsons Creek. Based on findings in the previous section and due to the unusual variability among the five replicates from the first round of biological testing noted above, 15 additional sediment samples were collected with a vibracore from the entrance channel for grain size analysis on September 6 and 7, 2001. Grain size analysis showed that the majority of the entrance channel's sediments consisted of fine-grained material (silt and clay) with some sand (USACE, 2013d).

After review of the grain size results, the samples were composited into four composites for bulk sediment chemistry and biological testing. All four Bridgeport Harbor composites had TOC values above 2% dry weight. Concentrations of total PCB ranged from 140 to 180 ug/kg dry-weight in Bridgeport Harbor entrance channel sediments. Total PCBs in the CLDS reference sediments were lower (50 ug/kg dry weight). No pesticides were detected above the target detection limits of 20 ug/kg dry weight. However, DDTs, dieldrin, and heptachlor epoxide were detected in all harbor sediments at levels above the method detection limits. Total PAH concentrations ranged from 5,502 to 7,244 ug/kg dry weight in the sediments. Total PAHs in the CLIS reference sediment, while elevated, where lower than the harbor sediments (USACE, 2013d).

Except for arsenic and nickel, the metal concentrations in the reference sediment were lower than the harbor sediment concentrations. Based on the elevated results of the sediment chemistry in the entrance channel over the reference sediment, it was determined to move to tier three (biological testing) to determine suitability of the entrance channel material for ocean placement (USACE, 2013d).

Next, the sediment composites from the entrance channel and the reference sediment from CLIS underwent bioassay and bioaccumulation testing. These three tests included:

1) a solid phase (benthic) toxicity test which assessed two species of test organisms, an amphipod *Ampelisca abdita* and the mysid shrimp *Americamysis bahia* through direct sediment exposure;

2) a water column toxicity test which assessed the exposure of three species of organisms (a vertebrate (fish) *Menidia beryllina*, a crustacean *Americamysis bahia*, and zooplankton-the larvae of *Arbacia punctulata*) to the suspended particulate phase (SPP) of the proposed dredged material; and

3) the bioaccumulation of pollutants of concern was assessed through a 28-day exposure of two marine macroinvertebrates to the proposed dredged material. The two marine macroinvertebrates tested were the burrowing polychaete *Nereis virens* and the bentnose clam *Macoma nasuta*.

Results showed that PAHs, PCBs, chromium and copper bioaccumulated in test organisms exposed to project sediments at higher levels than organisms exposed to reference sediments. As a result, additional evaluations were conducted to determine if the material would be suitable for open water placement. Comparison of bioaccumulation values from the harbor samples to the applicable U.S. Food and Drug Administration's (FDA) Action and Tolerance Levels for the compounds referenced above was conducted. However, only PCBs have U.S. FDA Action/Tolerance levels. The steady-state corrected mean clam and worm bioaccumulation concentrations of PCBs for all stations were below the FDA Action and Tolerance Levels for these species. Therefore, this project was in compliance with this regulatory level and the analysis proceeded to the next step, risk-based evaluations (USACE, 2013d).

The following risk-based evaluations were used to determine compliance with the MPRSA. They are: 1) consideration of steady-state bioaccumulation and food-chain transfer, 2) consideration of potential carcinogenic effects on human health, 3) consideration of potential non-carcinogenic effects on human health, 4) comparison with published FDA "levels of concern" for shellfish, and 5) consideration of potential ecological effects. Based on the analysis of the risk-based evaluations, it was determined that the material from the entrance channel was suitable for ocean water placement (USACE, 2013d).

12.1.2 Inner Harbor, Maneuvering Areas, and Anchorages

The most recent maintenance dredging of the inner portion of the Bridgeport Harbor FNP occurred in 1962. At that time roughly 1,433,000 cy of material was removed by a mechanical dredge and placed at the Bridgeport Disposal Site (USACE, 2002c). No sediment chemistry or grain size was available from the event. Please see the previous sections for more information regarding sediment characterization in Bridgeport Harbor's inner harbor, anchorages, and turning basin.

The Bridgeport Harbor Federal Navigation Project also includes channels in the Yellow Mill River, the Pequonnock River, and Johnson's Creek. These are presented below:

12.2 Pequonnock River FNP - Bridgeport Harbor, Bridgeport

The Pequonnock River FNP was proposed to be dredged in 2013. Though this project has not taken place, material was proposed to be removed and placed in CAD cells constructed within Bridgeport Harbor. Sediment testing from 2013 which showed that project material presented relatively high levels of metals, PAHs, PCBs, and pesticides in comparison to reference site material. Thus, project material was determined to be suitable only for CAD placement (USACE, 2013d). For more information regarding the planned construction and sequencing of this event, please see the previous sections. Sediment testing for both the Yellow Mill Channel and Pequonnock River (tributaries to the Bridgeport Harbor) also took place in 1973. The results showed that sediments in both channels were primarily gray or black organic silt and contained moderately high to high concentrations of potential pollutants, volatile solids, oil and grease, and metals (USACE, 1980a).

12.3 Yellow Mill Channel FNP - Bridgeport Harbor

The Yellow Mill Channel FNP was proposed to be dredged in 2013 as well. Material was planned to be removed and placed in CAD cells constructed within Bridgeport Harbor. Sediment testing in 2013 showed that in comparison to reference site material, project material had higher levels of metals, PCBs, PAHs, and pesticides. Therefore, dredged material was determined to be suitable only for CAD placement (USACE, 2013d). For more information regarding the planned construction and sequencing of this event, please see the previous sections. Sediment testing for both the Yellow Mill Channel and Pequonnock River (tributaries to the Bridgeport Harbor) took place in 1973. The results showed that sediments in both channels were primarily gray or black organic silt and contained moderately high to high concentrations of potential pollutants, volatile solids, oil and grease, and metals (USACE, 1980a).

12.4 Johnsons River FNP - Bridgeport Harbor

Johnsons River is a tributary to Bridgeport Harbor. The last time the Johnsons River FNP was dredged was in 1963 when about 24,000 cy of material was suitably sent to the Bridgeport Disposal Site for placement (USACE, 1963a). Sediment sampling was undertaken in 1973 and 1980. Based on these test results, sediments were found to be primarily gray or black organic silt and contain moderately high to high concentrations of metals and volatile solids (USACE, 1980a).

12.5 Derecktor Shipyards, Bridgeport Harbor, Bridgeport

A project to dredge roughly 38,000 cy of primarily silty material (99.3% - 99.6% fines) from the Derecktor shipyard was put forward in 2008. The plan proposed that 13,000 cy of the material be placed offshore at CLDS or WLDS and the remaining material would be placed at an upland site. After chemical and physical testing of the sediment, it was found that the material was suitable for unconfined open water placement at WLDS, but not at CLDS. Bulk chemistry analyses showed that two of the project samples contained higher concentrations of copper than the reference materials taken from CLDS. Another two samples were contaminated with higher levels of cadmium and copper in comparison to the CLDS reference site sediments. Compared to the WLDS sediments though, the project sediments showed results that were below or near the contaminant concentrations for metals and PAHs. For PCBs and pesticides, the contaminant concentrations in the project fell near or below the analytical detection limits in all of the project sediment samples.

12.6 Black Rock Harbor FNP, Bridgeport, CT

Grain size analysis from 1982 characterized the sediment in Black Rock Harbor as primarily organic mud with coarser material (sand and silty sand) in the eastern portion of the outer harbor. Material from the Black Rock Harbor FNP was placed at the CLDS in 1983 as part of the USACE's Field Verification Program to test the efficacy of capped versus uncapped placement of dredged material. Approximately 210,000 cy of dredged material was removed from Black Rock Harbor for this program (USACE, 1982d). In 1973, 1976, and 1979 sediment analyses of the harbor channel also showed that the sediments were mostly composed of black fine sandy

organic silt. Bulk chemistry and biological testing in those same years demonstrated the sediment contained moderately high to high concentrations of metals, oil and grease, volatile solids, and potential pollutants (USACE, 1980a).

12.7 Cedar Marina, Black Rock Harbor, Bridgeport

In 2004, a proposed project requiring the removal of approximately 10,100 cy of sandy material (1% fines) was intended to be placed at CLDS. Bulk chemistry test results showed that the concentrations of metals were below the CLDS reference values and all PAHs, PCBs and pesticides fell near or below detection limits. Therefore, sediments were found suitable for unconfined open water placement at CLDS.

A suitability determination from 2003 for the Cedar Marina to dredge roughly 17,800 cy of primarily sandy material (11.6% - 35.6% fines) from the boat basin found the overlying sediments not suitable for unconfined open water placement at CLDS. However, the underlying sediments (below 48 inches in depth) were found suitable for unconfined placement at CLDS. Bulk chemistry analyses revealed that the surficial sediments contained relatively high concentrations of lead, copper, cadmium and chromium. Test results of the bottom sediments for metals, PAHs, PCBs, and pesticides revealed that project material did not contain high concentrations for any parameters tested. Most samples taken from the top layers also show elevated concentrations for PAHs, PCBs and pesticides and failed toxicity testing. This project has not moved forward since that time.

12.8 Black Rock Yacht Club, Black Rock Harbor, Bridgeport

An estimated volume of about 5,000 cy of predominantly sand and coarse material (4.4%, 5.2% and 17.5% fines) was dredged from the Black Rock Yacht Club in 2011. Bulk chemistry analyses of the project's sediments show that concentrations of metals, PAHs and pesticides were below or near levels found for the CLDS and WLDS reference site sediments. Materials were deemed suitable for unconfined open water placement at either CLDS or WLDS.

12.9 Town of Fairfield, Black Rock Harbor, Bridgeport

In 2003, the Town of Fairfield proposed to dredge an area in their marina which would produce approximately 8,000 cy of material. The proposed placement site was CLDS. Four out of six samples were found to be unsuitable for unconfined open-water placement and were recommended to be capped with suitable sediments at CLDS. The two suitable samples, taken from the seaward side of the marina were considered an option to add to capping materials. Bulk sediment chemistry analysis showed elevated levels of metals (specifically cadmium and copper) and PAHs in samples which were taken from the area bounded by the elevated fixed pier, proposed floating docks, and the stone bank. For pesticides and PCB congeners, concentrations were at or below the minimum detection limits for all parameters.

12.10 Southport Harbor FNP, Fairfield, CT

Maintenance dredging of the -9-foot MLLW channel and anchorage area in Southport Harbor was completed in 2005. Approximately 56,700 cy of dredged material was removed by

mechanical bucket dredge and suitably placed at CLDS. The Southport Harbor was tested for sediment characteristics in 1998 in support of this dredging effort. Grain size analysis showed that the material from the FNP was primarily silt and sand. Bulk chemistry test results indicated that the samples in Southport Harbor generally have lower levels of contaminants when compared to reference materials. However, moderate levels of chromium, copper, lead and zinc were found at various locations throughout the harbor, while relatively high levels of lead were found at two locations within the northern anchorage area (USACE, 2003).

Elevated levels of metals reported in the bulk chemistry testing prompted bioassay/bioaccumulation tests to determine the suitability of the material for unconfined open water placement. Three biological tests were performed which included: 1) a ten-day acute exposure solid phase assay; 2) an acute suspended particulate phase assay; and 3) a 28-day solid phase sediment bioaccumulation test. Results for the amphipod, *Ampelisca abdita,* toxicity tests showed that none of the Southport Harbor composites yielded a mortality rate greater than 20% difference from the reference site. For the sea urchin, *Arbacia punctulata,* decreased survivorship and developmental stages were seen in all samples tested, including the CLDS reference sample. The mysid shrimp, *Mysidopsis bahia,* exhibited a survival of 78% after 96 hours for one sample (1E-2E) and 16% for a second sample (2A-3A) in 100% SPP. The 96-hour LC-50 was observed to be >100% in sample 1E-2E and 71.2% in sample 2A-3A. No observable effects concentration values (NOEC) were calculated to be 100% SPP for sample 1E-2E and 25% SPP for sample 2A-3A. For the silverside fish, *Menidia beryllina,* survival was 14% after 96-hour exposure to sample 1E-2E and 0% after 96-hour exposure to sample 2A-3A. The 96-hour LC-50 value was 76.5% for sample 1E-2E and 52.2% for sample 2A-3A. NOEC values were calculated at 50% SPP for sample 1E-2E and 25% SPP for sample 2A-3A (USACE, 2003).

Based on the bioassay and bulk chemistry results, material from Southport Harbor was considered for bioaccumulation testing. Mean survival of the worms, *Nereis virens*, exposed to the proposed dredged materials for 28 days was 87% in composite 1E-2E and 88% in composite 2A-3A. Mean worm survival at the CLDS reference site was 92%, while survival in the control treatment was 95%. Clam survival was 99% from the 1E-2E composite and 98% from the 2A-3A composite. The CLDS reference sediments had a marine clam, *Macoma nasuta*, survival rate of 97% and the control sediments had a clam survival rate of 97%. Bioaccumulation test results for the clam and worm indicate many of the tissue concentrations of contaminants of concern (COCs) were below detection limits. 18 of the COCs from composite 1E-2E and 20 of the COCs from composite 2A-3A were below detection level in the clam tests. For both composite samples, four COCs (chromium, copper, fluoranthene, and pyrene) bioaccumulated in the clam tissue to a higher degree that that of the CLDS reference sediment. In the worm tests, 23 COCs were detected at concentrations below their corresponding detection limits in both composite samples. Four COCs were found to have bioaccumulated to a higher degree than the CLDS reference tissue in both composite samples. The four COCs of greater concentration in the worm tissue were: cadmium, fluoranthene, naphthalene, and pyrene (USACE, 2003).

Based on the results of the bulk chemistry test and the bioassay/bioaccumulation test results, the USACE and EPA determined that the maintenance material from the Southport Harbor Federal navigation channel was suitable for unconfined open water placement in 1999; however no work was undertaken in that year (USACE, 2003).

Sediment testing was also conducted in 1972. Grain size analysis from that year indicated that material in the upper end of Southport Harbor was predominantly silt and sand (55% - 89% fines) and sand in the lower end (0% - 1.4% fines). One sample from the upper end of the harbor showed higher values for the concentrations of nickel, lead and copper. All other samples tested showed no significantly higher values for any parameters (USACE, 1980a). Maintenance dredging in 1962 removed about 41,200 cy of "ordinary material" from the FNP, and this material was placed at the Southport Dumping Ground in Long Island Sound (AR, 1962; USACE, 1961).

12.11 Jessica and John Illuzzi, Southport Harbor, Fairfield

Jessica and John Illuzzi's property was dredged in 2012. At that time 600 cy of material was taken out and suitably placed at WLDS. A separate project to dredge approximately 6,000 cy of material from their private property in Southport Harbor was proposed by Jessica and John Illuzzi in 2005. Placement areas proposed were either CLDS or WLDS. Three sediment cores were taken for analysis, then composited into one sample. The contaminant concentrations exceeded those at CLDS for four metals (lead, chromium, copper and cadmium). Contaminant concentrations were near or below the WLDS reference values for all metals except lead, which was three times the reference value. For PAHs, PCBs and pesticides, the contaminant concentrations in the project fell near or below the CLDS and WLDS reference values. Cores were then taken again at the three previous locations and analyzed individually. The individual results were similar to the WLDS reference values. Based on these results, the dredged material was deemed not suitable for unconfined aquatic placement at CLDS, but was found suitable for unconfined placement at WLDS.

12.12 Pequot Yacht Club, Southport Harbor, Fairfield

In 2013, the Pequot Yacht Club removed about 7,200 cy of suitable material which was placed at CLDS. A year earlier in 2012, the Pequot Yacht Club dredged approximately 10,800 cy of material from their boat basin and placed the material at CLDS. Prior to that, the Pequot Yacht Club planned to dredge their boat basin in Southport Harbor in 2011. This action would have produced about 23,300 cy of sand and silty material (21.6% - 33.4% fines). In comparison to the CLDS and WLDS reference sites, the project samples exhibited higher concentrations of most metals and many PAHs. Also, the pesticides DDD, DDT, and DDE were present in all samples at concentrations several times the target detection limit. Several PCBs in each sample were many times the target detection limit as well. For these reasons, the project material was found unsuitable for placement at WLDS or CLDS. The material could have been deemed suitable for unconfined open water placement, pending the results of biological testing and State water quality certification.

12.13 Stuart Bell, Southport Harbor, Fairfield

In 2006, 900 cy of material was dredged from a 3,700 sq. ft. area in Southport, CT. Bulk chemistry sediment testing showed no contamination of the sediments in all three samples tested. The material was approved for unconfined open-water placement at either Central Long Island

Sound or Western Long Island Sound Disposal Site; however dredging never took place due to Connecticut CZM concerns over resource impacts.

13.0 Norwalk Area Dredging Center

13.1 Westport Harbor & Saugatuck River FNP, Westport, CT

Sediment sampling and testing for the FNP took place in 2004 in support of a project proposal to maintain the FNP at Saugatuck River. The project would have removed 25,000 cy of material by mechanical bucket dredge from the FNP in Saugatuck River with placement at either WLDS or CLDS, but the project has not moved forward since that time. Eight sediment cores were taken for analysis and combined into three composite samples. Grain size analysis found that the majority of the project's material was fine-grained sediment (silt/clay) with portions of fine to medium grained sands. Metals (except for cadmium) and pesticides were undetected, while cadmium and PAHs were detected at low levels (USACE, 2007).

Biological testing of the material included three separate tests: 1) a ten-day acute exposure solid phase assay; 2) an acute suspended particulate phase assay; and 3) a 28-day solid phase sediment bioaccumulation test. The ten-day solid phase bioassays were conducted with the amphipod, *Ampelisca abdita,* and with the mysid shrimp, *Americamysis bahia,* to evaluate direct sediment acute toxicity. The organisms were exposed to test, reference and control sediments using a flow-through system. After ten days, the sediment was screened and the survival rates were determined. The acute suspended particulate phase test used three species, a mysid shrimp (*Americamysis bahia*), a silverside fish (*Menidia beryllina*) and the larvae of a sea urchin (*Arbacia punctulata*). Mysids and silversides were introduced into water columns in which control, reference, and test sediments had been suspended. Survival was then measured at selected intervals up to 96 hours. Sea urchin larvae were introduced into similar conditions where survivorship and developmental progress were measured. Additionally, a 28-day solid phase bioassay was performed on the marine clam *Macoma nasuta* and the marine worm *Nereis virens* for bioaccumulation analyses of contaminants of concern (COCs) (USACE, 2007).

The mysid shrimp exhibited survival rates of 100% and 96% in relative to the WLIS reference sample after 96 hours of exposure in 100%SPP. The 96-hour LC-50 was reported to be >100% survival. The mysid shrimp exhibited survival rates of 92%, 94%, and 100% relative to the CLIS reference after 96 hours of exposure to 100% SPP. The 96-hour LC-50 was still reported to be >100% survival. The silversides exhibited survival ranges of 98% and 96% relative to WLIS reference after 96 hours of exposure in 100% SPP. However, after 96 hours of exposure to 100% SPP, the survival range of silverside relative to CLIS reference were 94%, 98%, and 100%. The 96-hour LC-50 was reported to be >100% survival relative to both the WLIS and CLIS references. For the sea urchin, decreased survivorship and developmental stages were seen in the 50% and 100% SPP samples relative to both WLIS and CLIS references. The elutriate made from Westport Harbor test sediments did have a significant adverse impact on the survival and development of the sea urchin larvae. Based upon these bioassays, material from Westport Harbor was considered for bioaccumulation testing (USACE, 2007).

Bioaccumulation testing showed that the mean survival rate of the clams (*Macoma nasuta*) exposed to the proposed dredged materials for 28 days ranged from 96% to 98%, while the mean survival for clams at the WLIS and CLIS reference sites was 99% and 97% respectively. The mean survival for clams in the control treatment was 98%. Worm (*Nereis virens*) survival in the proposed dredge material ranged from 98% to 100%. The WLIS and CLIS reference sediments had a worm survival rate of 100% and 97% respectively. The control sediments had a 98% worm survival rate. Bioaccumulation test results for the clam and worm indicate many of the tissue concentration of contaminants of concern (COCs) in organisms exposed to Westport Harbor sediments were lower than those exposed to either CLIS or WLIS sediments. There were some bioaccumulated COCs that were reported to be statistically greater in organisms exposed to Westport Harbor (from two composites D/E and F/G/H) sediments. Lead (Pb) was statistically greater in worms and clams exposed to composites D/E and F/G/H, while copper (Cu) was significantly greater in worms for Westport Harbor composite F/G/H. Additionally PCB's and PAHs were generally higher in the tissues exposed to Westport Harbor sediments, particularly composites D/E and F/G/H. However, these levels of accumulated contaminants were considered low (USACE, 2007).

Based on risk analysis, the USACE and EPA determined that the accumulated levels would not result in unacceptable risks. Thus, it was determined that project material was suitable for unconfined open water placement at either CLDS or WLDS (USACE, 2007). However, this project did not occur; 1970 was the last time Westport Harbor FNP was maintenance dredged. At that time approximately 25,900 cy of "ordinary material" was removed and placed at open water site located about 5 nautical miles from Eaton's Neck Light (AR, 1970; USACE, 1969b).

13.2 Burritt's Landing Association, Saugatuck River, Westport

In 2010, the Burritt's Landing Association planned a project to remove about 9,900 cy of fine-grained material from the entrance channel and boat basin of their marina. Examination of bulk chemistry results showed that the metals concentrations of all project samples were below or near the means plus twice the standard deviations of the contaminant concentrations found at the WLDS reference site. The normalized concentrations of PAHs in the project sediments were all below or just slightly above the means plus twice the standard deviations of the normalized PAH values at the WLDS reference site. However, one sample (Sample B) showed elevated levels of PAHs. For PCBs and pesticides, the contaminant concentrations in the project fell near or below the analytical detection limits in all of the project sediment samples tested. CT DEEP permitted 6,500 cy of the project material to be placed at WLDS unconfined; 3,400 cy of the material represented by Sample B was placed at CLDS and was capped.

13.3 Cedar Point Yacht Club, Saugatuck River, Westport

The Cedar Point Yacht Club put forward a project in 2006 to dredge roughly 21,400 cy of material from its boat basin off of the Saugatuck River with the intention to dispose of the material at WLDS or CLDS. Chemical testing of the sediments demonstrated that some of the material was not suitable for unconfined open water placement at WLDS. However, the balance of materials to be dredged was deemed suitable for unconfined open water placement at WLDS, provided the applicant follow a sequential dredging plan.

13.4 Joseph Guimond, Saugatuck River, Westport

In 2003, it was proposed that 1,800 cy of material be dredged from a 16,590 sq. ft. area in the Saugatuck River in Westport, CT. WLDS and CLDS were the proposed placement areas. Two sediment cores were taken from the project footprint and composited for analysis. The sediments were found to be suitable for placement as proposed at either placement site.

13.5 Sydney Weiner, Saugatuck River, Westport

An estimated volume of approximately 5,200 cy of predominantly silty material was removed from Judy Cove in the Saugatuck River in 2009. Sediment testing showed that the concentrations of metals, PAHs, PCBs and pesticides were all below detection limits with the exception of copper which was near the copper concentration found at CLDS. Sediments were deemed suitable for unconfined open water placement at WLDS or CLDS.

13.6 Norwalk Harbor FNP, Norwalk, CT

The most recent maintenance of the Norwalk FNP occurred in 2006, 2009, and 2013 in three phases. For the third and final phase, approximately 352,200 cy of material was removed by mechanical bucket dredge from the 12-foot MLLW channel of the FNP south of the Route 136 bridge and suitably placed at CLDS. The material, which was predominantly clayey silt, required a cap which was created from clean sediment from the follow-on dredging of New Haven Harbor (USACE, 2005). The second phase, which began in 2008 and was completed in 2009, included work to dredge a total of approximately 195,000 cy of material from the 6-foot MLLW East channel, the 12-foot MLLW entrance channel, and the 10-foot south anchorage (which was only reduced to a depth of 6-feet MLLW). A mechanical bucket dredge removed the material which was then placed at CLDS and capped with about 75,000 cy of material from the maintenance of the North Cove FNP (AR, 2009).

The first phase of the project began in 2006. Mechanical bucket dredging of the 10-foot MLLW upper channel and a small portion of the 6-Foot East channel began in 2005 and was completed in 2006 with a total of roughly 150,000 cy of material removed. About 65,400 cy was removed from the 10-foot MLLW channel and capped at CLDS with roughly 52,600 cy of material removed from formation of two in-river CAD cells beneath the 10-foot MLLW channel. The 30,600 cy of unsuitable material dredged from the 10-foot channel was placed in the CAD cells, along with 1,700 cy from three marinas. The CAD cells were capped with about 2,200 cy from the 6-foot channel and 3,000 cy from the 10-foot channel (AR, 2006).

As part of the three phased project, six sediment cores were taken from the project area for analysis. Grain size analysis showed that sediments were uniform black silty clay or black clayey silt to a 6 to 7 foot depth at all stations then became gravelly sand. The sediments from one section of the FNP (represented by sampling sites D, E and F) were found to be toxic in a bioassay and were only suitable for placement in a CAD cell. Sediments excavated from depths below 15-feet MLLW to create the CAD were found to be similar to reference site material from WLDS and CLDS and deemed suitable for unconfined open water placement at WLDS or CLDS (USACE, 2005).

In 1998, Norwalk Harbor underwent sediment testing for a proposed maintenance dredging project that did not occur. Sediment samples were collected for grain size and bulk chemistry analysis at 28 locations within the Federal navigation channel of Norwalk Harbor in 1998. Grain size analysis showed the material to be predominantly silt and clay from the four segments of the Federal navigation project. However, one area in the northern portion of the Norwalk River was composed of sandy-gravelly material. Bulk chemistry test results indicated that the outer harbor area had relatively low levels of contaminants when compared to reference values. The inner harbor contained areas of relatively moderate to higher levels of contaminants. The contaminants present at elevated levels included several metals (copper, lead, mercury, and zinc), and various PAHs. The majority of the maintenance material was found suitable for open water placement at CLDS, but was capped due to conditions imposed by the CT water quality certificate. A small portion of material was not acceptable for open water placement and deemed suitable for placement in CAD cells within the project area. Material removed for the creation of the CAD cells was found suitable for placement at CLDS (USACE, 2005). This project did not occur in 1998; instead it was phased between the years 2006-2013.

From 1980 – 1981, Norwalk Harbor underwent maintenance dredging of the 12-foot, 10-foot, and 6-foot MLLW channels, and the 6-foot anchorage. Roughly 276,000 cy of primarily plastic, organic silt and clay material was removed by mechanical bucket dredge from the FNP. Approximately 2,000 cy of material was contaminated with relatively high levels of naphthalene and nitrobenzene. This material was unsuitable for unconfined placement; therefore, it was placed in a pit dredged beneath the 10-foot Federal channel and capped with a minimum of five feet of clean dredged material. The remaining 274,000 cy of material was suitable for placement at CLDS (USACE, 1979b).

Sediment sampling and testing of Norwalk Harbor was also conducted in 1972, 1975, 1978, and 1979. Grain size analysis from those years characterized the material as primarily silt and clay with the following average percent total fines: 1972 – average 80.6% total fines for 13 samples; 1975 – average of 77.6% total fines for 16 samples; 1978 – average 91.8% total fines for 3 samples; and in 1979 the mean was 85.1% total fines for 18 samples. Chemical analyses from these years indicated that both the East and West Branch of the FNP were contaminated with mercury. Also, the West Branch showed abnormally high values for volatile solids, zinc, chemical oxygen demand, and kjeldahl nitrogen across multiple years (USACE, 1980a).

13.7 Bermuda Lagoon, Norwalk Harbor, Norwalk/Westport

Richard Del Bello dredged 240 cy of material from a 0.02 acre area in Bermuda Lagoon in 2004. Grain size analysis showed that the majority of the material was silt made up of 79.7% fines. Bulk sediment chemistry results showed no contamination, so the material was approved for unconfined aquatic placement at WLDS.

In 2002, Margery Leonard planned a project to dredge roughly 200 cy of material from a manmade water body adjacent to Bermuda Lagoon. Bulk chemistry test results showed that the material had relatively low concentrations of all contaminants of concern with regard to metals, PAHs, PCBs and pesticides. Therefore, the material was determined to be suitable for unconfined open water placement at WLDS.

13.8 Bloom Brothers Marina, Inc., Norwalk Harbor, Norwalk

The Bloom Brothers Marina proposed that 3,600 cy of material be dredged from their boat basin in Norwalk Harbor in 2003. Proposed placement sites were CLDS and WLDS. Bulk sediment chemistry analyses indicated lower concentrations of metals tested when compared with the classification guidelines, with the exceptions of arsenic, which was relatively moderate in sample C; chromium, mercury, lead, and zinc which were moderate in composite B-D; and copper, which was moderate in composite B-D and relatively high in Sample C. When the concentrations of metals were compared with the reference site data, many were greater than the means plus twice the standard deviations for CLDS as well as WLDS. Some concentrations were several times greater than the CLDS data while the majority were only slightly greater than the WLDS data. The exception was copper which was much higher. This material was found unsuitable for unconfined open water placement at WLDS as proposed, but suitable for placement at CLDS, provided it was covered with other dredged material. Placement was stipulated so that the sediment from around Sample C was dredged and placed first. The rest of the project material then followed.

13.9 Norman Bloom, Norwalk Harbor, Norwalk

In 2013, roughly 300 cy of material was removed from a private boat basin owned by Norman Bloom in Norwalk Harbor. This material was send to CLDS for placement. A project to remove about 2,100 cy of predominantly silty material (98.5% fines) from the same boat basin located in the East Branch of Norwalk Harbor was planned by Norman Bloom in 2002 as well. The intended placement site was either CLDS or WLDS. Results of chemical testing of the project's sediments showed that concentrations of PAHs, PCBs and pesticides were below or near levels found for WLDS and CLDS reference sediments. Whereas for metals, the concentrations of copper, mercury, lead, cadmium, chromium and arsenic exceeded the concentrations found for materials taken from the WLDS and CLDS reference sites. For this reason, the material was found unsuitable for unconfined open water placement at WLDS or CLDS. Dredged material was placed at CLDS with capping.

13.10 Robert Bloom, Norwalk Harbor, Norwalk

In 2004, it was proposed that approximately 3,400 cy of material be dredged from around a docking facility at 120 Water Street, Norwalk. Grain size analysis revealed that the composite sample contained 69% fines. Bulk sediment chemistry testing of the project's sediments showed that the samples were contaminated with cadmium, copper, lead and mercury in comparison to CLDS reference concentrations. This means that the material was not considered suitable for unconfined open water placement and was capped at CLDS.

13.11 Norwalk Boat Club, Norwalk Harbor, Norwalk

Approximately 2,800 cy of mainly fine sand (65 – 82% fine sand) was removed from the Norwalk Boat Club's marina in 2008. Four sediment cores were taken for analysis and composited into two samples (N1/N4 and N2/N3) for testing purposes. Bulk sediment chemistry testing on Composite N1/N4 showed that PAH concentrations exceeded those at WLDS for all

but two of the PAHs tested. Composite N2/N3 had three PAH concentrations with higher levels that those at WLDS. Compared to the CLDS reference sediments, Composite N1/N4 exceeded the values for all but two PAH species. Two PAH concentrations exceeded the CLDS reference values in Composite N2/N3. Metals in both Composites N1/N4 and N2/N3 were below or near the contaminant concentrations found at the WLDS and CLDS reference sites. For PCBs and pesticides, the contaminant concentrations in the project were at low levels for all project sediment samples tested. Due to the relatively high concentrations of PAHs, the material was found unsuitable for unconfined aquatic placement at WLDS and CLDS and was placed and capped at CLDS.

In 2002, the Norwalk Boat Club dredged roughly 1,000 cy of primarily sandy material (0% - 25.8% fines) from the Club's boat basin. Bulk chemistry results showed that the material did not contain any contaminants of concern in regards to metals, PCBs, PAHs, and pesticides. As a result, the sediments were found suitable for unconfined open water placement at the WLDS.

13.12 Greyrock at Oyster Bend Marina, Norwalk Harbor, Norwalk

An estimated volume of approximately 23,600 cy of primarily silty material (95.5% - 97.4% fines) was proposed to be dredged from the boat basin in the Greyrock Oyster Bend Marina in 2003. Due to relatively high concentrations of mercury, cadmium, copper, various PAHs and PCBs the material was deemed unsuitable for unconfined open water placement at both WLDS and CLDS. The material could be found suitable for unconfined open water placement, pending the results of biological testing and State water quality certification.

13.13 Hillard Bloom Shellfish, Inc., Norwalk Harbor, Norwalk

Hillard Bloom Shellfish, Inc. put forward a plan to remove about 5,000 cy of sand and silty material (7.9% - 87.1% fines) from their facility in Norwalk Harbor in 2002. The intended placement site was either WLDS or CLDS. Chemical testing of the project's sediments showed that PAHs, PCBs and pesticides were below detection or at very low levels, and posed no concerns for either placement site. However, metal concentrations exceeded the levels found for both WLDS and CLDS reference materials. Specifically, lead, copper, mercury and cadmium were present in relatively high concentrations in the project sediments. The material was unsuitable for unconfined open water placement at CLDS or WLDS. However, project material could be deemed suitable for unconfined open water placement, pending the results of biological testing and State water quality certification.

13.14 Ischoda Yacht Club, Norwalk Harbor, Norwalk

A project to dredge the boat basin at the Ischoda Yacht Club was proposed in 2002. This action would remove approximately 900 cy of predominantly silty material (85.4% fines) to be sent to WLDS or CLDS for placement. The project sediments were tested for chemical composition and it was found that the material did not contain relatively high levels of PCBs, PAHs, or pesticides. The material contained high concentrations of several metals, specifically mercury, cadmium, chromium, copper, arsenic, zinc and lead in comparison to the WLDS and CLDS reference site though. Due to these relatively high concentrations, the material was deemed

unsuitable for unconfined aquatic placement at WLDS or CLDS. Project material could be suitable for unconfined open water placement, pending the results of State water quality certification and biological testing.

13.15 Norwalk Harborview Condominiums, Norwalk Harbor, Norwalk

A project to dredge approximately 1,300 cy of predominantly silty material (98.1% fines) from the boat basin in the East Branch of the Norwalk River was put forward by the Norwalk Harborview Condominiums in 2002. Chemical testing of the project's sediments revealed that there were no concerns for concentrations of PAHs, PCBs, or pesticides. On the other hand, there were concerns for metals. Specifically, copper, mercury, lead, cadmium, chromium, arsenic and zinc were found at levels much higher than those concentrations found for the reference site materials. The material was found unsuitable for unconfined open water placement at WLDS or CLDS. Biological testing and State water quality certification would be necessary if unconfined open water placement were to be pursued.

13.16 Covelee Association, Norwalk Harbor, Norwalk/Westport

About 2,600 cy of predominantly silty material (95.5% fines) was dredged from the boat basin at the Covelee Association in 2001. Though the levels of cadmium, chromium, copper and zinc in the project's sediments had higher concentrations than the WLDS reference site, it was determined that the concentrations did not present a concern. The composite sample demonstrated the presence of chlordane, DDD, DDT, dieldrin, and heptachlor epoxide at between four to fourteen times the various detection limits for each analyte. Although these pesticides would normally be reason for concern, it was felt that the likelihood of negative impact on marine life in the vicinity of any unconfined placement of dredged material from this project would be minimal. This was due to the fact that migration of these contaminants from the dredged material was highly unlikely due to the high TOC burden, which this dredged material carried. Eight of twenty-two PCB congeners were also detected in the composite at between one and ten times the various detection limits for each congener, however, these were of little concern since their mobility would be similarly restricted for the same reason as was given previously for pesticides. PAHs were also present in the composite sample; however, due to relatively high TOC values (greater than 3%), the concentrations were actually less than the values for the corresponding WLDS reference values. Based on these results, the suitable material was placed at WLDS in an unconfined manner.

13.17 East Norwalk Boat and Yacht Club, Norwalk Harbor, Norwalk

In 2002, the East Norwalk Boat and Yacht Club planned a project to remove roughly 700 cy of silty material (92% fines) from the Club's boat basin. According to chemistry analyses there were no concerns for concentrations of PAHs, pesticides, or PCBs. On the other hand, there were concerns for the metals. With the exception of nickel, which exceedance was marginal for both WLDS and CLDS, the remainder of the metals generally demonstrated substantial exceedances. It was determined that the material was unsuitable for unconfined open water placement at WLDS or CLDS, but was required to be capped at CLDS.

13.18 Shore and Country Club, Charles Creek, Norwalk

The Shore and Country Club removed approximately 14,300 cy of mostly fine-grained material from their boat basin in the Charles Creek off of Norwalk Harbor in 2007. Sediment testing showed that the concentrations of metals were all low or below detection limits, which were acceptable, with the sole exception of copper. The copper concentration was elevated, but still low. The concentrations of PAHs, PCBs and pesticides were all below detection limits. The material was deemed suitable for unconfined open water placement at either the Central or WLDS.

13.19 Norwalk Yacht Club, Wilson Cove, Norwalk Harbor, Norwalk

In 2006, it was proposed that two areas in the Norwalk River be dredged: a privately-maintained channel as well as a small basin adjacent to the channel. Approximately 12,200 cy of material was removed by this project. Prior to dredging, eight sediment cores were taken and composited into three samples (N1/N3, N2/N4, and N5-N8) for analysis. Bulk sediment chemistry showed that concentrations of metal contaminants were near or below those at WLDS for all metals except zinc and lead in composite N2/N4. Several of the normalized PAH concentrations were elevated in composite N1/N3 compared to those at WLDS. All other PAHs were near or below the WLDS reference area values. All of the project's sediments were found suitable for open water placement at WLDS, but the applicant was required to follow a sequential dredging plan. This process meant that the more contaminated sediments represented by the N2/N4 core were placed first, followed by the N1/N3 composite sediments, then by the N5-N8 sediments.

In comparison to the CLDS reference material, concentrations of metal contaminants were near or below those at CLDS for all metals except for cadmium and copper in composite N1/N3 and zinc and lead in composite N2/N4. Some of the PAH concentrations were elevated in composites N1/N3 and N5-N8 when compared to CLDS reference values. For PCBs and pesticides, the contaminant concentrations in the project material fell near or below the analytical detection limits in all of the project sediment samples tested. Based on these results, it was determined that the sediments represented by the N1/N3 composite were unsuitable for unconfined open water placement at CLDS. If the applicant wished to pursue the option to cap the N1/N3 material at CLDS, sediments represented by Composites N2/N4 and N5-N8 could have been used in the capping material.

13.20 Northwest Marine, Norwalk Harbor, Norwalk

In 2004, it was proposed that 5,900 cy of sand and silt be dredged from the Northwest Marine boat basin in Norwalk Harbor. Proposed placement sites were CLDS and WLDS. Six sediment cores were taken from the project's footprint for chemical analysis. Five out of the six sediment cores taken exceeded the concentrations at CLDS for cadmium, mercury, and copper as well as numerous PAHs. The sediments represented by sample NW-1 did not present any high levels for metals or PAHs in comparison to CLDS materials. Bulk sediment chemistry with reference to values at WLDS revealed that the sediments represented by four of the samples contained higher concentrations of copper. In comparison, copper levels were near or below WLDS reference levels in the sediments represented by samples NW-1 and NW-5. The organic results revealed

all but one (sample NW-1) of the cores from the project sediment samples exceeded WLDS reference values for a number of PAHs. The pesticide and PCB results revealed low levels of these contaminants for all cores from the project samples. The material was deemed suitable for unconfined open water placement at WLDS, but was required to be placed in a sequential dredging plan. Dredged material was determined unsuitable for unconfined open water placement at CLDS. The material could be deemed suitable for unconfined open water placement, pending the results of biological testing and State water quality certification.

13.21 St. Ann Club Marina, Norwalk Harbor, Norwalk

Recent dredging of the St. Ann Club Marina took place in 2013. At that time, approximately 2,800 cy of material was removed and placed at CLDS. A volume of roughly 2,700 cy of fine-grained material was dredged from the lower Norwalk River in 2012 by the St. Ann Club Marina. Bulk chemistry analyses determined that the project's sediments contained low concentrations of metals in comparison to the CLDS reference material with the exceptions of copper and mercury. However, these values were low and did not constitute concern. In all of the project samples, the PAH values were lower that the CLDS reference site when normalized for TOC. For PCBs and pesticides, the contaminant concentrations were above the analyte detection limits, but did not present a concern because they were only marginally high. Project material was found suitable for unconfined aquatic placement at CLDS by the USACE and EPA, but the State of Connecticut required it to be capped.

13.22 Wilsons Point Harbor FNP, Norwalk, CT

The Wilsons Point Harbor FNP has not been dredged since 1892. Material encountered in that year was described as mud and sand; about 179,000 cy were removed (AR, 1892). The harbor was previously improvement dredged in 1891 and material was said to have contained sand and mud. Approximately 125,000 cy was removed in 1891 (AR, 1891). Prior to that, improvement dredging in 1889 revealed that project material was sand, mud, and clay; roughly 110,000 cy were removed at that time (AR, 1889). This is the only available information regarding this project.

13.23 Fivemile River FNP, Darien & Norwalk, CT

The Fivemile River FNP was most recently dredged in 1999 when 48,000 cy of material was removed from the river. Dredged material was found suitable for unconfined open water placement at CLDS. Grain size analysis indicated that the material from the channel was predominantly silt and clay ranging from 36-96% silt and clay and 4-36% sand and gravel. Bulk chemistry did not indicate high values for any contaminants (USACE, 1999a).

Sediment sampling in 1974 indicated that sediments were within normal reporting limits for chemical testing except in the uppermost section of the channel where TOC, a couple of metals, and volatile solids were high. Grain size analysis completed in 1974 showed that sediments were 57.3-95.9% fines (USACE, 1980a). Maintenance dredging conducted in 1968 of the Fivemile River FNP found the material suitable for placement at the Norwalk Dumping Ground in Long

Island Sound (USACE, 1968). Approximately 47,700 cy of material was taken out, but no physical or chemical analyses of the sediment were available from that event (AR, 1968a).

13.24 Five Mile River Works, Five Mile River, Darien

In 2003, a project was proposed to dredge roughly 2,300 cy of sand and silty material (88.4% fines) from an area adjacent to the Federal navigation project in the Fivemile River. The intention was to dispose the material at either WLDS or CLDS. Examination of the bulk chemistry results in comparison to the CLDS and WLDS reference values showed that virtually all of the project sediment samples tested exceeded the reference values for metals. The organic results showed elevated PAH concentrations in all project samples. PCB and pesticide concentrations were also elevated in all project samples. Therefore, the proposed dredged material was not suitable for unconfined aquatic placement at WLDS or CLDS. It was recommended that the material be placed at CLDS and then covered with a cap of suitable material.

13.25 Douglas Campbell, Five Mile River, Darien

About 900 cy of sandy and silty material (74% fines) was dredged from around a dock in the Fivemile River in 2004. Bulk chemistry analyses revealed that the material contained higher concentrations of metals (specifically copper, mercury and cadmium) than CLDS reference materials. Three of the PAH contaminants tested for exceeded the reference values at CLDS as well. In the project samples, two of the PAH contaminants had higher concentrations than the values found for the WLDS reference site materials. The metal concentrations were near or below reference values for WLDS. Based on these findings, the material was deemed suitable for unconfined open water placement at WLDS, but not suitable for unconfined placement at CLDS.

13.26 Darien Boat Club, Goodwives River, Darien

The Darien Boat Club planned a project in 2011 to extend their boat basin in the Goodwives River by dredging about 19,500 cy of predominantly silt and clay (74.5% to 91.4% fines). Chemical testing of the project's sediments showed that all metal and PAH concentrations were less than the means plus twice the standard deviations and all PCB and pesticide concentrations were less than or just slightly above the detection limits. Material was suitable for unconfined open water placement at WLDS.

14.0 Stamford Area Dredging Center

14.1 Westcott Cove FNP, Stamford, CT

Westcott Cove was dredged in 1956, 1963, 1972, and 1978. The material dredged in 1963 was placed at Stamford Dumping Ground (about 6,700 cy). In 1972, roughly 6,000 cy of dredged material from Westcott Cove was placed on West Beach (USACE, 1978). The material (about 20,500 cy) dredged in 1978 was deposited upland. About 18,000 cy of the dredged material was

found suitable for beach nourishment and the remainder of the material was silt which was placed upland on land owned by the City of Stamford (USACE, 1978a).

Four sediment samples were taken in 1975 were analyzed for chemical composition and grain size. In 1977, sixteen additional sediment samples were taken to delineate the sand and silt areas in the channel. It was found that the sediments in Westcott Cove range from black, fine sandy organic silt to gray, coarse and fine sand. The sediments were relatively clean with low levels of volatile solids, oil and grease, heavy metals, and other potential pollutants (USACE, 1978a).

14.2 Halloween Yacht Club, Westcott Cove, Stamford

A project to dredge roughly 8,500 cy of sand and silty material (48% - 92% fines) in Stamford, CT was proposed by the Halloween Yacht Club in 2008 with the aim to dispose the dredged material at WLDS or CLDS. Bulk chemistry testing results showed that one sample from the project area contained a number of PAHs in higher concentrations than CLDS or WLDS reference materials. The metals in the project sediments were below or near the contaminant concentrations found at the WLDS and CLDS reference sites. Due to the elevated levels of PAHs in one of the samples, the sediments represented by that sample were not suitable for unconfined open water placement at CLDS or WLDS, but the remainder of the material was suitable for unconfined open water placement at CLDS or WLDS. The full amount of material could be found suitable for unconfined open water placement, pending the results of biological testing and State water quality certification.

14.3 Ponus Yacht Club, Stamford

The Ponus Yacht Club was recently dredged in 2009 when approximately 6,700 cy of material was removed and placed at the CLDS. Bulk sediment chemistry of the sediments proposed for dredging exhibited generally moderate to high heavy metal concentrations, particularly cadmium which was present at five to six times the reference concentration at CLDS. PCB and pesticides concentrations were in the 0.1 ppm range. PAH levels were close to the CLDS reference concentrations. Because of the elevated heavy metal concentrations, particularly cadmium, relative to reference concentrations, the sediment proposed for dredging was determined unsuitable for unconfined open water placement and was required to be capped with at least 21,000 cubic yards of dredged sediment suitable for unconfined open water placement at the CLDS.

14.4 Stamford Harbor FNP, Stamford, CT

The Stamford Harbor FNP consists of three channels: the East Branch which goes through the hurricane barrier, the West Branch which goes to a turning basin at the mouth of the Rippowam River, and the main entrance channel.

14.4.1 18-Foot Entrance Channel and Outer Anchorage

The sediments in the -18-foot MLLW main entrance channel were tested in 1975 and 1977. This material did not exhibit any significantly high values for any parameters tested (USACE, 1980a).

The entrance channel and anchorages were last maintenance dredged in 1946 when about 46,900 cy of material was placed at an undisclosed location (AR, 1946).

14.4.2 12-Foot East Branch Channel and Basin

Maintenance dredging of the -12-foot MLLW East Branch channel of the Stamford Harbor FNP was accomplished in 1980. Approximately 78,000 cy of sandy organic silts was removed from the channel and placed at the CLDS. Material from a subsequent dredging project of the New Haven Harbor FNP was used as a cap for the Stamford Harbor material at CLDS. Chemical testing of the Stamford sediments showed that they contained relatively high levels of mercury, zinc, arsenic and copper which was why the material needed to be isolated from the placement site with a cap of cleaner material (USACE, 1978b). Sampling in the East Branch in 1971 revealed that the southernmost sample contained abnormally high values for oil and grease and lead. None of the other samples taken below the hurricane barrier gave any unusually high values. Above the hurricane barrier, abnormally high values were found for all chemical parameters tested. This pattern was reiterated in the sampling results from 1978. All samples taken above the hurricane barrier presented abnormally high or moderately high values for all parameters. Below the barrier, only two samples showed high values; one for mercury and the other sample for vanadium (USACE, 1980a).

An Environmental Assessment for the dredging of material from under the navigation gate of the Stamford Hurricane Barrier, dated 1984, described the sediments beneath the navigation gate of the Stamford Hurricane Barrier as silty, sandy, clayey material (0.2% - 77% fines with an average of 49%). The proposed placement site was a small upland storage yard near the Federal project. Bulk chemistry results revealed that the sediments were contaminated with relatively high levels of zinc, cadmium and lead (USACE, 1984b). This project did not go forward though.

14.4.3 15-Foot West Branch Channel and Basin

The -15-foot MLLW West Branch channel of the Stamford Harbor FNP was last maintained in 1963. Approximately 100,000 cy of "ordinary material" was deposited at the Stamford Dumping Grounds (AR, 1964; USACE, 1963b). No chemical or physical data on the project material is available from that operation. The West Branch sediments were tested in 1977; sampling consisted of five grab samples. Two samples showed moderately high values for chemical oxygen demand, volatile solids, and kjeldahl nitrogen. One sample also showed a moderately high value for lead and one sample showed a moderately high value for vanadium. None of the other samples showed any significantly high values (USACE, 1980a).

15.0 Greenwich Area Dredging Center

15.1 Mianus River FNP, Greenwich, CT

No dredging has occurred in the Federal project at Mianus River since 1985. A project proposal to maintain the FNP was put forward by the USACE in 2005, but work was never conducted. To assess the physical and chemical features of the project area for that project proposal, sediment samples were collected for grain size, bulk chemistry, and bioassay/ bioaccumulation testing at

twelve locations within the Federal navigation channel of Mianus River in April 2005. Samples A and B were taken south of the railroad tracks, C, D, and E were taken between the rail road tracks and Interstate 95. Samples F through L were taken between Interstate 95 and Route 1. Grain size analysis showed that the sediments in Mianus River FNP were principally clay with fine-grained sand and silt having a black organic character and an anoxic marine odor (Alpha Woods Hole Labs, 2005).

Based on the grain size, four composite samples were identified for chemical and biological testing, the sediment was composited as follows: Composite AB, CDE, FGHI, and JKL (0-31"). Bulk chemistry test results which include total organic carbon (TOC) analysis, metals analysis, PCB/Pesticide analysis, and PAH analysis indicated that the samples in Mianus River generally have relatively low levels of contaminants when compared to Connecticut guidelines (Alpha Woods Hole Labs, 2005).

Bioassay/bioaccumulation tests were used to determine the suitability of the material for unconfined open water placement. The three tests included: 1) a ten-day acute exposure solid phase assay; 2) an acute suspended particulate phase assay; and 3) a 28-day solid phase sediment bioaccumulation test. The ten-day solid phase bioassays were conducted with the amphipod, *Ampelisca abdita,* and the mysid shrimp, *Americamysis bahia,* to evaluate direct sediment acute toxicity. The crustaceans were exposed to test, reference and control sediments. After ten days, the sediment was screened and the survival rates were determined. The acute suspended particulate phase test used three species, a mysid shrimp (*Americamysis bahia*), a silverside fish (*Menidia beryllina*), and the larvae of a sea urchin (*Arbacia punctulata*). Mysids and silversides were introduced into water columns in which control, reference, and test sediments had been suspended. Survival was then measured at selected intervals up to 96 hours. Sea urchin larvae were introduced into similar conditions where survivorship and developmental progress were measured at 48-hours. Additionally, a 28-day solid phase bioassay was performed on the marine clam *Macoma nasuta* and the marine worm *Nereis virens* for bioaccumulation analyses of contaminants of concern (COCs). Reference material was collected from the CLDS and WLDS placement sites for comparison (Alpha Woods Hole Labs, 2005).

Review of the SPP acute toxicity data indicated that the undiluted SPP solutions prepared from the Mianus River test sediments and CLDS reference waters only had a minor impact on the survival of the mysid shrimp, *A. bahia,* with exposure to Composite AB (LC= 87.2%). There was some impact to minnow (*Menidia beryllina*) survival from exposure to the SPP test solution prepared from Composites AB and CDE and WLDS reference waters (LC= 63.7 and 96.8 % respectively). Sea urchin (*Arbicia punctulata*) survival was not impacted, but development was significantly impacted from exposure to the SPP test solutions prepared from all Mianus River test sediments. There was no significant impact to survival of the mysids or amphipods when exposed to sediments from Mianus River and CLDS or WLDS reference waters (Alpha Woods Hole Labs, 2005).

Mean survival of the bivalve, *Macoma nasuta*, in the test sediments after 28 days exposure ranged from 94% to 99% and 86% to 93% for the worm, *Nereis virens*. Results of statistical evaluation of the data showed no significant reduction in survival for bivalves or worms maintained in test sediments when compared to the reference site sediments. Results of the 28

day bioaccumulation evaluation indicated that long term exposure to the Mianus River test sediments had no impact on the survival of either *M. nasuta* or *N. virens* when compared against the CLDS and WLDS reference sediments. Review of tissue body burden data documented varying levels of uptake of contaminants of concern by both *M. nasuta* and *N. virens.* In total, there were thirty contaminants of concern which were bioaccumulated at levels greater than in the reference animals (Alpha Woods Hole Labs, 2005).

Sediment analysis of the Mianus River FNP was also conducted in 1983. Sediments were found to be principally black, organic, fine grain silts (average 92.6% fines). Bulk chemistry testing showed no above average values for any potential contaminants. Material was deemed suitable for placement at the WLDS (WLDS) for dredging operations to remove 52,700 cy of dredged material in 1985 (USACE, 1985c). A draft Environmental Assessment for proposed maintenance dredging was completed in 1977. Grain size analysis from this report indicated that the sediments were composed of primarily black organic silt with a larger percentage of sand present in the farthest upstream sample. Chemical analyses showed relatively high values for volatile solids, oil and grease, cadmium, arsenic, mercury, and chemical oxygen demand. The material was deemed suitable for open water placement at Eatons Neck Disposal area (USACE, 1977b).

Environmental sampling done in 1975 showed that the sediments present in the Mianus River FNP were primarily silt ranging from 35.7-99.1% fines with an average of 77.6% fines throughout the length of the channel. The sample taken closest to the railroad bridge showed relatively high values for arsenic, volatile solids, and percent total carbon. However, samples taken from the rest of the channel indicated no significantly high values for any parameters (USACE, 1980a). Placement of material from improvement dredging that took place in 1951 and maintenance dredging in 1964 occurred at an open water placement site south of Stamford in Long Island Sound (USACE, 1950; USACE, 1963c).

15.2 Cos Cob Marina, Mianus River, Mianus

Recent dredging of the Cos Cob Marina was completed in 2013-2014. At that time, about 14,700 cy of material was sent to CLDS for placement. An estimated volume of 22,300 cy of material was proposed to be dredged from the Cos Cob Marina in 2012. Bulk chemistry analyses of the project material revealed that several of the PAHs exceeded the WLDS and CLDS reference values. Three metals (cadmium, copper and mercury) exceeded the concentrations found at the CLDS reference site. Therefore, the project sediments were not suitable for unconfined open water placement at either CLDS or WLDS. Approximately 19,000 cy of material was placed and capped at CLDS in 2012.

15.3 Mianus River Boat and Yacht Club, Mianus River, Mianus

The Mianus River Boat and Yacht Club was recently dredged in 2011. At that time about 7,900 cy of material was removed and suitably placed at the WLDS. Prior to that action, a project to remove approximately 2,500 cy of primarily silty material from the boat basin was put forward by the Mianus River Boat and Yacht Club in 2010. Two sediment cores were taken from the dredge footprint for analysis. Chemical testing of the samples showed that all of the metal

concentrations were below or near the levels found for the WLDS reference sediments. The material was deemed suitable for open water placement at WLDS.

15.4 The River Club of Greenwich, Mianus River, Greenwich

In 2012, the River Club of Greenwich dredged about 15,800 cy of predominantly silty material from their boat basin in the Mianus River. All of the concentrations of contaminants of concern were less or only slightly higher than the means plus twice the standard deviations of the concentrations at the WLDS reference site. The majority of the concentrations of contaminants of concern were less than the means plus twice the standard deviations of the concentrations at the CLDS reference site as well. The exceptions were cadmium and copper, which were somewhat higher but only marginally so. Project materials were suitable for unconfined open water placement at CLDS or WLDS.

15.5 Greenwich Harbor FNP, Greenwich, CT

Sediment coring and water sampling activities were completed at the Greenwich Harbor FNP in January 2012. The purpose was to acquire data for the analysis of environmental impacts associated with the proposed maintenance dredging of approximately 300,000 cubic yards of sediments from the Federal project. Discrete sediment cores were collected from 34 locations and water samples from eight locations within the Greenwich Harbor FNP. Sediment grabs and water samples were also collected from the reference placement locations at CLDS and WLDS. Sediment from the discrete core locations was combined into eight composite groups, which were mixed for toxicity testing and bulk chemical analysis (Woods Hole Group, 2012).

Harbor sediment consisted mainly of silt and clay overlain by slightly sandy (fine to medium sand) and organic material. Native material beneath the harbor sediment contained less sand and little to no organics. Composited sediment chemistry results show measureable concentrations of all eight metals, as well as results for most PAHs, PCB congeners and some pesticides. Water samples from elutriates prepared from each composite group site and reference placement sites were tested for metals, PCB congeners and PAHs. The majority of detections in elutriate water samples came from metals, specifically arsenic, which was present at all eight composite groups and the reference sites (Woods Hole Group, 2012).

Toxicity evaluations of the sediment composites were performed via a Suspended Phase Acute Toxicity bioassay, a 10-day acute survival bioassay, and a 28-day survival and bioaccumulation assay. The Suspended Phase Acute bioassay was performed using the test organisms *Americamysis bahia*, *Menidia beryllina*, and *Arbacia punctulata*. The 10-day acute survival bioassay was performed using the test organisms *A. bahia* and *Leptocheirus plumulosus*. The 28-day survival and bioaccumulation study was performed using the test organisms *Macoma nasuta* and *Nereis virens* (Woods Hole Group, 2012).

The results of the Suspend Particulate Phase Acute bioassay exhibited no significant negative impact on survival of the mysid *A. bahia* or minnow *Menidia beryllina*. Data from the *Arbacia punctulata* (urchin) survival and development assay showed that exposure of the urchin embryos to the SPP solution generated from most composite sediment samples had negative effects on survival and development. Results from the 10-day acute tests for both test species did not show

a statistically significant difference between composite sediment and reference placement stations. The 28-day survival and bioaccumulation assay results for *M. nasuta* did not show a statistically significant difference in survivability between composite sediment and reference placement stations. However, results from *N. virens* 28-day bioassays showed a statistically significant difference in survivability between several composite groups and both reference sites, most notably composite group 7, which had mean organism survivability of 81%, but overall a mortality $\leq$ 19% would not be considered biologically relevant. Tissues analysis from the 28-day from the toxicity test organisms were analyzed for metals, PAHs, PCB congeners, and pesticides. Tissue results from the 28-day bioaccumulation assay revealed that samples exposed to composite groups 5 and 6 contained the greatest number of analyte detections. Reference placement sites exhibited the second-fewest analyte detections, and the tissue from the unexposed control organisms had the fewest analyte detections. Metals and PCB congeners were the most commonly detected analytes from tissue tests. In general, as composite group number increased, the number of analytes detected in tissue tests also increased. This was a trend reflected in the sediment results as well, where contaminant levels of composite sediments increased from the outer harbor to the inner harbor locations (Woods Hole Group, 2012).

Sediment test results from 1974 indicated that the channel sediments in Greenwich Harbor ranged in size from 22% - 96.5% fines. One sample taken from the uppermost end of the channel showed abnormally high values for concentrations of the metals lead and mercury (USACE, 1980a). The channel was last dredged in 1968; approximately 39,800 cy of material was placed at the Stamford Dumping Ground, but there is no chemical testing or grain size information from that event (AR, 1968b; USACE, 1968).

15.6 AEMB Holdings, Greenwich Harbor, Greenwich

Approximately 900 cy of predominantly silty material (91.2% - 96.7% fines) was dredged from the AEMB Holdings property in Greenwich, CT in 2006. Bulk chemistry test results indicated in all project samples that all metals were below or near the contaminant concentrations found at the WLDS reference site. However, the concentrations of cadmium and copper were high relative to the CLDS reference site material. The concentrations of PCBs and pesticides fell near or below the analytical detection limits in all of the project sediment samples tested and the concentrations of PAHs were below or near the reference sites values at WLDS and CLDS. The material was found suitable for unconfined aquatic placement at WLDS, but not suitable for unconfined open water placement at CLDS.

15.7 Belle Haven Club, Long Island Sound, Greenwich

Recent dredging of the Belle Haven Club happened in 2010 when about 6,400 cy of material were removed from the marina and suitably placed at the WLDS. Prior to that event, in 2009 the Belle Haven Club proposed to dredge roughly 8,300 cy of fine-grained material from their boat basin. The proposed placement areas were CLDS and WLDS. Five sediment cores were taken from the project area for chemical analysis. The majority of the values in the project material were less than or slightly higher than the means plus twice the standard deviation values for metals and PAHs in comparison to the WLDS reference site material. The exceptions were

acenaphthene in two samples (S-2 and S-3) and fluorine in one sample (S-2). However, the concentrations were all relatively low.

There were no reference values for pesticides or PCBs at WLDS, but all of the project material's concentrations for these chemicals were below the detection limits or just slightly higher. Compared to the CLDS reference material, the project's sediments showed values that were less than or slightly higher than the means plus twice the standard deviation values for metals and PAHs. The exceptions were acenaphthene, which was higher than the reference value in samples S1, S2 and S3; fluorene, which was higher than the reference value in sample S2; and fluoranthene, which was higher than the reference value in sample S3. All of the concentrations for PCBs and pesticides were below the detection limits or just slightly higher. The material was found unsuitable for unconfined aquatic placement at CLDS and WLDS due to the relatively high values of PAHs.

15.8 Green Fields Property Holdings, Captain Harbor, Greenwich

Green Fields Property Holdings put forward a project in 2012 to dredge roughly 700 cy of fine-grained material from Captain Harbor. Chemical analyses were performed on the project's sediments and the results showed that the concentrations of metals and PAHs were below or near the values found for the WLDS. PCBs and pesticides were near or below analytical detection limits for all of the project samples. The dredged material was found suitable for unconfined open water placement at WLDS.

15.9 Phillip Hadley, Jay Levine and Richard and Ruthanne Ruzika, Greenwich Cove, Greenwich

In 2009, approximately 2,000 cy of fine-grained material was removed from the Greenwich Cove. The concentrations of metals in the project samples were determined to be below the means plus twice the standard deviations except for cadmium in the three samples, arsenic in and copper in one sample, which were slightly above WLDS reference values. All of the PAHs concentrations were below the means plus twice the standard deviations except for dibenzo(a,h)anthracene, which was slightly higher. There are no reference values for pesticides or PCB congeners from the WLDS reference area. None the less, these were not considered contaminates of concern as almost all were below the detection limits or slightly above. It was determined that the project's sediments were suitable for unconfined aquatic placement at WLDS.

15.10 Town of Greenwich, Grass Island Municipal Marina, Greenwich Harbor

An estimated volume of about 23,000 cy of primarily silty material (75.3% - 97.5% fines) was proposed to be dredged from the Grass Island Municipal Marina in 2002. Examination of the bulk chemistry results in comparison to WLDS and the CLDS reference values shows that all of the project sediment samples tested exceeded the means plus twice the standard deviations for the vast majority of the metals tested. The only exceptions were nickel and arsenic. The organic results showed consistent presence of DDT and or its biochemical transformation products

(DDD, DDE) in all project samples and both composites, and the additional presence of chlordane in both of the composites. Also, PCBs were detected in two of the composites. The PAH results showed only one marginal exceedance for fluoranthene. Based on these findings, the material was deemed unsuitable for unconfined open water placement at CLDS and WLDS.

16.0 Port Chester - Rye Area Dredging Center

16.1 Port Chester Harbor FNP, Rye, NY

Sediment samples were taken in 1994 from Port Chester Harbor. Samples PC-3, -4, -6, and -7 were mostly gravel. Samples PC-1 and -2 were mostly sand. Samples PC-5, -8, -9 and -11 were mostly silt (Battelle, 1995). The project was last dredged to project dimensions in 1990 with the removal of approximately 40,000 cy of sediment which was placed at WLDS (USACE, 2014d). Material from Port Chester Harbor was also tested for its chemical composition in 1974. In that year, it was found that the two samples contained high levels of lead, zinc, and nickel (Battelle, 1995).

16.2 Milton Harbor FNP, Rye, NY

The most recent testing of Milton Harbor's sediments happened in 1992. Eight samples were taken from the FNP and compared to reference material from WLDS. It was found that all eight of the samples in Milton Harbor had higher levels of ammonia, phenols, arsenic, chromium, copper, mercury, nickel (one sample was below), lead, vanadium, and zinc than material from WLDS. Grain size analysis revealed that the majority of the material was silt (average 66.1%) with some clay (23.5%) and sand (10.4%) (Nytest Environmental, 1992).

Additionally, a biological testing report was conducted in 1991 with 28 bioassays run using sediment taken from Milton Harbor and reference sediment from WLDS. Toxicity was tested using the amphipods *Ampelisca abdita, Rhepoxynius abronius,* and *Eohaustorius estuarius.* The sample was also tested for bioaccumulation potential to the clam, *Macoma nasuta,* and the sandworm *Nereis virens.* Total mortality in the test sediment ranged from 4% to 98.3%. Although significant mortality to some amphipods was shown with both sediments, in all cases total observed mortality was lower in WLDS sediment than in the Milton Harbor sediment. No significant mortality was observed for either *M. nasuta* or *N. virens*. The State of Connecticut's Department of Environmental Protection required that a cap be used to cover the material being placed at WLDS due to the high level of mercury in Milton Harbor's sediments (Nytest Environmental, 1991).

The earliest record of chemical testing of Milton Harbor's sediments was completed in 1974. The two samples taken were shown to have relatively high levels of lead, zinc, copper, and nickel (USACE, 1976b). Milton Harbor was last dredged when it was initially constructed in 1967. Construction was completed with removal of an estimated 172,200 cy of dredged material; the placement site for this event is unknown.

16.3 Poningo Neck Apartments, Milton Harbor, Rye

In 2009, a proposal was submitted by the Poningo Neck Apartments to dredge about 7,000 cy of sediment in Rye, NY. Bulk chemistry results showed that cadmium concentrations of the site material were relatively high in comparison to the CLDS reference site material, but lower or comparable to WLDS reference material. Project sediments were found to be suitable for unconfined open water placement at WLDS, but not suitable for placement at CLDS without material management by capping. In 1998, approximately 4,200 cy of material was removed from Milton Harbor by the Poningo Neck Apartments. Material was approved for placement at WLDS. About 2,200 cy of material was taken out of Milton Harbor in 1997 as well. This material was suitably placed at WLDS.

16.4 Town of Rye, Milton Harbor, Rye

The Town of Rye removed roughly 20,000 cy of sediment (29.1% – 98.5% fines) from the Milton Harbor in 2013 and placed the material at WLDS. Chemical and physical testing revealed that all of the project material was suitable for unconfined open-water placement at WLDS, but only some of the material was suitable for open water placement at CLDS. Cadmium was found to be elevated in the project sediments in comparison to the CLDS reference sediments in two of the samples tested and was not permitted for placement at CLDS without capping.

16.5 Westchester County Department of Public Works, Long Island Sound, Rye

In 1992, the Westchester County Department of Public Works proposed that about 300 cy of material be removed from an area in the Long Island Sound. Material was approved for a beach renourishment effort.

16.6 Westchester County Department of Parks, Recreation, and Conservation, Long Island Sound, Rye

Approximately 4,800 cy of material was dredged from an area in Long Island Sound by the Westchester County Department of Public Works in 1995. Material was placed in an upland site for dune stabilization purposes.

17.0 Mamaroneck - New Rochelle Area Dredging Center

17.1 Mamaroneck Harbor FNP, Mamaroneck, NY

Sediment samples were most recently taken from the Mamaroneck Harbor FNP in 1998 in support of proposed maintenance dredging. Samples were mostly silt and clay, ranging from 36-53% silt and 30-53% clay. Chemical testing showed that samples were in the low to moderate range for heavy metals and generally low for PAHs (Applied Marine Sciences, 1998).

Approximately 280,000 cy of this material was removed and suitably placed at CLDS and WLDS in 1999 (USACE, 1999b).

17.2 Oscar Davis, Mamaroneck Harbor, Mamaroneck

In 1999, Oscar Davis put forward a project to remove roughly 800 cy of material from Mamaroneck Harbor. The proposal was approved and material was found suitable for placement at CLDS.

17.3 Ruediger Flik, Mamaroneck Harbor, Mamaroneck

Two projects proposed by Ruediger Flik to dredge about 1,000 cy and 1,500 cy of sediment from the Mamaroneck Harbor was permitted in 1999 and 2000, respectively. Material from both projects was suitably placed at CLDS for placement.

17.4 Bennett Golub, Mamaroneck Harbor, Mamaroneck

Two separate project proposals to dredge material from Mamaroneck Harbor were proposed by Bennett Golub in 1999 and 2000. Approximately 900 cy of suitable sediment went to CLDS for placement to complete the 1999 dredging project and roughly 1,000 cy was taken to CLDS in 2000.

17.5 Orienta Condo Association, Mamaroneck Harbor, Mamaroneck

The Orienta Condo Association was permitted to dredge roughly 1,800 cy of material from the Mamaroneck Harbor in 1999. This suitable material was placed at CLDS.

17.6 Orienta Yacht Club, Mamaroneck Harbor, Mamaroneck

A project that removed approximately 2,800 cy of suitable sediment from Mamaroneck Harbor was performed by the Orienta Yacht Club in 1999. Dredged material was placed at CLDS.

17.7 Shore Acres Point, Corp., Mamaroneck Harbor, Mamaroneck

About 11,200 cy of material was suitably placed at CLDS as part of a dredging project in Mamaroneck Harbor that the Shore Acres Point, Corp. undertook in 1999.

17.8 Village of Mamaroneck, Mamaroneck Harbor, Mamaroneck

The Village of Mamaroneck proposed three projects in 1999. Each sought to remove material from Mamaroneck Harbor to be placed at CLDS for placement. All three projects were permitted and placement went as planned. The first project removed about 31,800 cy; the second dredging event took out roughly 13,200 cy; and the third project removed an estimated 19,700 cy of dredged material.

17.9 Indian Cove Property Owners Association, Mamaroneck Harbor, Mamaroneck

A project to dredge about 3,500 cy of sediment from the Mamaroneck Harbor was put forward in 1992 by the Indian Cove Property Owners Association. Dredged material was found suitable for placement at either WLDS or CLDS.

17.10 John J. Leitner, Indian Creek, Mamaroneck Harbor

In 2000, a project sought by John J. Leitner to dredge roughly 800 cy of material from Indian Creek was approved. Material was placed at a state-approved upland bioremediation facility.

17.11 Greacen Point Group, Pirate's Cove, Mamaroneck

A project in 2001 proposed by the Greacen Point Group dredged about 12,100 cy of sediment from the Pirate's Cove. Approximately 12,200 cy of dredged material was removed from Pirate's Cove by the Greacen Point Group in 2000 as well. A third project had roughly 20,500 cy of sediment taken out of Pirate's Cove in 1998. Placement of the dredged material took place at WLDS for all three dredging events.

17.12 Eric Rosenfeld, Larchmont Harbor, Larchmont

In 2000, Eric Rosenfeld sought approval for a dredging project that would take 2,300 cy of material out of Larchmont Harbor. The project was approved and material was deemed suitable for placement at the WLDS.

17.13 Bay Head Group, Larchmont Harbor, Larchmont

The Bay Head Group put forward two separate dredging projects in Larchmont Harbor in 2005. The first would take out about 7,200 cy and the second would remove an estimated 4,800 cy of sediment. Both projects were permitted with placement occurring at WLDS for the larger amount of material (7,200 cy) and CLDS for the 4,800 cy of material. In 1999, the Bay Head Group had approximately 13,600 cy of material removed from Larchmont Harbor as well. Project material was approved for placement at CLDS or WLDS.

17.14 Larchmont Yacht Club, Larchmont Harbor, Larchmont

An estimated 10,000 cy of suitable dredged material was placed at the WLDS in 2000 as part of a dredging project in Larchmont Harbor by the Larchmont Yacht Club.

17.15 Ann and Ken Herman, Larchmont Harbor, Larchmont

A small project that would remove about 100 cy of material from the Larchmont Harbor was proposed by Ann and Ken Herman in 1995. The material was approved for use upland as backfill.

17.16 Village of Larchmont, Larchmont Harbor, Larchmont

In 1991, the Village of Larchmont proposed to have roughly 5,600 cy of material removed from the Larchmont Harbor. The project was approved and material was placed at state-owned upland site.

17.17 Echo Bay FNP, New Rochelle, NY

Sediment samples were taken from the Echo Bay FNP in July 2008 as a part of an ecosystem restoration project under Section 206 of WRDA 1996. Locally, Echo Bay became the focus of an urban renewal effort, of which goals included the environmental restoration of the coastal area. Samples showed Echo Bay sediments were roughly half sand (average of 47% sand) with some areas higher in silt and clay (average 39.8% silt and clay). A few samples had slightly higher gravel content (average 12.9% of all samples) (USACE, 2008b). The project is on-going. Dredging was last completed when the project in 1949, when about 15,000 cy was removed. Sediment characteristics and placement site information were not available for this dredging event.

17.18 Daniel S. Sperandio, Neptune Cove, New Rochelle

An estimated 2,200 cy of sediment was dredged from Neptune Cove in 1993. Dredged material was found suitable for placement at either CLDS or WLDS.

17.19 New Rochelle Harbor FNP, New Rochelle, NY

The most recent testing of the New Rochelle Harbor's sediments took place in 1990. Seven sites were sampled throughout the length of the channel. Grain size analysis from that year indicated that the material was mostly sand (average 54.21%) with some silt (36.03%) and clay (9.77%). Bioassays were performed to test the toxicity of the harbor's sediments against reference material. There were no significant differences in mortality for the *Palaemonetes pugio, Mercenaria mercenaria,* or *Nereis virens* test subjects between the reference and New Rochelle Harbor material. The results of the bioassay/bioaccumulation testing indicated that the dredged material encountered in New Rochelle Harbor met the ocean placement testing criteria for unconfined placement at either the Mud Dump Site or the WLDS in 1991 (Nytest Environmental, 1990).

The FNP at New Rochelle Harbor was completed in 1922 and provides for a channel 8 feet MLLW deep into and through New Rochelle Harbor. Approximately 140,000 cy of material was expected to be removed during construction of the channel, but no information regarding sediment type or placement method was obtainable. In 1974, grain size analysis and chemical testing was done on five samples taken from New Rochelle Harbor. All of the samples exceeded EPA acceptable criteria for kjeldahl nitrogen, lead, and zinc. Grain size analysis showed that the sediments in New Rochelle Harbor were mostly sand (average 60.91%) with some silt (29.56%), gravel (5.84%), and clay (3.7%) (NY Testing Lab, 1974). The project was last maintained in 1971 when roughly 43,100 cy was removed; the placement site for that dredging event is unknown.

17.20 Castaways Yacht Club, New Rochelle Creek, New Rochelle

In 2012, the Castaways Yacht Club planned a project to remove roughly 12,500 cy of fine-grained material from the New Rochelle Creek. The proposed placement site was either the Western or Central Long Island Sound. In comparison to the CLDS reference site, the project's sediments were found to contain much higher concentrations of metals (particularly chromium and nickel) and PAHs. For this reason, unconfined open water placement at CLDS was not approved. Compared to the WLDS reference materials, the project's two composites (Composites CD and EF) showed that several metals were many times higher than the WLDS values. However, samples A and B did not exceed the contaminant concentrations for metals at WLDS, with the exception of nickel. For PAHs, the project samples were lower than the values for WLDS reference materials. PCB and pesticide concentrations were below analytical detection limits for all samples. It was determined that the material represented by Samples A and B were suitable for unconfined open water placement at WLDS, but the material from Composites CD and EF must undergo biological testing or be capped in order to be placed as planned.

17.21 Wright Island Marina, New Rochelle Creek and Harbor, New Rochelle

The Wright Island Marina most recently dredged material from New Rochelle Harbor in 2010. Approximately 7,000 cy of suitable material was removed and placed at the CLDS. Prior to that event, the marina proposed that material be dredged from the New Rochelle Creek in 2008 and from their marina in New Rochelle Harbor in 2006. Roughly 8,600 cy of material was removed in 2006 and another 8,600 cy was removed in 2008. On both occasions, dredged material was approved for placement at CLDS.

17.22 New York Athletic Club, Long Island Sound, New Rochelle

An estimated 6,200 cy of dredged material was removed from Long Island Sound by the New York Athletic Club in 1998. Material was returned to the original site after lead shot and clay targets were removed from the dredged sediment.

18.0 Eastchester Bay Area Dredging Center

18.1 Eastchester Creek FNP, Bronx, NY

Sediment samples were recently analyzed in April 2009. Project samples showed the majority of sediments in East Chester Creek were silt (12-74%) and clay (4.3-34%). Isolated areas of predominantly gravel samples were collected (3.6-84.8%) as well (Battelle, 2009). The material to be dredged was found not suitable for placement at the Historic Area Remediation Site in 2009. The only viable alternative was placement at a permitted and approved upland site. The proposed work was completed and approximately 21,000 cy of sediment was removed from the Federal channel, dewatered and placed upland at brownfield reclamation sites in Teterboro and Bellmawr, NJ. Prior to this event, the project was last dredged to its authorized 8-foot MLLW

depth in 1989 with the removal of approximately 36,000 cy of sediment. The dredged material was placed at the Mud Dump Site and the CLDS (USACE, 2014g).

Sediments from Eastchester Creek were analyzed for chemical composition in 1974. The location of the samples was not given and only two were taken. Both samples tested higher than the EPA criteria for chemical oxygen demand, oil and grease, lead, and zinc. Six samples were also tested for grain size. The material was mostly sand (average 68.2%) with some silt (19.45%), gravel (9.96%), and clay (2.67%) (USACE, 1980a).

19.0 Manhasset & Little Neck Bays Area Dredging Center

19.1 Little Neck Bay FNP, Bayside & Douglaston, NY

The Federal Navigation Project at Little Neck Bay was constructed in 1966-1968 which appears to be the last time the 7-foot MLLW channel and anchorage was Federally-dredged. Information about sediment type and chemistry is not available for that event. Approximately 2,184,800 cy of material was removed in construction; the placement site is unknown.

19.2 New York City Department of Parks and Recreation, Alley Creek, Bayside

In 1994, the NYC Department of Parks and Recreation had approximately 18,900 cy of material dredged from Alley Creek. Placement took place upland for the purpose of fish and wildlife habitat creation.

19.3 U.S. Merchant Marine Academy, Little Neck Bay, Kings Point

The U.S. Merchant Marine Academy proposed that roughly 35,700 cy of sediment be taken out of Little Neck Bay in 2006. This material was sent to an upland site for placement.

19.4 Kennilwood Owners Association, Manhasset Bay, Kings Point

An estimated 200 cy of sand was removed from Manhasset Bay in 2003 by the Kenilwood Owners Association. The material was found suitable for beach renourishment.

19.5 Town of North Hempstead, Leeds Pond, Plandome Manor

In 1994, the Town of Hempstead excavated a detention basin by Leeds Pond. About 10,000 cy of material was required for removal; placement took place at a state-approved upland site.

19.6 Harvey Sandler, Manhasset Bay, Plandome Manor

A project proposal to dredge approximately 1,000 cy of sediment from Manhasset Bay was submitted by Harvey Sandler in 2006. The project was approved and placement occurred at an upland site.

19.7 Port Washington Water Pol, Manhasset Bay, Port Washington

In 1991, a small amount of dredged material (approx. 20 cy) was permitted to be taken out of Port Washington by the Port Washington Water Pol to be used in a bank stabilization project.

19.8 Town of North Hempstead Department of Public Works, Manhasset Bay, Port Washington

An estimated 1,800 cy of material was removed from Mill Pond in 2000 at the request of the Town of North Hempstead DPW. Material was approved for upland placement.

19.9 Luro Holding Corp./Anthony Luro, Manhasset Bay, Manorhaven

The Luro Holding Corporation sought approval to dredge about 19,800 cy of sediment from Sheet's Creek in 1993. The project was permitted, but only some material (8,000 cy) was deemed suitable for placement at CLDS; the rest of the material (11,800 cy) was approved for placement at WLDS.

19.10 Capri East Marina, Inc., Manhasset Bay, Manorhaven

Approximately 24,500 cy of sediment was removed from Manhasset Bay in 1994. The Capri East Marina, Corp. requested and funded the project and placement took place at CLDS.

20.0 Hempstead Harbor Area Dredging Center

20.1 Hempstead Harbor FNP, Roslyn, NY

The most recent chemical testing of Hempstead Harbor's sediments occurred in 1976. Two sites (both near the town wharf) were tested for metals. Arsenic was not detected in either sample; cadmium was detected in sample 4 at 0.09µg/L and 0.14µg/L in sample 5; chromium levels in both samples 4 and 5 were the same at 0.05µg/L; copper was also the same in both samples at 6.0µg/L; the value for lead in sample 4 was 4.3µg/L and sample 5 was 4.4µg/L; mercury was undetected in both samples; nickel values for both samples were 0.6µg/L; and zinc levels varied from 0.83µg/L in sample 5 and 0.89µg/L in sample 5 (U.S. Testing Company, 1976).

Grain size analysis from 1982 showed that harbor sediments were mostly sand (78.6%) with silt (16.7%) and clay (5.1%) (NY Testing Lab, 1982). Chemistry data from 1971 indicated that two samples from the Town Wharf and Glenwood Landing in Hempstead Harbor exceeded criteria limits for oil and grease and total kjeldahl nitrogen (USACE, 1971b). The last time Hempstead Harbor was maintained was in 1950, when approximately 31,600 cy of material was removed. The placement site for that material is unknown.

20.2 Exxon Mobil Glenwood Landing Terminal, Hempstead Harbor, Glenwood Landing

In 2004, roughly 4,600 cy of material was proposed to be dredged from the Exxon Mobil Glenwood Landing Terminal in Hempstead Harbor. The applicant has not moved the project forward since that time.

20.3 Town of Oyster Bay, Hempstead Harbor, Sea Cliff

The Town of Oyster Bay had the Tappan Beach boat launch in Glenwood Landing dredged to 4-feet MLLW in 2004. The quantity of dredged material removed could not be obtained for this project, but it is known that the material was placed upland for purposes of beach renourishment. Prior to that event, the Town of Oyster Bay removed approximately 2,000 cy of sediment from Hempstead Harbor in 1999, then the material was used for a restoration project in a nearby tidal wetland.

20.4 Glen Cove Creek FNP, Glen Cove, NY

Sediment samples were taken in November of 1996 for a project proposed to maintain the Glen Cove Creek FNP. Sediment samples showed that Glen Cove Creek was mainly silt and clay (ranging from 4-99% fines) with a few core samples that showed a higher sand content (ranging from 2-88% sand) (USACE, 1996b). Work began in 1996 to maintenance dredge the outer portion of the channel. Maintenance dredging of the remaining portion of the creek began in 2001. The basic work included dredging of approximately 30,500 cy of material with upland placement. Dredging was suspended in April 2001 due to the discovery of an oil layer in the creek sediment and radiation in dredged material at the upland dewatering site in May 2001. Subsequent investigations revealed that the radiological contamination was caused by discrete pieces of ore or slag, varying in size from pea gravel to cobbles. Once these pieces were removed, the radiation dropped to background levels. The work site was immediately secured by the Corps and EPA (USACE, 2014f).

Additional sampling of the creek sediment for radiological and oil contamination was completed and the report was submitted by the contractor (Cabrera) in the first week of March 2002. The report concluded that significant thorium contamination was present in the creek sediments. The New York District terminated the dredging contract in February 2002. The radiological contaminated material in the dewatering site was segregated by USEPA in the summer of 2002 and stored in the Dixon Warehouse for eventual placement. The City of Glen Cove placed the remaining non-radioactive dredged material (to N. Hempstead Landfill) from the dewatering site in November/December 2002. USACE was not able to complete the dredging of the creek, which was contaminated with radiation, at that time due to the fact it was incorporated into the ongoing Superfund cleanup project in the adjacent upland areas. Dredging of the remaining portions of the creek was performed for EPA under the Superfund program. The City of Glen Cove also contributed funds for the cost of dredging the navigational portion of the dredging/placement operations. The project was completed in March 2007 with the removal of an estimated 28,800 cy of dredged material (USACE, 2014f).

20.5 City of Glen Cove, Glen Cove Creek, Glen Cove

An estimated 2,000 cy of dredged material was removed from Glen Cove Creek in 1998. Radioactivity was detected in the material and it was appropriately placed by the Li Tungsten Corp., for purposes of site remediation.

20.6 Glen Cove Marina, Glen Cove Creek, Glen Cove

The Glen Cove Marina proposed two projects in 1991 and 1990. In 1991, about 16,500 cy of material was dredged from the marina in Glen Cove Creek; placement took place at an upland site. The project in 1990 was smaller, with about 2,600 cy of material dredged from Glen Cove Creek and placed upland.

21.0 Oyster Bay - Cold Spring Harbor Area Dredging Center

21.1 Lattington Harbor Property Owners Association, Frost Creek, Lattington Harbor

Approximately 5,500 cy of sandy sediment was removed from Frost Creek in 2005. The material was used for a nearby beach renourishment project. Effort for this event was requested and paid for by the Lattington Harbor Property Owners Association.

21.2 Town of Oyster Bay, Oyster Bay Harbor, Oyster Bay

In 1991, the Town of Oyster Bay dredged roughly 8,500 cy of material from Oyster Bay Harbor. Project sediment was deemed suitable for placement at WLDS.

21.3 New York Department of Environmental Conservation, Oyster Bay Harbor, Oyster Bay

A dredging project was undertaken in 2006 by the NY Department of Environmental Conservation (NYDEC). About 300 cy of sediment was dredged from Oyster Bay Harbor in order to replace a bulkhead next to the NYDEC boat ramp. Material was placed at an upland site.

21.4 Fort Hill Beach Association, Oyster Bay, Lloyd Bay

An estimated 1,800 cy of dredged material was taken out of Oyster Bay in 2008 as part of a dredging project funded by the Fort Hill Beach Association. Project material was placed at an upland site.

21.5 Seawanhaka Yacht Club, Oyster Bay, Centre Island

In 2013, the Seawanhaka Yacht Club proposed a project to remove roughly 8,500 cy of sand (4.8% - 10.4% fines) from Oyster Bay. Chemical and physical testing of the project's sediment

showed that some material (represented by samples S-1 and S-2) was suitable for unconfined open-water placement at CLDS or WLDS. However, material represented by sample S-3 was not suitable for open water placement at WLDS and would require material management for open water placement at CLDS. The contaminated sample, S-3, showed PAH concentrations that exceeded the WLDS and CLDS reference values for four PAH compounds.

21.6 Town of Oyster Bay Department of Public Works, Oyster Bay, Centre Island

In 1998, the Town of Oyster Bay Department of Public Works put forward a project to dredge about 3,000 cy of sand from Oyster Bay Harbor. Material was placed on the beach to restore and renourish the Centre Island Beach.

21.7 Village of Lloyd Harbor, Cold Spring Harbor, Lloyd Harbor

Approximately 1,000 cy of sandy sediment was taken out of Cold Spring Harbor by the Village of Lloyd Harbor in 2008. Material was suitable for purposes of beach renourishment.

21.8 Lloyd Cove Association, Cold Spring Harbor, Lloyd Harbor

The Lloyd Cove Association put forward a project to dredge roughly 1,500 cy of sediment from Cold Spring Harbor in 2001. Material was placed at a state-approved upland facility.

21.9 Laval Properties, Cold Spring Harbor, Lloyd Harbor

A dredging project in 2006 removed approximately 2,500 cy of material from Cold Spring Harbor. The project was brought by Laval Properties and placement took place at an upland site.

22.0 Huntington & Northport Bay Area Dredging Center

22.1 Huntington Harbor FNP, Huntington, NY

The most recent sediment testing information available for the Huntington Harbor FNP was from 1971 when four samples were taken. These samples showed that the two samples taken from the inner harbor exceeded the EPA limits for total volatile solids, chemical oxygen demand, kjeldahl nitrogen, oil and grease, mercury, lead, and zinc. The samples taken from the outer harbor also exceeded the EPA limits for kjeldahl nitrogen, oil and grease, mercury, lead, and zinc (USACE, 1980a). The existing project at Huntington Harbor was originally constructed in 1872 and has had improvements over the years, but information regarding the amount and type of sediment removed for those improvement dredging events was not found nor was a placement site specified.

22.2 Knutson Marina, Huntington Harbor, Huntington

In 2013, approximately 8,500 cy of material was proposed to be removed and placed at either the WLDS or the CLDS. Due to high PAH concentrations in the project sediments, the material was found unsuitable for unconfined open water placement at WLDS or CLDS.

22.3 Wyncote Yacht Club, Huntington Harbor, Huntington

The Wyncote Yacht Club in Huntington dredged roughly 4,500 cy of sediment from Huntington Harbor in 2005. Material was deemed suitable for placement at WLDS. Previously in 2000, the yacht club had about 6,600 cy of material removed from Huntington Harbor. For this event, project material was placed at state-approved upland site for placement.

22.4 Thomas A. Knutson Jr. Rev. Trust, Huntington Harbor, Huntington

In 1999, approximately 2,000 cy of material was taken out of Huntington Harbor at the request and funding of the Thomas A. Knutson Jr. Rev. Trust. Project material was placed at a state-approved upland facility.

22.5 Suffolk County Department of Public Works, Centreport Harbor & Northport Harbor, Huntington & Northport

An estimated 30,000 cy of sandy material was removed from Centreport Harbor in Huntington, NY in 2008 by the Suffolk County Department of Public Works (DPW). This material was suitable to use for beach renourishment purposes. The Suffolk County DPW also had material dredged from the Northport Harbor in Northport, NY. This event took place in 1996 with approximately 75,000 cy of material taken out and placed at CLDS.

22.6 Northport Harbor FNP, Huntington, NY

The most recent dredging of the Northport Harbor FNP was when it was constructed in 1956. At that time it was estimated that approximately 32,800 cy of material would be removed to create a channel 8-foot MLLW deep with a 6-foot MLLW anchorage adjacent to the channel. Sediment characterization and placement site information was not available for that event. Test results of one sample, taken from Northport Harbor in 1971, showed that the material exceeded the EPA acceptable criteria for volatile solids, chemical oxygen demand, kjeldahl nitrogen, oil and grease, mercury, lead, and zinc (USACE, 1980a).

22.7 Harbour Point Homeowners Association, Northport Bay, Huntington

The Harbour Point Homeowners Association has dredged their marina in Northport Bay six times over the course of 14 years. Recent dredging took place in 2007 when about 8,200 cy of suitable material was removed and placed at WLDS. Roughly 19,500 cy of material was removed from the Harbour Point marina in 2006. Examination of the bulk chemistry results showed that the metals in the project's sediments were below or near the contaminant

concentrations found at the WLDS reference site. Also, the concentrations of PAHs tested for in the project sediments were near or below the WLDS reference values. For PCBs and pesticides, the contaminant concentrations in the project fell near or below the analytical detection limits in all of the samples tested. The material was found suitable for unconfined aquatic placement at WLDS and was placed there in 2006.

In 2004, about 19,500 cy of material was requested to be dredged from the Harbour Point marina. The project was approved, but only 17,000 cy of material was deemed suitable for placement at WLDS; the other 2,500 cy of material was placed at an upland site. Two projects in 1999 and 1993 saw that approximately 3,500 cy for each project was taken out of the marina and placed in an upland site.

22.8 Herbert Heyman, Northport Bay, Asharoken

In 1994, Herbert Heyman of Asharoken proposed a small dredging project that would remove less than 100 cy of material from Northport Bay. The project was permitted and the dredged sediment was used for beach renourishment purposes.

23.0 Smithtown Bay & Stony Brook Harbor Area Dredging Center

23.1 Town of Smithtown, Nissenquogue River, Kings Park

The Town of Smithtown put forward a project in 1996 that would dredge roughly 50 cy of sediment from the Nissequogue River at Old Dock Bluff. The project was approved and material was sent to an upland site for placement.

23.2 Suffolk County Department of Public Works, Nissenquogue River, Porpoise Channel, and Stony Brook Harbor

The Suffolk County Department of Public Works (DPW) had approximately 90,000 cy of sandy material taken out of the Nissenquogue River in 1994. This material was placed on the beach for purposes of beach renourishment. The previous year in 1993, the Suffolk County DPW proposed that an estimated 60,000 cy of sandy sediment be removed from Stony Brook Harbor in Stony Brook, NY. The same year, the Suffolk County DPW put forward a separate project to remove roughly 45,000 cy of sandy sediment from Porpoise Channel in Smithtown, NY as well. Both projects were permitted and material was used for beach renourishment at both locations.

24.0 Port Jefferson - Mount Sinai Dredging Center

24.1 Port Jefferson Harbor FNP, Brookhaven, NY

Information on Port Jefferson Harbor consists of chemical testing of the harbor's sediments in 1971. The sample taken from the outer harbor exceeded the EPA criteria for zinc, and oil and grease. The two samples taken from the inner harbor within the turning basin exceeded EPA

criteria for total volatile solids, chemical oxygen demand, kjeldahl nitrogen, oil and grease, mercury, lead, and zinc (USACE, 1980a). Port Jefferson Harbor has not been dredged by the Federal Government since completion of the authorized 12-foot channel in 1903 and a single instance of maintenance dredging to that depth in 1906. Removal of approximately 16,500 cy of material took place in 1906, but the placement site for this material is unknown.

24.2 Town of Brookhaven, Port Jefferson, Brookhaven

In 1991, the Town of Brookhaven was permitted to remove about 3,600 cy of material from Port Jefferson Harbor. This material was placed upland for placement. The Town of Brookhaven was permitted twice more in the span of 10 years for maintenance projects. All three dredging events removed less than 5,000 cy of material at a time with upland placement of the dredged material.

24.3 Bayles Dock Marina, Port Jefferson, Brookhaven

The Bayles Dock Marina dredged roughly 800 cy of material from Port Jefferson Harbor in 1992. This material was placed upland.

24.4 Long Island Lighting Co., Port Jefferson, Brookhaven

In 1995, the Long Island Lighting Co. proposed a project to remove approximately 3,100 cy of material from Port Jefferson Harbor. The project was permitted and dredged material was placed upland.

24.5 Mariners End Corporation, Port Jefferson, Brookhaven

In 1997, the Mariners End Corporation had about 700 cy of material dredged from Port Jefferson Harbor and placed at an upland site.

24.6 Town of Brookhaven Department of Parks and Recreation, Port Jefferson and Mount Sinai Harbor, Brookhaven

The Department of Parks and Recreation in the Town of Brookhaven put forward a project to have roughly 200 cy of material dredged from Port Jefferson Harbor in 1999. The project was approved and material was sent to the Brookhaven Town landfill. In 1993, the same Department of Parks and Recreation had approximately 8,000 cy of material removed from Mount Sinai Harbor. This material was used for beach renourishment.

24.7 DF Marina LLC, Port Jefferson, Brookhaven

In 2008, the DF Marina LLC dredged about 3,000 cy of material from Port Jefferson Harbor. This material was placed in an upland site. This project is typically repeated every 5 years with the same amount of material removed and placement method used.

25.0 Suffolk County Northeast Shore Area Dredging Center

25.1 Mattituck Harbor and Inlet FNP, Mattituck, NY

Maintenance dredging in the Mattituck Harbor FNP was recently performed in 2014. Approximately 100,000 cy of sandy material was removed and placed on Bailie's Beach by pipeline dredge. Previous dredging of the Mattituck Harbor happened in 2004 when approximately 3,800 cy of sand was placed at the adjacent beach east of the East Jetty (Bailie's Beach) (USACE, 2014e). Sediment samples were taken from the FNP in May of 2003 to determine the suitability of the material. Approximately half of the cores collected were predominantly sand and gravel (ranging from 50-94%). The other half of samples collected were mainly silt and clay (ranging from 69-97%) (USACE, 2011b).

Previous maintenance dredging of Mattituck Harbor was completed in 1990, which included the removal of approximately 11,000 cy of sand, with placement at the nearby beach, east of the East Jetty (USACE, 2014e). Sediment samples along two profile lines of the inlet (one updrift and one downdrift of the inlet) were collected in 1965. The samples were taken at the backshore area, at high water, mid-tide, and low water levels. The updrift samples were collected along 1965 Profile 56, which is located approximately 500 feet west of the west jetty, and downdrift ones were collected along Profile 57, located approximately 2,000 ft east of the east jetty. The median grain size varied from 0.07mm (fine sand as per the Wentworth Soil Classification System) to 25.4mm (pebble), with no one size being dominant (USACE, 2011b).

25.2 Sebastian's Cove Property Owners Association, Mattituck Creek, Mattituck

A small amount (about 50 cy) of dredged material was removed from Sebastian's Cove in 1999. The Sebastian's Cove Property Owners Association funded the project and placement took place at an upland site.

25.3 Town of Riverhead, Hallocks Pond, Northville

In order to construct a new boat ramp with associated pilings, the Town of Riverhead had to remove about 400 cy of sediment from around the construction area in Hallocks Pond in 1999. The project material was placed adjacent to the site.

26.0 Great & Little Peconic Bays Dredging Center

26.1 Suffolk County Department of Public Works, Various Locations

This section details various projects undertaken by the Suffolk County Department of Public Works (DPW) throughout the Little and Great Peconic Bays.

26.1.1 Cedar Beach Creek, Little Peconic Bay, Southold

The Suffolk County DPW undertook a project in 2007 that removed about 6,000 cy of sandy sediment from an area around Cedar Creek Beach in Little Peconic Bay. This material was placed upland for beach renourishment.

26.1.2 Corey Creek, Hog Neck Bay, Little Peconic Bay, Southold

Corey Creek was dredged by the Suffolk County DPW in 2006 and 1994. In 2006, an estimated 8,000 cy of sandy material was removed and placed on the beach for renourishment. In 1994, about 18,000 cy of sandy sediment was taken out and used for beach renourishment as well.

26.1.3 Richmond Creek, Hog Neck Bay, Little Peconic Bay, Southold

The Richmond Creek in Hog Neck Bay was dredged by the Suffolk County DPW in 2006. Roughly 10,000 cy of sandy sediment was placed on the beach for renourishment efforts.

26.1.4 Little Creek, Little Peconic Bay, East Cutchogue

In 2006, the Suffolk County DPW had approximately 4,500 cy of sandy material dredged from the Little Creek in Little Peconic Bay. This material was placed upland for purposes of beach renourishment. Prior to that project in 1996, the Suffolk County DPW had roughly 3,200 cy of sandy sediment taken out of Little Creek. This material was also placed upland for beach renourishment.

26.1.5 Mud Creek, Great Peconic Bay, Cutchogue

An estimated 5,000 cy of sandy material was dredged from Mud Creek in Great Peconic Bay in 1995. This effort was funded by the Suffolk County DPW and material was used for beach renourishment.

26.1.6 West Creek, Great Peconic Bay, Cutchogue

The West Creek was dredged in 1998 by the Suffolk County DPW. Approximately 10,000 cy of sandy material was taken out and placed upland for purposes of beach renourishment.

26.1.7 Schoolhouse Creek, Great Peconic Bay, New Suffolk

The Schoolhouse Creek was dredged by the Suffolk County DPW in 2007. At that time, roughly 2,500 cy of sandy sediment was removed and placed upland for a beach renourishment effort.

26.1.8 Deep Hole Creek, Great Peconic Bay, Mattituck

In 2006, the Suffolk County DPW had about 6,500 cy of sandy material taken out of Deep Hole Creek. The material was used upland for beach renourishment purposes.

26.1.9 James Creek, Great Peconic Bay, Mattituck

Approximately 6,500 cy of sandy sediment was removed from James Creek in 2006 by the Suffolk County DPW. The Suffolk County DPW removed about 6,000 cy of sandy material from James Creek in Great Peconic Bay in 1996 as well. Project material was placed upland for beach renourishment during both dredging events.

26.1.10 Brushes Creek, Great Peconic Bay, Laurel

Brushes Creek was dredged by the Suffolk County DPW in 2007 as well as in 1996. The more recent dredging event saw that about 2,000 cy of sandy material was taken out of the creek and used for beach renourishment. In 1996, approximately 14,000 cy of sandy sediment was taken out of Brushes Creek. Dredged material was placed upland for beach renourishment for that event as well.

26.1.11 Hawks Creek, Great Peconic Bay, Jamesport

The Suffolk County DPW dredged in Hawks Creek in 2008. Roughly 2,000 cy of sandy material was removed and placed upland for beach renourishment efforts.

26.1.12 Miamogue Lagoon, Great Peconic Bay, Riverhead

Approximately 2,000 cy of sandy sediment was taken out of Miamogue Lagoon by the Suffolk County DPW in 2004. Material was placed upland to support a beach renourishment effort.

26.1.13 Dreamers Cove, Great Peconic Bay, Aquebogue/Riverhead

A project that would remove about 8,100 cy of sandy sediment from Dreamers Cove in Great Peconic Bay was proposed by the Suffolk County DPW in 1996. Dredged material was placed upland for the purpose of beach renourishment.

26.1.14 Red Creek Pond, Great Peconic Bay, Southport

In 2008, the Suffolk County DPW put forward a project that would dredge roughly 5,000 cy of sandy material from Red Creek Pond in Southport, NY. The project was approved and the dredged sand placed upland for beach renourishment.

26.2 Anthony & Marie Vitale, Cedar Beach Creek, Southold

A project to dredge about 100 cy of sandy sediment from an area near Cedar Beach Creek in Little Peconic Bay was proposed by Anthony and Marie Vitale in 1993. The project was approved and placement of the dredged sediment occurred upland for use as beach renourishment material.

26.3 Ted Dowd, Fair Haven Inlet, Southold

Material from the Fair Haven Inlet was dredged in 1999 at the request and funding of Ted Dowd, a private owner in Southold, NY. Approximately 200 cy of sandy material was taken from the inlet and placed upland for the purposes of beach renourishment and backfill.

26.4 Lohn Patrick, Corey Creek, Southold

An estimated 25 cy of dredged material was removed from Corey Creek in 1991 by Lohn Patrick of Southold, NY. Project material was placed upland for the purpose of bank stabilization.

26.5 Cove Condominium Homeowners Association, Corey Creek, Southold

The Cove Condominium Homeowners Association proposed a project in 1998 that would removed roughly 100 cy of material from Corey Creek. The project was permitted and placement took place in an upland site.

26.6 Laughing Waters Property Owners Association, Corey Creek, Southold

Approximately 3,800 cy of dredged sediment was taken out of Corey Creek in 1998. The project was funded by the Laughing Waters Property Owners Association. Approximately 1,800 cy of sandy material was used for beach renourishment with the remaining 2,000 cy placed at an upland site.

26.7 Nassau Point Lagoon Association, Wunneweta Pond, Cutchogue

In 1995, the Nassau Point Lagoon Association had approximately 300 cy of sandy material dredged from Wunneweta Pond in Cutchogue, NY. The placement method for this material was upland for the purpose of beach renourishment.

26.8 Wunneweta Pond Association, Wunneweta Pond, Cutchogue

The Wunneweta Pond Association had roughly 300 cy of material removed from Wunneweta Pond in 2005. This material was used for beach renourishment. An estimated 400 cy of dredged material was removed from Wunneweta Pond in 1994. This project was funded by the Wunneweta Pond Association. Material was placed in an upland site.

26.9 Alan Cardinale, Jr, Wunneweta Pond, Cutchogue

A small quantity (about 100 cy) of dredged material was taken out of the Wunneweta Pond in 1997 at the request and funding of Alan Cardinale, Jr. The dredged material was placed at an upland site.

26.10 Peter Izzo & Arnold Blair, Horseshoe Cove, Cutchogue

In 1998, Peter Izzo and Arnold Blair of Cutchogue, NY put forward a project to dredge about 200 cy of sediment from Horseshoe Cove in Great Peconic Bay. The project was permitted and placement took place at a state-approved upland site.

26.11 Curran Frank, Haywater Cove, Cutchogue

A project that would remove roughly 25 cy of sediment from Haywater Cove was put forward by Curran Frank in 1991. The material was proposed to be used for backfill to stabilize the bank and bulkhead at the project site. This project was permitted and placement occurred as requested.

26.12 Thomas Samuels, Haywater Cove, Cutchogue

Thomas Samuels of Cutchogue, NY proposed a project in 1999 that would take approximately 100 cy of material out of Haywater Cove. No other information is available regarding this project.

26.13 Johanna Smith, Haywater Cove, Cutchogue

A small quantity (about 100 cy) of dredged material was taken out of Haywater Cove in 1994 at the request and funding of Johanna Smith. This material was placed upland for use as backfill and bank stabilization.

26.14 Glendalough Properties, Inc, Cutchogue Harbor, Cutchogue

In 1996, the Glendalough Properties, Inc, put forward a project that would removed approximately 1,200 cy of sandy sediment from Cutchogue Harbor. The project was permitted and the dredged material was used for beach renourishment purposes.

26.15 Michael Slade, Wickham Creek, Cutchogue

A project proposed by Michael Slade in 1996 removed about 350 cy of material from Wickham Creek. The dredged material was placed upland for placement and use as backfill on a bank stabilization project. Prior to that project, the same applicant took about 25 cy of sediment out of Wickham Creek in 1995. This material was also placed upland for use as backfill.

26.16 Louis M. Bacon, Cutchogue Harbor, New Suffolk

Approximately 3,700 cy of sandy material was taken out of Cutchogue Harbor in 1996. The project was funded by Louis M. Bacon and material was used for a beach renourishment effort.

26.17 Nora Tuthill Glueck, Schoolhouse Creek, New Suffolk

A proposal to dredge about 300 cy of sandy sediment from Schoolhouse Creek in Little Peconic Bay was put forward by Nora Tuthill Glueck in 2004. The project was approved and material was found suitable for upland use for beach renourishment purposes.

26.18 Thomas Cavanaugh, Little Peconic Bay, Cutchogue

In 2004, less than 100 cy of sediment was dredged from Little Peconic Bay at the request and funding of Thomas Cavanaugh of Cutchogue, NY. This material was placed at an upland site.

26.19 Belvedere Property Management, Inc., Little Peconic Bay, Robins Island

The Belvedere Property Management, Inc. requested to have approximately 200 cy of material taken out of the Little Peconic Bay near a section of Robins Island. The project was permitted and dredged material was used for a beach renourishment effort in 1995.

26.20 Neil McGoldrick, Halls Creek, Mattituck

An estimated 2,000 cy of sandy material was removed from Halls Creek by Neil McGoldrick in 1998. This material was placed upland for beach renourishment.

26.21 Strong's Marina, James Creek, Mattituck

In 1992, Strong's Marina had roughly 1,500 cy of sediment taken out of James Creek in Mattituck, NY. This material was placed upland at a site adjacent to the dredging work area.

26.22 Edgemere Park Association, Brushes Creek, Laurel

A project to remove about 100 cy of material from Brushes Creek was proposed by the Edgemere Park Association in 1999. Roughly 40 cy of material was used on-site as backfill material, the remaining 60 cy of material was placed upland at a state-approved site.

26.23 Great Peconic Bay Yacht Basin, Inc., Hawks Creek, South Jamesport

The Great Peconic Bay Yacht Basin, Inc. took approximately 5,000 cy of sandy sediment out of Hawks Creek in 1997. Project material was used for beach renourishment.

26.24 Peconic River FNP, Riverhead, NY

The last time the Peconic River FNP was maintenance dredged was in 1948. In that year, approximately 83,900 cy of dredged material was removed to maintain the 6-foot MLLW deep channel that extends from the Great Peconic Bay into the Peconic River. There was no available information regarding sediment type or chemistry or a placement site for this event.

26.25 Town of Riverhead, Peconic River, Riverhead

The Town of Riverhead had approximately 1,500 cy of material dredged from the Peconic River in Riverhead, NY in 1994. This material was placed at an upland site.

26.26 Sylvan-Royal Canal Association, Flanders Bay, Riverhead

In 2007, about 600 cy of sandy sediment was proposed to be removed from Flanders Bay by the Sylvan-Royal Canal Association. The project was approved and the sediment was placed upland as beach renourishment.

26.27 Baywoods Property Owners, Flanders Bay, Riverhead/Aquebogue

An estimated 1,000 cy of sandy material was dredged from Flanders Bay in 1991. This project was funded by the Baywoods Property Owners and placement took place upland for purposes of beach renourishment.

26.28 Edward and Patricia Hocker, Meetinghouse Creek, Riverhead/Aquebogue

A private project that would take approximately 100 cy of sediment out of the Meetinghouse Creek was proposed by Edward and Patricia Hocker in 1994. The project was permitted and material was placed upland for use as backfill.

27.0 Shelter Island Sound & Gardiner's Bay Dredging Center

27.1 Reydon Shores Property Owners, Southold Bay, Southold

An estimated 2,400 cy of sandy sediment was removed from Southold Bay in 1997. The Reydon Shores Property Owners requested and funded this project. Material was used upland for beach renourishment efforts.

27.2 Paradise Point Association, Inc, Southold Bay, Southold

The Paradise Point Association, Inc, requested that about 1,100 cy of material be dredged from an area in Southold Bay in 1999. The project was permitted and dredged material was placed upland at a state-approved facility.

27.3 John H. Mulholland & Michael P. Bontje, Southold Bay, Southold

John H. Mulholland and Michael P. Bontje had roughly 400 cy of sediment removed from Southold Bay in 1995. Project material was placed at an upland site.

27.4 Suffolk County Department of Public Works, Goose Creek, Southold

In 2006, the Suffolk County DPW removed approximately 14,000 cy of sandy sediment from Goose Creek in Shelter Island Sound. This material was placed upland for beach renourishment.

27.5 Al Koke, Jockey Creek, Southold

Approximately 6,500 cy of material was dredged from Goose Creek in 1992. This project was requested and funded by Al Koke of Southold, NY. Dredged material was placed at an upland site.

27.6 Joseph Cornacchia, Jockey Creek, Southold

A project to dredge about 4,000 cy of material from Jockey Creek was submitted by Joseph Cornacchia of Southold, NY in 1991. The project was approved and material was used as backfill at an adjacent upland site.

27.7 Suffolk County Department of Public Works, Jockey Creek, Southold

The Suffolk County DPW dredged roughly 15,000 cy from Jockey Creek in 2006. This material was used upland for beach renourishment.

27.8 John Lynch, Dug Canal, Southold

In 1996, John Lynch of Southold, NY put forward a project to dredge about 100 cy of material from Dug Canal in Shelter Island Sound. The project was permitted and material was placed upland as backfill.

27.9 Howard Zehner PE, Sage Basin, Southold

An estimated 600 cy of sediment was removed from Sage Basin in Shelter Island Sound in 1992. This project was funded by Howard Zehener of Southold, NY. The dredged sediment was placed upland at a site adjacent to the dredge area.

27.10 Town of Southold, Goldsmith's Inlet, Long Island Sound, Southold

The Town of Southold requested that about 5,000 cy of material be removed from Goldsmith's Inlet in 1998. The project was approved and material was placed upland at the Town of Southold Highway Yard.

27.11 Greenport Harbor FNP, Greenport, NY

The Greenport Harbor FNP provides for two anchorages (8-foot MLLW and 9-foot MLLW deep) and an 8-foot MLLW deep channel connecting the anchorages. The FNP was completed in 1937 and has not been maintained since that time. Approximately 106,900 cy of dredged

material was removed to create the 8-foot channel into Stirling Basin and the 9-foot anchorage outside of the Basin. No placement site or sediment information is known for that event.

27.12 Ruth White, Greenport Harbor, Greenport

A project was proposed in 1993 by Ruth White of Greenport, NY that would dredge approximately 100 cy of sediment from Greenport Harbor. The project was permitted and material was placed upland for use as backfill.

27.13 Aquafood Property Limited Partnership, Greenport Harbor, East Marion

Roughly 3,800 cy of dredged material was removed from Greenport Harbor by the Aquafood Property Limited Partnership in 1994. Project material was placed upland.

27.14 Gusatave and Carol Wade, Stirling Basin, Greenport

In 1994, Gusatave and Carol Wade proposed a project that would removed about 25 cy of material from Stirling Basin. The proposal was approved and project material was placed upland as backfill.

27.15 JAAP W Hilbrand, Stirling Basin, Greenport

Approximately 100 cy of material was removed from Stirling Basin in 1999. The project was funded by JAAP W Hilbrand of Greenport, NY. Dredged material was placed upland at a state-approved facility.

27.16 John J. Casillo, Fordham Canal, Greenport

A project to dredge roughly 100 cy from Fordham Canal in Greenport was proposed by John J. Casillo in 2001. The project was permitted and material was placed upland at a state-approved facility.

27.17 Thomas Aprea Jr, Spring Pond, East Marion

In 1993, about 500 cy of dredged sediment was removed from Spring Pond by Thomas Aprea, Jr. Project material was used upland for beach renourishment purposes.

27.18 Town of Southold, Marion Lake, East Marion

The Town of Southold requested that roughly 20 cy of sediment be dredged from Marion Lake in 1996. The project was approved and material was placed upland.

27.19 Town of Shelter Island Department of Public Works, Dering Harbor, Shelter Island

An estimated 200 cy of material was taken out of Dering Harbor at the request and funding of the Town of Shelter Island Department of Public Works in 2003. Project sediments were placed upland.

27. 20 Village of Dering Harbor, Dering Harbor, Shelter Island

A project was proposed by the Village of Dering Island in 1993 which would have roughly 300 cy of material taken out of Dering Harbor to be placed upland for placement. The project was permitted and placement took place as planned.

27.21 Silver Beach- Shelter Island Association, Inc, Crab Creek, Shelter Island Heights

In 2007, material from Crab Creek was removed at the request and funding of the Silver Beach-Shelter Island Association, Inc. Approximately 700 cy was dredged and placed upland for beach renourishment.

27.22 Suffolk County Department of Public Works, Various Locations

This section details various projects undertaken by the Suffolk County Department of Public Works (DPW) throughout Shelter Island Sound and Gardiner's Bay.

27.22.1 Silver Beach Lagoon, Shelter Island

The Suffolk County DPW undertook a project in 2006 that removed about 14,000 cy of sediment from Silver Beach Lagoon on Shelter Island. This material was placed in an upland site.

27.22.2 West Neck Harbor, Shelter Island

In 2008, the Suffolk County DPW had roughly 18,000 cy of sandy material removed from West Neck Harbor. Project sediment was suitable for placement upland as beach renourishment. Prior to that event, in 1996 the Suffolk County DPW dredged approximately 6,000 cy of sediment from West Neck Harbor which was also used for beach renourishment purposes.

27.22.3 Dickerson Creek, Shelter Island

An estimated 6,000 cy of sandy sediment was taken out of Dickerson Creek in 1996. This material was placed upland for beach renourishment.

27.22.4 Coecles Harbor, Shelter Island

A project to dredge approximately 40,000 cy of sandy material from Coecles Harbor was proposed by the Suffolk County DPW in 1995. The project as permitted and placement took place upland with material used for a beach renourishment effort.

27.22.5 Northwest Creek, East Hampton

In 1994, the Suffolk County DPW dredged about 20,000 cy of sediment from the Northwest Creek in East Hampton, NY. Placement of the dredged material was at an upland site.

27.22.6 Three Mile Harbor, East Hampton

The Three Mile Harbor was dredged by the Suffolk County DPW in 1995 and 1993. In 1995, roughly 15,000 cy of material was removed and placed at an upland site for placement. A larger project that removed 130,000 cy of sandy sediment from the mouth of Three Mile Harbor took place in 1993. Project material from that event was suitable for upland placement for purposes of beach renourishment.

27. 23 Shorewood Farm, Inc, Clark Creek, Shelter Island

In 1991, approximately 800 cy of suitable material was removed from Clark Creek by Shorewood Farm, Inc and placed at Rams Island Causeway for a beach renourishment effort.

27. 24 David Persson, Coecles Harbor, Shelter Island

A project was put forward by David Persson of Shelter Island, NY in 1999 to remove about 600 cy of sandy material from Coecles Harbor. The project was approved and project sediment was deemed suitable for use as beach renourishment material.

27. 25 Town of Southampton Trustess, Fresh Pond, North Haven

Approximately 100 cy of sediment was taken out of Fresh Pond in North Haven, NY by the Town of Trustees in 1993. This material was placed in an upland site for placement.

27.26 Sag Harbor FNP, Sag Harbor, NY

The Federal Navigation Project for Sag Harbor was authorized in 1902 and as modified through 1935 consisted of two rubblestone breakwaters in Shelter Island Sound protecting the harbor from the east, a 10-foot channel to the wharves, an 8-foot anchorage between the channel and the breakwaters, and a 6-foot anchorage between the channel and the central waterfront. The Water Resources Development Act of 1992 deauthorized the dredged features of the project, leaving only the breakwaters as Federal project features. Therefore any future maintenance dredging of the former Federal channel and anchorage areas would need to be accomplished by non-Federal interests under permit. The last time the FNP was maintained by the Federal Government was in 1937. Approximately 177,800 cy of dredged material was removed, but the placement site is unknown for that material.

27.27 Breakwater Yacht Club, Sag Harbor Bay, Sag Harbor

The Breakwater Yacht Club was most recently dredged in 2012. At that time, about 24,000 cy of suitable material was taken out and placed at the CLDS. Previously, the harbor was maintained

in 2011 when approximately 12,400 cy of material was also found suitable for placement at CLDS.

27. 28 BJD Enterprises LTD BDAS East Point Marina, Three Mile Harbor, East Hampton

In 1992, approximately 4,500 cy of sediment was removed from Three Mile Harbor by BJD Enterprises LTD BDAS East Point Marina. Dredged material was placed at the Bistran sand pit for placement.

27.29 Clearwater Beach Group Property Owners Association, Hog Creek, Springs

A project to dredge roughly 2,500 cy of sandy material from Hog Creek was proposed by the Clearwater Beach Group Property Owners Association in 1997. The project was permitted and material was deemed suitable for use upland for a beach renourishment effort.

27.30 Lionhead Beach Civic Association, Hog Creek, Springs

An estimated 1,200 cy of sandy sediment was taken out of Hog Creek in 1997. This project was requested and funded by the Lionhead Beach Civic Association of Springs, NY. Project sediments were placed upland as well as used for beach renourishment purposes.

27.31 Devon Yacht Club, Napeague Bay, Amagansett

The Devon Yacht Club put forward a project in 1995 that would remove approximately 2,200 cy of sediment from Napeague Bay and dispose of the material at an upland site. The project was approved and placement occurred as proposed.

27.32 U.S. Department of Agriculture, Orient Point Harbor, Orient Point

In 1993, the U.S. Department of Agriculture had roughly 800 cy of material dredged from Orient Point Harbor. This material was placed upland.

27.33 U.S. Department of Homeland Security, Plum Gut Harbor and Orient Point Harbor, Southold & Orient Point

The U.S. Department of Homeland Security planned two separate dredging projects in 2007. The first project removed about 29,000 cy of sandy sediment from Plum Gut Harbor; material was placed upland for beach renourishment. The second project took out an estimated 18,000 cy of material from Orient Point Harbor and placement occurred at an upland site.

28.0 Montauk Area Dredging Center

28.1 Lake Montauk Harbor FNP, Montauk, NY

The Federal project at Lake Montauk Harbor was last proposed to be maintained in 2014. Approximately 20,400 cy of sandy material is proposed to be placed on the beach west of the West Jetty in Montauk Harbor by pipeline dredge. The FNP was previously dredged in 2012 when approximately 16,000 cy of clean sand was placed west of the West Jetty in Montauk Harbor as well. Sediment sampling in the Lake Montauk FNP was conducted in 2005. For the area east of the Lake Montauk jetty, gravel was the dominant sediment collected in both intertidal and subtidal locations, for all samples except the intertidal sampling site located closest to the jetty. At this sample location, sand is likely to accumulate due to coastal sand transport processes. The sand component was comprised of predominantly very coarse to coarse-grained sand, with trace amounts of medium, fine, and very fine sand. No clay was found in any of the core samples collected to the east of the jetty. For the area west of the Lake Montauk jetty, gravel was the dominant sediment in six out of 10 intertidal core samples, with the majority of the predominantly gravel cores collected furthest west of the jetty. The remaining four intertidal core samples were comprised of predominantly medium or coarse-grained sand. Only trace amounts of very fine sand and silt were collected, and no clay was found in any of the intertidal samples collected west of the jetty. Similar to the intertidal samples, five out of 10 subtidal core samples were comprised of predominantly gravel, with the remaining subtidal core samples comprised of predominantly medium or coarse grained sand. The subtidal sampling site located furthest from the jetty (LMW101S) had the highest amount of smaller grain-size material, with predominantly medium and fine-grained sand making up 78% of the sample (Offshore & Coastal Technologies, 2005).

In the navigation channel, grab samples were predominantly comprised of sand, with medium-grained sand the dominant grain size found in seven out of 10 grab samples. Similar to the areas east and west of the Lake Montauk jetty, trace amounts of very fine sand and silt were collected, and no clay was found any of the samples collected in the channel. Core samples collected in the shoal area were dominated by coarse and medium-grained sand. Very little gravel, trace amounts of very fine sand and silt, and no clay was found in any of the core samples collected in the shoal area (Offshore & Coastal Technologies, 2005).

Sediment samples were also taken in 1981. The predominant substrate type in areas of swift currents (i.e., at the mouth of the inlet) included coarse material such as gravels and sands. In areas of slow currents (i.e., in the center of the Lake), were mud and silts. Wave action along the shoreline/intertidal zone washed away the mud and silts, resulting in a stone, sand, and gravel substrate (SCPD, 1981). Based on past data, future dredging events at this FNP may yield material that is suitable for beach renourishment.

29.0 Summary

Navigation projects bordering Long Island Sound are made up of a diverse array of sediment types which can be used or placed in a variety of settings. Some harbors and navigation channels host dredged material that is appropriate for purposes of beach renourishment or habitat creation while others have contaminated material that is only suitable for placement in a Confined Aquatic Disposal (CAD) cell or capped at an existing disposal site where it can be isolated from the surrounding environment. This report details historical information that can be used for the purpose of informing the reader what past sediment testing showed and what the sediment *may* consist of for future testing. This report and its findings are not to be used as the sole method of determining the suitability of dredged material for placement. All projects are required to conduct testing to show the chemical, physical, and, if necessary, biological effects of dredged material on the proposed placement site(s) as well as obtain State water quality certification. Below is a summary of each dredge center's Federal Navigation Projects and non-USACE projects.

- Material from the Block Island Dredging Center has historically been suitable for beach renourishment purposes at both the Harbor of Refuge and Great Salt Pond FNPs.
- The Fishers Island Sound and Little Narragansett Bay Dredging Center has three FNPs (Stonington Harbor, Watch Hill Cove, and Pawcatuck River) that have not been dredged since the 1940's and 1950's. Material from the Stonington Harbor and Pawcatuck River FNP was placed at the Stonington Dumping Grounds and material from the Watch Hill Cove FNP was placed on a beach near the site for those dredging events. The Little Narragansett Bay FNP dredged sediment has been found suitable for beach renourishment as well as placement at NLDS or RISDS in past projects. Material from the FNP at Mystic Harbor has been suitable for unconfined aquatic placement at RISDS and NLDS. Non-Federal projects in this dredge center have been mixed in suitability between suitable for placement at NLDS, CLDS and unsuitable without biological testing and State water quality certification.
- The Fishers Island Dredging Center is made up of the West Harbor FNP and one non-Federal project. The FNP has not been dredged since 1931; no information regarding placement site was found. The non-Federal project was found suitable for unconfined aquatic placement at NLDS, CLDS, or WLDS.
- The New London Dredging Center consists of several Federal, non-Federal, and USACE navigation projects. Material from the New London and Thames River FNPs has been found suitable for placement at NLDS in past projects. Non-Federal and other Federal projects have been approved for unconfined placement at CLDS, and contained placement within CAD cells, and at CLDS with capping.

- Navigation projects in the Niantic Dredging Center are made up of several non-Federal projects and a USACE FNP at Niantic Harbor. Material from the Niantic Harbor FNP was last removed in 1970 and placed at the Niantic Dumping Ground in LIS. Non-Federal project material was found suitable for unconfined aquatic placement at NLDS as well as upland placement in past projects.
- Placement of dredged material for USACE FNPs in the Connecticut River Dredging Center has predominately been in-river or upland along the banks of the river for past maintenance projects. Beginning with the Calves Island Bar FNP and moving toward the mouth of the Connecticut River, material has historically been found suitable for placement at CSDS. Non-Federal project material has been deemed suitable by the USEPA and USACE for placement at CSDS, CLDS, WLDS, in-river, upland, or was deemed unsuitable.
- The Clinton-Westbrook Dredging Center includes three FNPs and several non-Federal navigation channels. Material from the Patchogue River and Clinton Harbor FNPs has often been found suitable for beach renourishment (for sandy sediments) and/or placement at CSDS (for silty sediments). The third FNP in this Dredging Center, Duck Island Harbor has not been dredged since 1949. No record of a placement site was found for that event. Non-Federal projects in this dredging center have predominantly been suitable for placement at CSDS. However, a third of the non-Federal projects have suitably placed material at CLDS.
- Guilford Harbor, Stony Creek Harbor, and Branford Harbor represent the Federal navigation projects in the Guilford-Branford Dredging Center. The FNPs within Stony Creek and Branford Harbors have dredged material that has been found suitable for placement at CLDS in past projects. Material from the Guilford Harbor FNP has traditionally been deemed suitable for beach renourishment or placement at CLDS depending on grain size. Most of the non-Federal navigation projects in the Guilford-Branford Dredging Center have been deemed suitable for placement at CLDS, a quarter or projects have been suitable for placement at WLDS and only one project has had unsuitable material for unconfined aquatic placement.
- The New Haven Dredging Center is represented by the New Haven Harbor FNP which includes channels in the Mill, Quinnipiac, and West Rivers. Material from the New Haven Harbor FNP and its tributaries has been deemed suitable for placement at CLDS in past projects. Of the non-Federal projects in this dredging center, the majority have been placed at CLDS. Around a quarter of the non-Federal projects have sent material to WLDS for placement, and a third of other projects have been found unsuitable for unconfined aquatic placement.
- The FNPs that make up the Housatonic-Milford Dredging Center are the Milford Harbor FNP and the Housatonic River FNP. Past maintenance dredging projects in Milford Harbor have sent material to CLDS for unconfined placement (for silty sediments) and/or used material for beach renourishment (for beach compatible sand). Material in the Housatonic River FNP have been found suitable for nearshore placement for the purpose of

beach renourishment and/or confined placement at an upland site. Non-Federal navigation projects in this dredging center have primarily been found suitable for unconfined placement at CLDS with the exception of one project which was unsuitable.

- The Dredging Center in the Bridgeport Area includes the FNPs for Bridgeport Harbor, Black Rock Harbor, and Southport Harbor. Within the Bridgeport Harbor FNP there are several tributary channels: Pequonnock, Johnsons Creek, and Yellow Mill. Maintenance of the Bridgeport Harbor FNP has typically used open-water placement in Long Island Sound, at the historic Bridgeport Disposal Site. Dredged material in the Bridgeport Harbor FNP was found to be mixed in suitability in the separate Bridgeport Harbor DMMP. Material from the entrance channel was found suitable for unconfined placement at CLDS, while material from the inner harbor was found unsuitable and required confined placement within CAD cells. Dredged material from the Black Rock Harbor FNP was placed at the CLDS in 1983 as part of the USACE's Field Verification Program to test the efficacy of capped versus uncapped placement of dredged material. However, the Black Rock Harbor FNP has not been maintenance dredged since 1955 when material was placed at the Bridgeport Dumping Grounds. The Southport FNP was last maintained in 2005; dredged material was suitably placed at WLDS for that event. The majority of non-Federal project material in this dredging center has been deemed suitable for placement at WLDS, CLDS, while about a third of the non-Federal projects have been unsuitable for unconfined aquatic placement.
- The Norwalk Are Dredging Center includes Federal navigation projects at Westport Harbor, Wilson Point Harbor, Norwalk Harbor, and Fivemile River. Both the Westport Harbor and Fivemile River FNPs have has material suitable for placement at CLDS and WLDS in past projects. The Norwalk Harbor FNP material was required to be capped at CLDS for past maintenance. Wilson Point Harbor had not been dredged since 1892. Non-Federal projects in the Norwalk Dredging Center have predominantly sent material to NLDS for placement. CLDS has also been used as a placement site for non-Federal project material and about a third of the non-Federal projects have had material that was found unsuitable for unconfined aquatic placement.
- Federal navigation projects in the Stamford Area Dredging Center include Westcott Cove and Stamford Harbor. The Westcott Cove FNP has not been dredged since 1978. At that time, some of the dredged material was found suitable for beach renourishment while the rest of the material was placed upland. In past projects, material from the Stamford Harbor FNP has been suitably placed at CLDS. Only two non-Federal projects in this dredging center were recorded; both contained material that was unsuitable for unconfined aquatic placement.
- The Greenwich Area Dredging Center has two FNPs and several non-Federal projects within its bounds. Previous dredging of the Mianus River FNP has had material suitable for placement at WLDS. The second FNP, Greenwich Harbor, has not been maintained since 1968. Material from that dredging event was placed at the Stamford Dumping

Grounds. Two-thirds of the non-Federal navigation projects in the Greenwich Area Dredging Center were found suitable for placement at WLDS in past dredging projects. Material from one non-Federal project was suitably placed at CLDS and two other non-Federal projects had material that was unsuitable for unconfined aquatic placement.

- The Port Chester and Milton Harbor are the two FNPs within the Port Chester-Rye Area Dredging Center. The FNP at Port Chester was last maintained in 1990. Possible future maintenance would propose to place dredged material at an upland placement site or a LIS aquatic site. Dredged material from the Milton Harbor FNP was capped at WLDS for a maintenance event in the past. Non-Federal projects in this FNP have had material placed at WLDS, capped at CLDS, and used for beach renourishment.
- The Mamaroneck-New Rochelle Area Dredging Center is defined by the Mamaroneck Harbor, Echo Bay, and New Rochelle Harbor FNPs as well as multiple non-Federal navigation projects. The Mamaroneck Harbor FNP was last maintained in 1999; material was suitably placed at CLDS. The FNP at Echo Bay has not been dredged since it was constructed in 1910. Dredged material from the New Rochelle Harbor FNP was deemed suitable for placement at WLDS for dredging in 1991. Roughly half of the non-Federal projects that are within this dredging center had material that was found suitable for placement at CLDS. A quarter of the non-Federal projects suitably placed dredged material at WLDS; the rest were placed upland.
- The Eastchester Bay Area Dredging Center has only one Federal navigation project, the Eastchester Creek FNP. Zero non-Federal projects were identified in this report. Dredged material from the Eastchester Creek FNP was found unsuitable for placement at HARS and instead was sent to an approved upland site in a previous maintenance project.
- One FNP and several non-Federal navigation projects exist within the Manhasset and Little Neck Bays Area Dredging Center. The FNP at Little Neck Bay has not been dredged since 1962. Dredged material from the non-Federal projects that make up this center have been predominantly placed upland; one project used material for beach renourishment, while another used material for habitat creation. Two projects sent material to a LIS aquatic site (CLDS for one and WLDS for the second).
- The Hempstead Harbor Dredging Center contains the Hempstead Harbor and Glen Cove Creek FNPs as well as a few non-Federal dredging projects. The Hempstead Harbor FNP has not been dredged since 1968. Dredged material from the FNP at Glen Cove Creek was placed upland for a maintenance event in 1996. Three non-Federal projects in this dredging center were reviewed for this report; one had material used for beach renourishment purposes and the two others placed their dredged material upland.
- Only non-Federal navigation projects make up the Oyster Bay-Cold Spring Harbor Area Dredging Center. Half of the projects used upland placement for their dredged material, one project sent material to WLDS, and the rest (3 projects) used their dredged material for beach renourishment efforts.

- The Huntington and Northport Bay Area Dredging Center host two Federal navigation projects that have not been dredged since the 1940's and 1950's. Both events were improvement dredging efforts and disposal of the dredged material is unknown. Of the non-Federal projects that make up this dredging center, material has been placed at variable sites. One project each was found suitable for placement at WLDS, CLDS, used for beach renourishment, or found unsuitable. Two projects placed dredged material upland.
- No Federal navigation projects exist within the bounds of the Smithtown Bay and Stony Brook Harbor Area Dredging Center. The two non-Federal navigation projects reviewed in this report for this dredging center placed material upland or used it for beach renourishment purposes.
- The Port Jefferson-Mount Sinai Dredging Center is characterized by the Port Jefferson Harbor FNP and several non-Federal navigation projects. The FNP at Port Jefferson Harbor was last dredged in 1906 and the placement site for the dredged material is unknown. Of the non-Federal projects that make up this center, the majority have used upland placement for their dredged material. One project placed material on the beach for renourishment.
- Only one non-Federal navigation project was reviewed for this report within the Suffolk County Northeast Shore Area Dredging Center. That project's dredged material was placed upland. No FNPs exist within this area.
- Within the Great and Little Peconic Bays Dredging Center, many non-Federal navigation projects are found along with two Federal navigation projects. The Mattituck Harbor and Inlet FNP was last maintained in 2014. Material was placed on a nearby beach for renourishment. The same placement site was used in two prior maintenance projects for this FNP. The Peconic River FNP has not been dredged since it was constructed in 1872. Less than half (4/10 projects) of the non-Federal projects within this dredging center had dredged material placed upland. Many of those projects used the material for backfill or bank stabilization. The rest of the projects, which represents the majority, used their dredged material for beach renourishment.
- The Shelter Island Sound and Gardiner's Bay Dredging Center has two FNP's within its borders. The Greenport Harbor and Sag Harbor FNP's were last dredged in 1939 and 1937, respectively. The placement site for the dredged material is unknown for those events. There are many non-Federal navigation projects in this dredging center. They are split roughly in half regarding placement of dredged material. A little more than half of the non-Federal projects had material that was placed upland, often used for backfill or sent to a State-approved upland facility. A little less than half of the total non-Federal projects used their dredged material for beach renourishment and only one project suitably placed material at CLDS.
- Only one FNP makes up the Montauk Area Dredging Center. Dredged material from the FNP at Lake Montauk Harbor has historically been used for beach renourishment. Zero non-Federal navigation projects were reviewed for this report.

30.0 Sources

Alpha Woods Hole Labs. 2005. Laboratory Testing in Support of Environmental Assessment, Sediment Sampling and Testing for Mianus River, Greenwich, Connecticut. Prepared for: U.S. Army Corps of Engineers, New England District, Concord, MA. Raynham, MA.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1874. 1874. Section 12: Stonington Harbor, CT. pp: 77-78. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1889. 1889. Section D11: Improvement of Norwalk Harbor, CT. pp: 706. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1891. 1891. Section D14: Improvement of Harbor at Wilsons Point, CT. pp: 789-791. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1892. 1892. Section D13: Improvement of Harbor at Wilsons Point, CT. pp: 695-696. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1893. 1893. Section D3.2: Improvement of Connecticut River Below Hartford, CT. pp: 911-912. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1911. 1911. Section D5: Improvement of Connecticut River Below Hartford, CT. pp: 1225-1229. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1912. 1912. Section D6: Improvement of Eightmile River, CT. pp: 1441. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1917. 1917. Section 7: Connecticut River Below Hartford, CT. pp: 2043. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1931. 1931. Section 32: Hay (West) Harbor, NY. pp: 156-157. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1934. 1934. Section 10: New London Harbor, CT. pp: 75-76. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1943. 1943. Section 15: New London Harbor, CT. pp: 82-83. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1946. 1946. Section 26: Stamford Harbor, CT. pp: 123-125. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1949. 1949. Section 54: Duck Island Harbor, CT. pp: 109-110. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1950. 1950. Section 39: Pawcatuck River, RI & CT. pp: 96-97. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1957. 1957. Section 27: Stonington Harbor, CT. pp: 52. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1962. 1962. Section 31: Southport Harbor, CT. pp: 56-57. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1964. 1964. Section 36: Stamford Harbor, CT. pp: 55-56. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1966. 1966. Section 38: Thames River, CT. pp: 53-54. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1968a. 1968. Section 11: Fivemile River Harbor, CT. pp: 11. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1968b. 1968. Section 14: Greenwich Harbor, CT. pp: 13. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1970. 1970. Section 34: Westport Harbor and Saugatuck River, CT. pp: 20. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1973. 1973. Section 9: Connecticut River Below Hartford, CT. pp: 1-6. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1976. 1976. Section 11: Connecticut River Below Hartford, CT. pp: 1-6 – 1-7. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1978. 1978. Section 8: Connecticut River Below Hartford, CT. pp: 1-5. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1980. 1980. Section 15: New London Harbor, CT. pp: 15. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1982. 1982. Section 21: New Haven Harbor, CT. pp: 1-9. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1987. 1987. Section 6: Connecticut River Below Hartford, CT. pp: 1-4. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1992. 1992. Section 5: Connecticut River Below Hartford, CT. pp: 1-4. Washington, D.C.

Annual Report of the Chief of Engineers, U.S. Army, for Fiscal Year 1994. 1994. Section 7: Connecticut River Below Hartford, CT. pp: 1-5. Washington, D.C.

Annual Report of the Secretary of the Army on Civil Works Activities for Fiscal Year 2000. 2000. Section 13: Great Salt Pond, Block Island, RI. pp: 1-7. GPO. Washington, D.C.

Annual Report of the Secretary of the Army on Civil Works Activities for Fiscal Year 2006. 2006. Section 15: Norwalk Harbor, CT. pp: 1-8. GPO. Washington, D.C.

Annual Report of the Secretary of the Army on Civil Works Activities for Fiscal Year 2009. 2009. Section 19: Norwalk Harbor, CT. pp: 1-9. GPO. Washington, D.C.

Applied Marine Sciences, Inc. 1998. Sediment Chemistry Analysis of Mamaroneck Harbor Sediments. Prepared for: U.S. Army Corps of Engineers, New York District, New York, NY. League City, TX.

ATC Construction Services, Inc. 1997. Laboratory and Grain Size Test Results from Milford Harbor, Milford, CT. Prepared for: U.S. Army Corps of Engineers, New England District, Waltham, MA. Avon, MA.

Battelle. 2002. Final Data Report: Laboratory Testing in Support of Environmental Assessment, Biological Sampling and Testing- Three Projects in Connecticut, Saybrook Outer Bar, CT. Prepared for: U.S. Army Corps of Engineers, New England District, Concord, MA. Duxbury, MA.

Battelle. 2009. Data Report for East Chester Creek (Upland). Prepared for: U.S. Army Corps of Engineers, New York District, New York, NY. Duxbury, MA.

Battelle Marine Sciences Laboratory. 1995. Results of Analysis of Port Chester Sediment Samples. Prepared for: U.S. Army Corps of Engineers, New York District, New York, NY. Duxbury, MA.

Energy Resources Co. Inc. (ERCO). 1980. Ecological Evaluation of Proposed Oceanic Discharge of Dredged Material from Quinnipiac River, New Haven Harbor, Connecticut. Prepared for: U.S. Army Corps of Engineers, New England Division, Waltham, MA. Cambridge, MA.

Energy Resources Co. Inc. (ERCO). 1981. Ecological Evaluation of Proposed Oceanic Discharge of Dredged Material from Mill River, New Haven Harbor, Connecticut. Supplemental Report on Bioaccumulation. Prepared for: New England Division, Corps of Engineers, Waltham, MA. Cambridge, MA.

Gahagan and Bryant Associates, Inc. 1996. Completion Report P-424 Thames River Dredging, Naval Submarine Base, New London & Groton, CT. Prepared for: Department of the Navy, Northern Division, Naval Facilities Engineering Command, Lester, PA. Wilmington, DE.

Nytest Environmental, Inc. 1990. Ocean Disposal Biomonitoring Report for New Rochelle Harbor, New York. Prepared for: U.S. Army Corps of Engineers, New York District, New York, NY. Port Washington, NY.

Nytest Environmental, Inc. 1991. The Toxicity of Dredged Sediments from Milton Harbor and WLIS. Prepared for: U.S. Army Corps of Engineers, New York District, New York, NY. Port Washington, NY.

Nytest Environmental, Inc. 1992. Report of Analysis for Milton Harbor Sediments. Prepared for: U.S. Army Corps of Engineers, New York District, New York, NY. Port Washington, NY.

New York Testing Laboratories, Inc. 1971a. Greenport Harbor Bottom Sediments Chemical Analysis. Prepared for: U.S. Army Corps of Engineers, New York District, New York, NY. Westbury, Long Island, NY.

New York Testing Laboratories, Inc. 1971b. Peconic River Bottom Sediments Chemical Analysis. Prepared for: U.S. Army Corps of Engineers, New York District, New York, NY. Westbury, Long Island, NY.

New York Testing Laboratories, Inc. 1974. New Rochelle Harbor Bottom Sediments Chemical Analysis. Prepared for: U.S. Army Corps of Engineers, New York District, New York, NY. Westbury, Long Island, NY.

New York Testing Laboratories, Inc. 1982. Hempstead Bay Bottom Sediments Chemical Analysis. Prepared for: U.S. Army Corps of Engineers, New York District, New York, NY. Westbury, Long Island, NY.

Offshore & Coastal Technologies, Inc. 2005. Field Data Collection, Inlet Hydraulics Modeling and Sediment Transport Analysis in support of the Feasibility Study of Lake Montauk Harbor, Town of East Hampton, Long Island, NY. Prepared for; U.S. Army Corps of Engineers, New York District, New York, NY.

Suffolk County Planning Department (SCPD). 1981. Future Development Alternatives at Lake Montauk and Fort Pond Bay. Prepared for: Town of East Hampton.

U.S. Army Corps of Engineers. 1948. Specifications for Maintenance Dredging in Pawcatuck River, Rhode Island and Connecticut. New England Division, Boston, MA.

U.S. Army Corps of Engineers. 1950. Specifications for Improvement Dredging in Mianus River, Cos Cob Harbor, Connecticut. New England Division, Boston, MA.

U.S. Army Corps of Engineers. 1955. Specifications for Maintenance Dredging in Connecticut River Below Hartford, Connecticut. New England Division, Boston, MA.

U.S. Army Corps of Engineers. 1957. Specifications for Maintenance Dredging in Connecticut River Below Hartford, Connecticut. New England Division, Boston, MA.

U.S. Army Corps of Engineers. 1961. Specifications for Maintenance Dredging in Southport Harbor, Connecticut. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1963a. Specifications for Improvement Dredging in Johnsons Creek, Bridgeport Harbor, Connecticut. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1963b. Specifications for Maintenance Dredging in Stamford Harbor, West Branch and Westcott Cove, Stamford, Connecticut. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1963c. Specifications for Maintenance Dredging in Mianus (Cos Cob Harbor), Greenwich, and Norwalk Harbor, Connecticut. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1968. Specifications for Maintenance Dredging in Greenwich and Fivemile River Harbors, Connecticut. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1969a. Specifications for Improvement Dredging in Stony Creek, Branford, Connecticut. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1969b. Specifications for Maintenance Dredging in Westport Harbor and Saugatuck River, Westport, CT. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1970. Specifications for Improvement Dredging in Niantic Bay and Harbor, East Lyme and Waterford, CT. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1971a. Proposed Maintenance Dredging of Great Salt Pond, Block Island, Rhode Island (Environmental Statement). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1971b. Analysis of Dredged Material, Hempstead Harbor, Hempstead, NY. New York District, New York, NY.

U.S. Army Corps of Engineers. 1975a. Proposed Maintenance Dredging and Marsh Development Project, Branford Harbor, Branford, CT (Final Environmental Impact Statement). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1975b. Proposed Maintenance Dredging of the Housatonic River Estuary, Stratford and Milford Harbor, Branford, CT (Final Environmental Statement). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1976a. Proposed Improvement Dredging of the New London Harbor and Thames River, CT (Environmental Statement). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1976b. Proposed Maintenance Dredging of the Milton Harbor, Rye, NY (Environmental Assessment). New York District, New York, NY.

U.S. Army Corps of Engineers. 1977a. Proposed Maintenance Dredging of the Federal Navigation Project at Stony Brook Harbor, Branford, CT (Environmental Assessment). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1977b. Proposed Maintenance Dredging of the Federal Navigation Project at Mianus River, Mianus, CT (Draft Environmental Statement). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1978a. Proposed Maintenance Dredging of the Federal Navigation Project at Westcott Cove, Stamford, CT (Environmental Assessment). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1978b. Proposed Maintenance Dredging of the Federal Navigation Project of New Haven and Stamford Harbors, CT (Environmental Assessment). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1979a. Specifications for Maintenance Dredging Connecticut River Below Hartford, Connecticut. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1979b. Proposed Maintenance Dredging of the Federal Navigation Project at Norwalk Harbor, Norwalk, CT (Environmental Assessment and Section 404 Evaluation). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1980a. *Environmental Atlas of New England Federal Channel and Harbor Sediments*. Vol. 1-4. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1980b. Proposed Maintenance Dredging of the Federal Navigation Project of Milford Harbor, Milford, CT (Environmental Assessment). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1981. Proposed Maintenance Dredging of the Federal Navigation Project of Guilford Harbor, Guilford, CT (Environmental Assessment). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1982a. Specifications for Maintenance Dredging Connecticut River Below Hartford, Connecticut. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1982b. Specifications for Maintenance Dredging Mill River and Quinnipiac River, New Haven Harbor, Connecticut. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1982c. Proposed Maintenance Dredging of the Black Rock Harbor-Cedar Creek Federal Navigation Channel, Bridgeport, Connecticut (Environmental Assessment, Section 404(b)1 Evaluation, and Finding of No Significant Impact). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1982d. Site Selection and Baseline Surveys of the Black Rock Disposal Site for the Field Verification Program , Bridgeport, Connecticut. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1983. Specifications for Maintenance Dredging Connecticut River Below Hartford, Connecticut, Upper Bars. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1984a. Proposed Maintenance Dredging of the Federal Navigation Project at the North Cove, Old Saybrook, CT (Environmental Assessment Update, 404(b)1 Evaluation, and Finding of No Significant Impact). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1984b. Proposed Maintenance Dredging of the Federal Navigation Project at Stamford Harbor (Stamford Hurricane Barrier), Stamford, CT (Environmental Assessment Update, 404(b)1 Evaluation, and Finding of No Significant Impact). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1985a. Proposed Maintenance Dredging of the Thames River and New London Harbor Channel, New London & Groton, CT (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1985b. Fiscal Year 1984 Maintenance Dredging Evaluation for the Connecticut River Below Hartford. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1985c. Proposed Maintenance Dredging of the Mianus River, Greenwich, Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1986a. Proposed Maintenance Dredging of the Federal Navigation Project at Little Narragansett Bay, Rhode Island and Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1986b. Proposed Maintenance Dredging of the Federal Navigation Project at New Haven Harbor and West River, New Haven and West Haven, Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1987a. Proposed Maintenance Dredging of the Federal Navigation Project at Branford Harbor, Branford, Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1987b. Proposed Maintenance Dredging of the Federal Navigation Project at Milford Harbor, Milford, Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1990. Navigation Improvement Study Reconnaissance Report for Stonington Harbor, Stonington, CT. New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1991. Proposed Maintenance Dredging of the Federal Navigation Project at the North Cove, Old Saybrook, CT (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1992. Proposed Maintenance Dredging of the Federal Navigation Project at Guilford Harbor, Guilford, CT (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1993a. Proposed Maintenance Dredging of the Federal Navigation Project at the Patchogue River, Westbrook, Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1993b. Proposed Maintenance Dredging of the Federal Navigation Project at the Stony Brook Harbor, Branford, Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England Division, Waltham, MA.

U.S. Army Corps of Engineers. 1993c. Proposed Maintenance Dredging of the Federal Navigation Project at New Haven Harbor, New Haven, Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England District, Waltham, MA.

U.S. Army Corps of Engineers. 1996a. Proposed Maintenance Dredging of the Federal Navigation Project at the Little Narragansett Bay (Pawcatuck River), Westerly, Rhode Island and Stonington, Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England District, Waltham, MA.

U.S. Army Corps of Engineers. 1996b. Glen Cove Creek Grain Size Analysis. New York District, New York, NY.

U.S. Army Corps of Engineers. 1999a. Proposed Maintenance Dredging of the Federal Navigation Project at Fivemile River, Darien and Norwalk, Connecticut (Environmental Assessment, 404(b)1 Evaluation, Finding of No Significant Impact, and Section 103 Site Selection). New England District, Waltham, MA.

U.S. Army Corps of Engineers. 1999b. Proposed Maintenance Dredging of the Federal Navigation Project at Mamaroneck Harbor, Mamaroneck, New York (Environmental Assessment, 404(b)1 Evaluation, Finding of No Significant Impact, and Section 103 Site Selection). New York District, New York, NY.

U.S. Army Corps of Engineers. 2000. Thames River Navigation Assessment Study, Montville, Connecticut. Planning Assistance to States Investigation for the Mohegan Tribe. New England District, Concord, MA.

U.S. Army Corps of Engineers. 2002a. Proposed Maintenance Dredging of the Federal Navigation Project at Pistol Point Bar in the Connecticut River Below Hartford, Cromwell and Portland, CT (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2002b. Proposed Maintenance Dredging of the Federal Navigation Project at New Haven Harbor, New Haven, Connecticut (Environmental Assessment, 404(b)1 Evaluation, Finding of No Significant Impact, and Section 103 Site Selection). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2002c. Dredged Material Management Plan, Preliminary Assessment, Summary of Findings and Recommendations for Bridgeport Harbor, Bridgeport, Connecticut. New England District, Concord, MA.

U.S. Army Corps of Engineers. 2003. Proposed Maintenance Dredging of the Federal Navigation Project at Southport Harbor, Fairfield, Connecticut (Environmental Assessment, 404(b)(1) Evaluation, Finding of No Significant Impact, and Section 103 Site Selection). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2005. Proposed Maintenance Dredging of the Federal Navigation Project at Norwalk Harbor, Norwalk, Connecticut (Environmental Assessment, 404(b)(1) Evaluation, and Finding of No Significant Impact). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2007. Proposed Maintenance Dredging of the Federal Navigation Project at Westport Harbor, Westport, CT (Draft Environmental Assessment, 404(b)(1) Evaluation, Finding of No Significant Impact, and Section 103 Site Selection). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2008a. Proposed Maintenance Dredging of the Federal Navigation Project at the North Cove, Old Saybrook, CT (Environmental Assessment, 404(b)(1) Evaluation, Finding of No Significant Impact, and Section 103 Site Selection). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2008b. Grain Size Analysis for Echo Bay Sediments. New York District, New York, NY.

U.S. Army Corps of Engineers. 2009. Proposed Maintenance Dredging of the Federal Navigation Channel and anchorage at the Great Salt Pond, Block Island, Rhode Island (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2010a. Proposed Maintenance Dredging of the Federal Navigation Project at the Patchogue River, Westbrook, Connecticut (Environmental Assessment, 404(b)1 Evaluation, Finding of No Significant Impact, and Section 103 Site Selection). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2010b. Proposed Maintenance Dredging of the Federal Navigation Project at Clinton Harbor, Clinton Harbor, Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2011a. Proposed Maintenance Dredging of the Federal Navigation Project at the Patchogue River, Westbrook, Connecticut (Environmental Assessment, 404(b)1 Evaluation, Finding of No Significant Impact, and Section 103 Site Selection). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2011b. Detailed Project Report of the Section 111 Study at Mattituck Inlet, New York. New York District, New York, NY.

U.S. Army Corps of Engineers. 2012. Proposed Maintenance Dredging of the Federal Navigation Project at the Housatonic River, Stratford and Milford, Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2013a. Proposed Maintenance Dredging of the Federal Navigation Channel and anchorage at the Harbor of Refuge, Block Island, Rhode Island (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2013b. Proposed Maintenance Dredging of the Federal Navigation Channel at Wethersfield Cove, Wethersfield, CT (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2013c. Proposed Maintenance Dredging of the Federal Navigation Project at New Haven Harbor, New Haven, Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2013d. Proposed Maintenance Dredging of the Federal Navigation Project at Bridgeport Harbor, Bridgeport, Connecticut (Environmental Assessment in support of the Dredged Material Management Plan for Bridgeport Harbor, 404(b)1 Evaluation, and Finding of No Significant Impact). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2014a. Proposed Maintenance Dredging of the Federal Navigation Project at the Pawcatuck River, Little Narragansett Bay, and Watch Hill Cove, Rhode Island and Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2014b. Proposed Maintenance Dredging of the Federal Navigation Project at the Mystic River, Groton & Stonington, Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2014c. Proposed Maintenance Dredging of the Federal Navigation Project at Guilford Harbor, Guilford, Connecticut (Environmental Assessment, 404(b)1 Evaluation, and Finding of No Significant Impact). New England District, Concord, MA.

U.S. Army Corps of Engineers. 2014d. Fact Sheet- Port Chester Harbor, New York (Federal Navigation Channel Maintenance of Infrastructure and Stewardship). New York District, New York, NY.

U.S. Army Corps of Engineers. 2014e. Fact Sheet- Mattituck Harbor, New York (Federal Navigation Channel Maintenance of Infrastructure and Stewardship). New York District, New York, NY.

U.S. Army Corps of Engineers. 2014f. Fact Sheet- Glen Cove Creek, New York (Federal Navigation Channel Maintenance of Infrastructure and Stewardship). New York District, New York, NY.

U.S. Army Corps of Engineers. 2014g. Fact Sheet- Eastchester Creek, New York (Federal Navigation Channel Maintenance of Infrastructure and Stewardship). New York District, New York, NY.

United States Testing Company, Inc. 1976. Report of Test for Sediment Samples Identified as Hempstead Bay. Prepared for: U.S. Army Corps of Engineers, New York District, New York, NY. Hoboken, NJ.

Woods Hole Group. 2010. Laboratory Testing in Support of Environmental Assessment, Sampling, and Biological Testing- Mystic River Federal Navigation Project, Mystic River, Groton and Stonington, CT. Prepared for U.S. Army Corps of Engineers, New England District. East Falmouth, MA.

Woods Hole Group. 2012. Final Report: Sampling and Testing In Support of Greenwich Harbor Federal Navigation Project, Greenwich, CT. Prepared for U.S. Army Corps of Engineers, New England District. East Falmouth, MA.

Long Island Sound
Final Dredged Material Management Plan and
Final Programmatic Final Environmental Impact Statement

Appendix D

Dredging and Disposal Cost Matrix Report

December 2015

Prepared by:
Engineering/Planning Division
Environmental Resources Section
U.S. Army Corps of Engineers
New England District
Concord, Massachusetts

APPENDIX D – DREDGING AND DISPOSAL COST MATRIX REPORT
TABLE OF CONTENTS

1.0 INTRODUCTION D-1
2.0 DESCRIPTION AND CALCULATION OF COST D-1
- 2.1 Contract Cost D-1
- 2.2 Design D-2
- 2.3 Sampling & Testing D-2
- 2.4 Coordination & Permitting D-3
- 2.5 Air Quality Mitigation D-3
- 2.6 Contingency D-4

3.0 COSTS D-4
4.0 REFERENCES D-4

ATTACHMENTS

ATTACHMENT A – Transportation Cost Spreadsheet
ATTACHMENT B – Cost Summary Report
ATTACHMENT C – AECOM Air Quality Summary

1.0 INTRODUCTION

The undertaking of a dredging project, be it small (< 500 cubic yards) or large (>1,000,000 cubic yards), has costs associated with the various phases of the project. This report details the estimated costs associated with the phases of various sized dredging projects and methodologies. The projects for which costs have been estimated range in size from 1,000 CY to 4 million CY of dredged material.

Estimated costs for each phase of a dredging project are presented in table form. Descriptions of how the costs were derived for each phase are also detailed below. The costs for projects larger than 10,000 CY were developed assuming that they would be done under the US Army Corps of Engineers (USACE) guidelines. Costs for projects 10,000 CY and lower were developed as if they would be conducted by local interests. The main differences between these two approaches are the inclusion of design phase costs in the projects to which USACE guidelines were applied.

For each dredging project, six phases were identified and include: Contract Cost, Design, Sampling & Testing, Coordination & Permitting, Air Quality Mitigation, and Contingency Costs.

2.0 DESCRIPTION AND CALCULATION OF COST

2.1 CONTRACT COST

With each type of dredge (mechanical, hopper, hydraulic/pipeline) there are different size dredges; mechanical dredging uses multiple bucket sizes, hopper dredges have multiple dredge plant capacities, and hydraulic dredging uses pipelines with multiple pipeline diameter options. The dredge size/capacity was selected for each case based on historic dredging and placement estimates and professional expertise. As an example, to dredge and provide beach nourishment for 75,000 CY of material, when only traveling 5 miles to the disposal site, a small hopper dredge is suitable. When dredging and traveling 50 miles to place the same quantity of material, a medium hopper dredge, with a significantly higher capacity is more applicable due to the longer haul distance.

Additional assumptions include dredge efficiency which was assumed to be the efficiency of removal of dredged material and project duration (in months) which is the greater of either the Dredging Time or Hauling Time from the Corps of Engineer Dredge Estimating Program (CEDEP) CHKLIST (or summary) sheet.

There are several general assumptions that were held constant throughout all the dredging and disposal estimates. All Local Area Factor inputs in CEDEP were held constant; these include Present Year (2011), Economic Index (8102), Labor Adjustment Factor (1.120), Full Cost of Money Rate (2.625%/year), Dates of Money Rate (January to June 2011), Annual Months Available for Dredging (10 months), and Current Fuel Price ($3.56/gal). All CEDEP estimates were completed as Planning Estimates, which include contractor profit. All estimates utilize the Percent of Net Pay as the Non-Pay Computation Method and assume 0% net-pay losses. All estimates assume a 2.0 foot bank height with the project size representing the required dredging depth. The remainder of the Dredge Prism (Paid Overdepth, Not Dug, and Non-Pay yardage) was assumed to be zero in all estimates (See Appendix A, Contract Cost Report).

2.2 DESIGN

The design costs of the project would vary based on the project size. Smaller projects would have a lower cost and larger projects a higher cost. Based on past experience and professional judgment, it was assumed that design costs are 8% of the contract cost.

2.3 SAMPLING & TESTING

The identification and evaluation of suitable disposal/placement options for dredged material requires the characterization of the material to be dredged which includes the collection of sediment and water samples which undergo physical and chemical analysis. If the dredged material is to be placed in an ocean disposal site, it also may be subject to toxicity and bioassay testing. This analysis is conducted according to national standards for all private and federal projects as defined by USACE and the US Environmental Protection Agency (EPA) in guidance documents including; the *Ocean Testing Manual* ("Evaluation of Dredged Material Proposed for Ocean Disposal - Testing Manual" (EPA/USACE, 1991)), the *Inland Testing Manual* ("Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. - Testing Manual" (EPA/USACE, 1998)), and the *Quality Assurance/Quality Control Manual* ("Guidance for Sampling and Analysis of Sediments, Water and Tissue for Dredged Material Evaluations: Chemical Evaluations" (EPA/USACE, 1995)). In addition, projects in the New England states must meet the requirements set forth in the *Regional Implementation Manual* ("Regional Implementation Manual for the Evaluation of Dredged Material Proposed For Disposal In New England Waters" (EPA/USACE, 2004)), which provides additional, region specific guidance as agreed upon by USACE, New England District (NAE)and EPA Region 1.

The types of testing to be required and the specific suite of chemical analysis to be performed vary according to the historical contaminant inputs to the watershed, the potentially available disposal options which are augmented by the requirements of State regulatory agencies. In order to determine the cost of sampling and testing NAE applied a set of generalized assumptions for projects of varying size and complexity to the applicable regional and local testing requirements for disposal options including ocean placement, beach nourishment, confined or unconfined upland placement, marsh creation, confined aquatic disposal (CAD) cell creation and placement, and containment disposal facility or containment island placement. The number of samples required to be collected and analyzed for any given project was determined by identifying the average number collected from historic projects of similar size and complexity. The level of effort required for field sample collection was calculated by multiplying the number of samples by an average daily production rate for sample collection and processing. The level of effort for analysis and reporting tasks was determined by averaging the number of labor hours utilized for historic projects of similar size and complexity. Costs for labor, equipment, and analysis were taken from the current year of NAE's Environmental Services contract that has been used for sampling and analysis. Contract management and oversight costs (preparation of the scope of work, acquisition, etc) were determined by applying levels of effort for similar sized projects.

2.4 COORDINATION & PERMITTING

As noted in a the NAE Report titled Federal, State, and Local Regulations and Programs Applicable to Dredged Material Management (USACE 2011), there are numerous regulations and programs applicable to dredging projects. As such, considerable effort is typically expended to formulate and evaluate dredging alternatives and to prepare documents which detail how proposed dredging projects comply with these regulations. These documents (i.e. Environmental Impact Statements (EIS), Environmental Assessments (EA)) and compliances (i.e. coastal zone management consistency determinations, etc.) are then sent to applicable regulatory and resource agencies for coordination, review and comment Additionally, permitting actions are generally required for most dredging projects (Federal and private). The permitting (compliance and approval or coordination) process usually involves the submittal of detailed project information to applicable agencies for their review, comment and approval (the completion of sets of standardized forms and the submission of the previously mentioned documents detailing the dredging project and data relevant to the project). Fees must be paid to regulatory agencies (?) for permitting; however they are not included in the estimated costs developed in this report since they would vary from State to State.

Costs for coordination and permitting were developed and are presented in Appendix A. Costs include efforts for the following:

- biological resource studies (e.g., benthos, eelgrass, shellfish, fish, etc.),
- cultural resource studies,
- preparation of a NEPA document (e.g., Environmental Assessment, Environmental Impact Statement),
- coordination with Federal, State, and Local Resource Agencies, and
- preparation of Federal, State, and Local permitting documents.

2.5 AIR QUALITY MITIGATION

USACE-NAE contracted with AECOM, Inc. to create a tool to predict the air emissions from activities associated with dredging in the various states surrounding Long Island Sound. Various scenarios were developed and air quality models were run to predict air emissions and cost estimates for air mitigation related to dredging projects in Long Island Sound. It should be noted that the air emissions calculated aren't just related to equipment used to perform the dredging but any equipment needed as part of the project. That would include tugs, support vessels, as well as trucks and bulldozers which would be used for an upland placement project.

If direct and/or indirect air emissions exceed the *de minimis* threshold (a regulatory threshold considered to be of no environmental concern) for a specific nonattainment pollutant as a result of a project, a formal conformity determination is required through more refined air quality impact analyses for localized pollutants, such as particulate matter (PM) and carbon monoxide (CO), and for regional pollutants such as nitrogen oxide (NOx) or volatile organic compounds (VOC).

Cost data for key components of the dredging work were developed by the USACE in the form of total and unit prices (where applicable) for major components of the work (e.g., dredging, dewatering, disposal, etc.). The prices were all-inclusive and did not break out the portions of the cost attributable to individual factors such as fuel cost, labor cost, and equipment costs. Therefore, for the purposes of the model all costs were used directly. A fuel cost of $4.20 per gallon (fuel costs used by AECOM were based on averages at the time in which the estimates were prepared and are different than those used in the NAE dredging cost estimating) was used for all cost data provided by the USACE. (See Appendix B for full report).

2.6 CONTINGENCY

Since typical costs of projects were being calculated, a contingency factor needed to be applied to the cost estimate to reflect additional costs or uncertainties that would be experienced in site specific projects. A contingency of 20 percent of the contract cost was added to the overall cost estimate.

3.0 COSTS

The costs for the following project phases are included in Appendix A:

- Contract Cost of Dredging
- Design Efforts
- Sampling & Testing
- Coordination & Permitting
- Air Quality Mitigation
- Project Contingency

4.0 REFERENCES

EPA/USACE. 1991. Evaluation of Dredged Material Proposed for Ocean Disposal - Testing Manual". EPA 503/8-91/001. 214 pp.

EPA/USACE. 1995. Quality Assurance/Quality Control Manual :"Guidance for Sampling and Analysis of Sediments, Water and Tissue for Dredged Material Evaluations: Chemical Evaluations. EPA 823-B-95-001. 297 pp.

EPA/USACE. 1998. Inland Testing Manual : Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. - Testing Manual. EPA 823-B-98-004. 176 pp.

EPA/USACE. 2004. Regional Implementation Manual ("Regional Implementation Manual for the Evaluation of Dredged Material Proposed For Disposal In New England Waters. 62 pp.

USACE. 2011. Long Island Sound Dredged Material Management Plan: Federal, State, and Local regulations and Programs Applicable to Dredge Material Management. US Army Corps of Engineers, 696 Virginia Road, Concord, MA 01742. 79 pp.

ATTACHMENT A

TRANSPORTATION COST SPREADSHEET

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN
DREDGING AND DISPOSAL TRANSPORTATION COST MATRIX - DREDGING PLANT AND WET HAUL DISTANCES

Cubic Yards Dredged	Cost Items	Ocean or Nearshore Disposal - Haul Distances								
		<5 Miles		10 Miles		20 Miles		30 Miles	60 Miles	120 Miles
		Bucket	Hopper	Bucket	Hopper	Bucket	Hopper	Bucket	Bucket	Bucket
1000 CY	Contract Cost	$294,400	$396,500	$299,500	$405,000	$429,000	$422,100	$436,100		
	Design	$23,552	$31,720	$23,960	$32,400	$34,320	$33,768	$34,888		
	Sampling & Testing	$181,963	$181,963	$181,963	$181,963	$181,963	$181,963	$181,963		
	Coordination & Permitting	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000		
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0		
	Contingency	$58,880	$79,300	$59,900	$81,000	$85,800	$84,420	$87,220		
	TOTAL	$608,795	$739,483	$615,323	$750,363	$781,083	$772,251	$790,171		
2000 CY	Contract Cost	$311,900	$413,600	$318,800	$422,200	$448,000	$456,300	$465,100	$621,400	
	Design	$24,952	$33,088	$25,504	$33,776	$35,840	$36,504	$37,208	$49,712	
	Sampling & Testing	$181,963	$181,963	$181,963	$181,963	$181,963	$181,963	$181,963	$181,963	
	Coordination & Permitting	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	
	Contingency	$62,380	$82,720	$63,760	$84,440	$89,600	$91,260	$93,020	$124,280	
	TOTAL	$631,195	$761,371	$640,027	$772,379	$805,403	$816,027	$827,291	$1,027,355	
5000 CY	Contract Cost	$347,700	$456,400	$367,100	$490,500	$384,700	$575,900	$513,900	$724,600	
	Design	$27,816	$36,512	$29,368	$39,240	$30,776	$46,072	$41,112	$57,968	
	Sampling & Testing	$209,314	$209,314	$209,314	$209,314	$209,314	$209,314	$209,314	$209,314	
	Coordination & Permitting	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	
	Contingency	$69,540	$91,280	$73,420	$98,100	$76,940	$115,180	$102,780	$144,920	
	TOTAL	$704,370	$843,506	$729,202	$887,154	$751,730	$996,466	$917,106	$1,186,802	
10,000 CY	Contract Cost	$430,052	$533,396	$469,970	$610,296	$494,976	$763,896	$680,573	$962,932	
	Design	$34,404	$42,672	$37,598	$48,824	$39,598	$61,112	$54,446	$77,035	
	Sampling & Testing	$281,759	$281,759	$281,759	$281,759	$281,759	$281,759	$281,759	$281,759	
	Coordination & Permitting	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	
	Contingency	$86,010	$106,679	$93,994	$122,059	$98,995	$152,779	$136,115	$192,586	
	TOTAL	$882,226	$1,014,506	$933,321	$1,112,938	$965,329	$1,309,546	$1,202,893	$1,564,312	
26,000 CY	Contract Cost	$979,900	$773,000	$778,700	$977,900	$836,700	$1,387,700	$1,136,200	$1,677,600	$3,232,600
	Design	$39,196	$30,920	$31,148	$39,116	$33,468	$55,508	$45,448	$67,104	$129,304
	Sampling & Testing	$281,850	$281,850	$281,850	$281,850	$281,850	$281,850	$281,850	$281,850	$281,850
	Coordination & Permitting	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$97,990	$77,300	$77,870	$97,790	$83,670	$138,770	$113,620	$167,760	$323,260
	TOTAL	$1,448,936	$1,213,070	$1,219,568	$1,446,656	$1,285,688	$1,913,828	$1,627,118	$2,244,314	$4,017,014
50,000 CY	Contract Cost	$1,056,300	$1,140,900	$1,251,800	$1,525,400	$1,614,300	$2,319,400	$1,834,800	$2,773,400	$4,969,000
	Design	$42,252	$45,636	$50,072	$61,016	$64,572	$92,776	$73,392	$110,936	$198,760
	Sampling & Testing	$281,940	$281,940	$281,940	$281,940	$281,940	$281,940	$281,940	$281,940	$281,940
	Coordination & Permitting	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$105,630	$114,090	$125,180	$152,540	$161,430	$231,940	$183,480	$277,340	$496,900
	TOTAL	$1,547,122	$1,643,566	$1,769,992	$2,081,896	$2,183,242	$2,987,056	$2,434,612	$3,504,616	$6,007,600
75,000 CY	Contract Cost	$1,443,500	$1,517,100	$1,735,500	$2,098,400	$2,219,000	$3,284,900	$2,549,000	$3,893,400	$7,000,000
	Design	$57,740	$60,684	$69,420	$83,936	$88,760	$131,396	$101,960	$155,736	$280,000
	Sampling & Testing	$282,121	$282,121	$282,121	$282,121	$282,121	$282,121	$282,121	$282,121	$282,121
	Coordination & Permitting	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$144,350	$151,710	$173,550	$209,840	$221,900	$328,490	$254,900	$389,340	$700,000
	TOTAL	$1,988,711	$2,072,615	$2,321,591	$2,735,297	$2,872,781	$4,087,907	$3,248,981	$4,781,597	$8,323,121
100,000 CY	Contract Cost	$1,839,300	$1,893,400	$2,229,300	$2,671,400	$2,631,800	$4,259,400	$3,277,800	$5,029,900	$9,076,000
	Design	$73,572	$75,736	$89,172	$106,856	$105,272	$170,376	$131,112	$201,196	$363,040
	Sampling & Testing	$311,700	$311,700	$311,700	$311,700	$311,700	$311,700	$311,700	$311,700	$311,700
	Coordination & Permitting	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$183,930	$189,340	$222,930	$267,140	$263,180	$425,940	$327,780	$502,990	$907,600
	TOTAL	$2,469,502	$2,531,176	$2,914,102	$3,418,096	$3,372,952	$5,228,416	$4,109,392	$6,106,786	$10,719,340
250,000 CY	Contract Cost	$4,179,800	$4,169,400	$5,150,800	$6,099,400	$6,490,800	$10,069,400	$7,590,800	$11,803,900	$21,350,500
	Design	$167,192	$166,776	$206,032	$243,976	$259,632	$402,776	$303,632	$472,156	$854,020
	Sampling & Testing	$384,145	$384,145	$384,145	$384,145	$384,145	$384,145	$384,145	$384,145	$384,145
	Coordination & Permitting	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$417,980	$416,940	$515,080	$609,940	$649,080	$1,006,940	$759,080	$1,180,390	$2,135,050
	TOTAL	$5,229,117	$5,217,261	$6,336,057	$7,417,461	$7,863,657	$11,943,261	$9,117,657	$13,920,591	$24,803,715
500,000 CY	Contract Cost	$11,409,100	$5,229,000	$11,969,100	$7,244,000	$13,089,100	$11,244,000	$15,395,000	$20,778,700	$32,351,800
	Design	$456,364	$209,160	$478,764	$289,760	$523,564	$449,760	$615,800	$831,148	$1,294,072
	Sampling & Testing	$454,486	$454,486	$454,486	$454,486	$454,486	$454,486	$454,486	$454,486	$454,486
	Coordination & Permitting	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000
	AQ Mitigation	$933,155	$0	$943,064	$0	$962,881	$0	$982,698	$1,042,149	$1,161,053
	Contingency	$1,140,910	$522,900	$1,196,910	$724,400	$1,308,910	$1,124,400	$1,539,500	$2,077,870	$3,235,180
	TOTAL	$14,489,015	$6,510,546	$15,137,324	$8,807,646	$16,433,941	$13,367,646	$19,082,484	$25,279,353	$38,591,591
750,000 CY	Contract Cost	$16,959,100	$7,549,000	$17,791,600	$10,564,000	$19,471,600	$16,579,000	$23,488,700	$30,888,700	$41,071,800
	Design	$678,364	$301,960	$711,664	$422,560	$778,864	$663,160	$939,548	$1,235,548	$1,642,872
	Sampling & Testing	$484,212	$484,212	$484,212	$484,212	$484,212	$484,212	$484,212	$484,212	$484,212
	Coordination & Permitting	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000
	AQ Mitigation	$1,395,366	$976,667	$1,410,230	$1,143,232	$1,439,955	$1,476,362	$1,469,681	$1,558,858	$1,737,213
	Contingency	$1,695,910	$754,900	$1,779,160	$1,056,400	$1,947,160	$1,657,900	$2,348,870	$3,088,870	$4,107,180
	TOTAL	$21,322,952	$10,176,739	$22,286,866	$13,780,404	$24,231,791	$20,970,634	$28,841,011	$37,366,188	$49,153,277
1,000,000 CY	Contract Cost	$21,382,500	$8,811,700	$22,302,500	$12,321,700	$24,152,500	$19,321,700	$26,262,500	$34,186,100	$50,544,200
	Design	$855,300	$352,468	$892,100	$492,868	$966,100	$772,868	$1,050,500	$1,367,444	$2,021,768
	Sampling & Testing	$554,463	$554,463	$554,463	$554,463	$554,463	$554,463	$554,463	$554,463	$554,463
	Coordination & Permitting	$115,000	$115,000	$115,000	$115,000	$115,000	$115,000	$115,000	$115,000	$115,000
	AQ Mitigation	$1,835,923	918, 802	$1,840,877	$1,096,978	$1,850,786	$1,453,330	$1,860,695	$1,890,420	$1,949,871
	Contingency	$2,138,250	$881,170	$2,230,250	$1,232,170	$2,415,250	$1,932,170	$2,626,250	$3,418,610	$5,054,420
	TOTAL	$26,881,436	$10,714,801	$27,935,190	$15,813,179	$30,054,099	$24,149,531	$32,469,408	$41,532,037	$60,239,722
2,000,000 CY	Contract Cost	$42,312,500	$16,591,700	$44,172,500	$23,611,700	$47,872,500	$37,591,700	$56,516,100	$67,736,100	$100,084,200
	Design	$1,692,500	$663,668	$1,766,900	$944,468	$1,914,900	$1,503,668	$2,260,644	$2,709,444	$4,003,368
	Sampling & Testing	$613,678	$613,678	$613,678	$613,678	$613,678	$613,678	$613,678	$613,678	$613,678
	Coordination & Permitting	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000
	AQ Mitigation	$3,663,114	$1,815,519	$3,673,023	$2,171,870	$3,692,840	$2,884,574	$3,703,657	$3,772,108	$3,891,011
	Contingency	$4,231,250	$1,659,170	$4,417,250	$2,361,170	$4,787,250	$3,759,170	$5,651,610	$6,773,610	$10,008,420
	TOTAL	$52,693,042	$21,523,735	$54,823,351	$29,882,886	$59,061,168	$46,532,790	$68,925,689	$81,784,940	$118,780,677
4,000,000 CY	Contract Cost	$84,212,500	$32,151,700	$87,892,500	$46,151,700	$95,292,500	$74,151,700	$112,396,100	$134,876,100	$199,204,200
	Design	$3,368,500	$1,286,068	$3,515,700	$1,846,068	$3,811,700	$2,966,068	$4,495,844	$5,395,044	$7,968,168
	Sampling & Testing	$656,939	$656,939	$656,939	$656,939	$656,939	$656,939	$656,939	$656,939	$656,939
	Coordination & Permitting	$210,000	$210,000	$210,000	$210,000	$210,000	$210,000	$210,000	$210,000	$210,000
	AQ Mitigation	$7,317,495	$3,608,952	$7,337,313	$4,321,655	$7,376,947	$5,747,062	$7,416,581	$7,535,484	$7,773,291
	Contingency	$8,421,250	$3,215,170	$8,789,250	$4,615,170	$9,529,250	$7,415,170	$11,239,610	$13,487,610	$19,920,420
	TOTAL	$104,186,684	$41,128,829	$108,401,702	$57,801,532	$116,877,336	$91,146,939	$136,415,074	$162,161,177	$235,733,018

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN
DREDGING AND DISPOSAL TRANSPORTATION COST MATRIX - DREDGING PLANT AND WET HAUL DISTANCES

Cubic Yards Dredged	Cost Items	Beach Nourisment Direct Placement		Beach Nourishment Pump-Off Placement				Marsh Creation		CAD Cell Creation & Placement	
		≤1 Mile	2 Miles	5 Miles	10 Miles	20 Miles	50 Miles	≤2 Miles		2 Miles	5 Miles
		Pipeline	Pipeline	Pump-Off	Pump-Off	Pump-Off	Pump-Off	Bucket	Pipeline	Bucket	Bucket
1000 CY	Contract Cost	$452,100	$473,000	$575,800	$588,100	$789,900	$1,096,000	$445,200	$543,300	$405,800	$380,900
	Design	$36,168	$37,840	$46,064	$47,048	$63,192	$87,680	$35,616	$43,464	$32,464	$30,472
	Sampling &	$54,945	$54,945	$54,945	$54,945	$54,945	$54,945	$61,908	$61,908	$142,458	$142,458
	Coordination &	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$52,000	$52,000	$50,000	$50,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$90,420	$94,600	$115,160	$117,620	$157,980	$219,200	$89,040	$108,660	$81,160	$76,180
	TOTAL	$683,633	$710,385	$841,969	$857,713	$1,116,017	$1,507,825	$683,764	$809,332	$711,882	$680,010
2000 CY	Contract Cost	$478,200	$511,300	$603,400	$628,100	$826,500	$1,145,800	$521,300	$605,700	$464,600	$466,500
	Design	$38,256	$40,904	$48,272	$50,248	$66,120	$91,664	$41,704	$48,456	$37,168	$37,320
	Sampling &	$54,945	$54,945	$54,945	$54,945	$54,945	$54,945	$61,908	$61,908	$142,458	$142,458
	Coordination &	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$52,000	$52,000	$50,000	$50,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$95,640	$102,260	$120,680	$125,620	$165,300	$229,160	$104,260	$121,140	$92,920	$93,300
	TOTAL	$717,041	$759,409	$877,297	$908,913	$1,162,865	$1,571,569	$781,172	$889,204	$787,146	$789,578
5000 CY	Contract Cost	$484,300	$552,100	$686,400	$747,900	$1,009,800	$1,295,200	$974,400	$763,600	$622,100	$629,300
	Design	$38,744	$44,168	$54,912	$59,832	$80,784	$103,616	$77,952	$61,088	$49,768	$50,344
	Sampling &	$55,969	$55,969	$55,969	$55,969	$55,969	$55,969	$64,057	$64,057	$155,220	$155,220
	Coordination &	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$52,000	$52,000	$50,000	$50,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$96,860	$110,420	$137,280	$149,580	$201,960	$259,040	$194,880	$152,720	$124,420	$125,860
	TOTAL	$725,873	$812,657	$984,561	$1,063,281	$1,398,513	$1,763,825	$1,363,289	$1,093,465	$1,001,508	$1,010,724
10,000 CY	Contract Cost	$549,049	$643,556	$836,843	$935,443	$1,242,877	$1,567,421	$1,122,258	$1,414,927	$878,986	$905,236
	Design	$43,924	$51,484	$66,947	$74,835	$99,430	$125,394	$89,781	$113,194	$70,319	$72,419
	Sampling &	$65,413	$65,413	$65,413	$65,413	$65,413	$65,413	$75,749	$75,749	$202,593	$202,593
	Coordination &	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$52,000	$52,000	$50,000	$50,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$109,810	$128,711	$167,369	$187,089	$248,575	$313,484	$224,452	$282,985	$175,797	$181,047
	TOTAL	$818,195	$939,164	$1,186,572	$1,312,780	$1,706,295	$2,121,712	$1,564,239	$1,938,855	$1,377,695	$1,411,295
26,000 CY	Contract Cost	$730,100	$894,900	$1,265,500	$1,536,400	$1,969,500	$2,338,200	$2,772,600	$1,838,400	$2,073,000	$2,048,700
	Design	$29,204	$35,796	$50,620	$61,456	$78,780	$93,528	$110,904	$73,536	$82,920	$81,948
	Sampling &	$65,503	$65,503	$65,503	$65,503	$65,503	$65,503	$75,839	$75,839	$202,774	$202,774
	Coordination &	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$52,000	$52,000	$50,000	$50,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$73,010	$89,490	$126,550	$153,640	$196,950	$233,820	$277,260	$183,840	$207,300	$204,870
	TOTAL	$947,817	$1,135,689	$1,558,173	$1,866,999	$2,360,733	$2,781,051	$3,288,603	$2,223,615	$2,615,994	$2,588,292
50,000 CY	Contract Cost	$1,177,100	$1,353,500	$1,979,100	$2,496,600	$3,084,600	$3,605,700	$4,813,500	$3,213,700	$3,074,600	$3,239,200
	Design	$47,084	$54,140	$79,164	$99,864	$123,384	$144,228	$192,540	$128,548	$122,984	$129,568
	Sampling &	$65,593	$65,593	$65,593	$65,593	$65,593	$65,593	$75,930	$75,930	$202,955	$202,955
	Coordination &	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$69,000	$69,000	$61,000	$61,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$164,356	$178,617
	Contingency	$117,710	$135,350	$197,910	$249,660	$308,460	$360,570	$481,350	$321,370	$307,460	$323,920
	TOTAL	$1,468,487	$1,669,583	$2,382,767	$2,972,717	$3,643,037	$4,237,091	$5,632,320	$3,808,548	$3,933,355	$4,135,260
75,000 CY	Contract Cost	$1,572,200	$1,789,200	$2,694,600	$3,470,900	$4,266,800	$4,874,200	$8,301,100	$4,547,400	$4,374,600	$4,780,600
	Design	$62,888	$71,568	$107,784	$138,836	$170,672	$194,968	$332,044	$181,896	$174,984	$191,224
	Sampling &	$65,774	$65,774	$65,774	$65,774	$65,774	$65,774	$76,110	$76,110	$203,316	$203,316
	Coordination &	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$69,000	$69,000	$61,000	$61,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$335,526	$357,766
	Contingency	$157,220	$178,920	$269,460	$347,090	$426,680	$487,420	$830,110	$454,740	$437,460	$478,060
	TOTAL	$1,919,082	$2,166,462	$3,198,618	$4,083,600	$4,990,926	$5,683,362	$9,608,364	$5,329,146	$5,586,886	$6,071,966
100,000 CY	Contract Cost	$1,924,483	$2,185,300	$3,410,100	$4,445,100	$5,332,600	$6,142,200	$10,969,800	$5,795,600	$5,670,400	$6,156,500
	Design	$76,979	$87,412	$136,404	$177,804	$213,304	$245,688	$438,792	$231,824	$226,816	$246,260
	Sampling &	$66,618	$66,618	$66,618	$66,618	$66,618	$66,618	$78,078	$78,078	$215,717	$215,717
	Coordination &	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$69,000	$69,000	$61,000	$61,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$435,937	$455,706
	Contingency	$192,448	$218,530	$341,010	$444,510	$533,260	$614,220	$1,096,980	$579,560	$567,040	$615,650
	TOTAL	$2,321,528	$2,618,860	$4,015,132	$5,195,032	$6,206,782	$7,129,726	$12,652,650	$6,754,062	$7,176,910	$7,750,833
250,000 CY	Contract Cost	$4,030,800	$4,762,300	$7,693,100	$10,303,100	$12,491,600	$13,798,700	$26,952,100	$13,790,300	$12,531,900	$13,027,700
	Design	$161,232	$190,492	$307,724	$412,124	$499,664	$551,948	$1,078,084	$551,612	$501,276	$521,108
	Sampling &	$76,061	$76,061	$76,061	$76,061	$76,061	$76,061	$89,771	$89,771	$263,090	$263,090
	Coordination &	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$95,000	$95,000	$80,000	$80,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$1,076,744	$1,147,527
	Contingency	$403,080	$476,230	$769,310	$1,030,310	$1,249,160	$1,379,870	$2,695,210	$1,379,030	$1,253,190	$1,302,770
	TOTAL	$4,751,173	$5,585,083	$8,926,195	$11,901,595	$14,396,485	$15,886,579	$30,910,165	$15,905,713	$15,706,200	$16,342,195
500,000 CY	Contract Cost	$5,994,400	$7,392,300	$10,892,400	$13,377,400	$12,384,400	$18,371,900	$58,032,700	$25,597,800	$26,773,600	$27,100,800
	Design	$239,776	$295,692	$435,696	$535,096	$495,376	$734,876	$2,321,308	$1,023,912	$1,070,944	$1,084,032
	Sampling &	$85,595	$85,595	$85,595	$85,595	$85,595	$85,595	$101,554	$101,554	$308,450	$308,450
	Coordination &	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$95,000	$95,000
	AQ Mitigation	$214,419	$214,419	$308,625	$308,625	$308,625	$1,679,505	$1,005,002	$217,007	$2,100,260	$2,147,036
	Contingency	$599,440	$739,230	$1,089,240	$1,337,740	$1,238,440	$1,837,190	$5,803,270	$2,559,780	$2,677,360	$2,710,080
	TOTAL	$7,233,630	$8,827,236	$12,911,556	$15,744,456	$14,612,436	$22,809,066	$67,363,834	$29,600,053	$33,025,614	$33,445,398
750,000 CY	Contract Cost							$86,869,000	$38,160,100	$39,979,800	$40,478,200
	Design							$3,474,760	$1,526,404	$1,599,192	$1,619,128
	Sampling &							$103,883	$103,883	$323,768	$323,768
	Coordination &							$135,000	$135,000	$110,000	$110,000
	AQ Mitigation							$1,543,638	$318,589	$3,146,093	$3,216,187
	Contingency							$8,686,900	$3,816,010	$3,997,980	$4,047,820
	TOTAL							$100,813,181	$44,059,986	$49,156,833	$49,795,103
1,000,000 CY	Contract Cost							$114,713,700	$50,717,500	$52,194,800	$52,729,300
	Design							$4,588,548	$2,028,700	$2,087,792	$2,109,172
	Sampling &							$115,576	$115,576	$368,946	$368,946
	Coordination &							$140,000	$140,000	$115,000	$115,000
	AQ Mitigation							$2,055,272	$421,457	$3,421,945	$3,474,340
	Contingency							$11,471,370	$5,071,750	$5,219,480	$5,272,930
	TOTAL							$133,084,466	$58,494,983	$63,407,963	$64,069,688
2,000,000 CY	Contract Cost							$228,939,000	$99,205,400	$103,901,100	$104,970,000
	Design							$9,157,560	$3,968,216	$4,156,044	$4,198,800
	Sampling &							$119,783	$119,783	$396,484	$396,484
	Coordination &							$220,000	$220,000	$180,000	$180,000
	AQ Mitigation							$4,101,812	$2,372,311	$6,835,159	$6,939,948
	Contingency							$22,893,900	$9,920,540	$10,390,110	$10,497,000
	TOTAL							$265,432,055	$115,806,250	$125,858,897	$127,182,232
4,000,000 CY	Contract Cost							$457,429,500	$186,872,000	$207,535,800	$209,491,600
	Design							$18,297,180	$7,474,880	$8,301,432	$8,379,664
	Sampling &							$129,688	$129,688	$429,624	$429,624
	Coordination &							$250,000	$250,000	$210,000	$210,000
	AQ Mitigation							$8,194,292	$4,720,602	$13,661,585	$13,871,163
	Contingency							$45,742,950	$18,687,200	$20,753,580	$20,949,160
	TOTAL							$530,043,610	$218,134,370	$250,892,021	$253,331,211

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN
DREDGING AND DISPOSAL TRANSPORTATION COST MATRIX - DREDGING PLANT AND WET HAUL DISTANCES

Cubic Yards Dredged	Cost Items	Confined or Unconfined Upland Dewatering and Disposal - Including Cost of Rehandling Ashore and Trucking Where Needed									
		0≤2 Miles No Haul		5 Miles		10 Miles		20 Miles	30 Miles	60 Miles	Railroad to PA Mines
		Bucket	Pipeline	Bucket	Pipeline	Bucket	Pipeline	Bucket	Bucket	Bucket	Bucket
1000 CY	Contract Cost	$401,300	$549,700	$427,100	$587,900	$433,500	$594,400	$440,100	$440,100	$448,300	$570,500
	Design	$32,104	$43,976	$34,168	$47,032	$34,680	$47,552	$35,208	$35,208	$35,864	$45,640
	Sampling &	$62,369	$62,369	$62,369	$62,369	$62,369	$62,369	$62,369	$62,369	$62,369	$62,369
	Coordination &	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$80,260	$109,940	$85,420	$117,580	$86,700	$118,880	$88,020	$88,020	$89,660	$114,100
	TOTAL	$626,033	$815,985	$659,057	$864,881	$667,249	$873,201	$675,697	$675,697	$686,193	$842,609
2000 CY	Contract Cost	$455,300	$578,000	$478,700	$642,200	$491,500	$691,000	$504,900	$521,100		$765,600
	Design	$36,424	$46,240	$38,296	$51,376	$39,320	$55,280	$40,392	$41,688		$61,248
	Sampling &	$62,369	$62,369	$62,369	$62,369	$62,369	$62,369	$62,369	$62,369		$62,369
	Coordination &	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000		$50,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0		$0
	Contingency	$91,060	$115,600	$95,740	$128,440	$98,300	$138,200	$100,980	$104,220		$153,120
	TOTAL	$695,153	$852,209	$725,105	$934,385	$741,489	$996,849	$758,641	$779,377		$1,092,337
5000 CY	Contract Cost	$483,200	$633,300	$612,200	$775,300	$644,300	$807,400	$677,600	$835,200	$1,015,200	$1,329,500
	Design	$38,656	$50,664	$48,976	$62,024	$51,544	$64,592	$54,208	$66,816	$81,216	$106,360
	Sampling &	$64,888	$64,888	$64,888	$64,888	$64,888	$64,888	$64,888	$64,888	$64,888	$64,888
	Coordination &	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$96,640	$126,660	$122,440	$155,060	$128,860	$161,480	$135,520	$167,040	$203,040	$265,900
	TOTAL	$733,384	$925,512	$898,504	$1,107,272	$939,592	$1,148,360	$982,216	$1,183,944	$1,414,344	$1,816,648
10,000 CY	Contract Cost	$600,052	$736,515	$858,652	$987,267	$922,252	$1,051,467	$988,978	$1,070,218	$1,165,618	$2,292,652
	Design	$48,004	$58,921	$68,692	$78,981	$73,780	$84,117	$79,118	$85,617	$93,249	$183,412
	Sampling &	$77,219	$77,219	$77,219	$77,219	$77,219	$77,219	$77,219	$77,219	$77,219	$77,219
	Coordination &	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$120,010	$147,303	$171,730	$197,453	$184,450	$210,293	$197,796	$214,044	$233,124	$458,530
	TOTAL	$895,285	$1,069,958	$1,226,293	$1,390,921	$1,307,701	$1,473,097	$1,393,111	$1,497,098	$1,619,210	$3,061,813
26,000 CY	Contract Cost	$755,600	$986,600	$994,700	$1,332,400	$1,259,200	$1,394,800	$1,458,600	$1,751,300	$2,552,600	$4,095,100
	Design	$30,224	$39,464	$39,788	$53,296	$50,368	$55,792	$58,344	$70,052	$102,104	$163,804
	Sampling &	$77,412	$77,412	$77,412	$77,412	$77,412	$77,412	$77,412	$77,412	$77,412	$77,412
	Coordination &	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$75,560	$98,660	$99,470	$133,240	$125,920	$139,480	$145,860	$175,130	$255,260	$409,510
	TOTAL	$988,796	$1,252,136	$1,261,370	$1,646,348	$1,562,900	$1,717,484	$1,790,216	$2,123,894	$3,037,376	$4,795,826
50,000 CY	Contract Cost	$1,506,300	$1,542,300	$2,796,500	$2,854,200	$3,117,300	$3,145,200	$3,450,900	$3,198,200	$4,718,300	$9,969,300
	Design	$60,252	$61,692	$111,860	$114,168	$124,692	$125,808	$138,036	$127,928	$188,732	$398,772
	Sampling &	$77,605	$77,605	$77,605	$77,605	$77,605	$77,605	$77,605	$77,605	$77,605	$77,605
	Coordination &	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$150,630	$154,230	$279,650	$285,420	$311,730	$314,520	$345,090	$319,820	$471,830	$996,930
	TOTAL	$1,855,787	$1,896,827	$3,326,615	$3,392,393	$3,692,327	$3,724,133	$4,072,631	$3,784,553	$5,517,467	$11,503,607
75,000 CY	Contract Cost	$2,068,500	$4,003,700	$2,118,600	$3,104,900	$4,485,000	$4,452,700	$4,918,700	$5,700,700	$6,702,700	$14,763,000
	Design	$82,740	$160,148	$84,744	$124,196	$179,400	$178,108	$196,748	$228,028	$268,108	$590,520
	Sampling &	$77,991	$77,991	$77,991	$77,991	$77,991	$77,991	$77,991	$77,991	$77,991	$77,991
	Coordination &	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$206,850	$400,370	$211,860	$310,490	$448,500	$445,270	$491,870	$570,070	$670,270	$1,476,300
	TOTAL	$2,497,081	$4,703,209	$2,554,195	$3,678,577	$5,251,891	$5,215,069	$5,746,309	$6,637,789	$7,780,069	$16,968,811
100,000 CY	Contract Cost	$2,638,300	$2,642,300	$5,218,500	$5,047,800	$5,860,300	$5,630,200	$6,527,500	$7,531,200	$8,828,100	$19,564,300
	Design	$105,532	$105,692	$208,740	$201,912	$234,412	$225,208	$261,100	$301,248	$353,124	$782,572
	Sampling &	$80,124	$80,124	$80,124	$80,124	$80,124	$80,124	$80,124	$80,124	$80,124	$80,124
	Coordination &	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000	$61,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,049,789
	Contingency	$263,830	$264,230	$521,850	$504,780	$586,030	$563,020	$652,750	$753,120	$882,810	$1,956,430
	TOTAL	$3,148,786	$3,153,346	$6,090,214	$5,895,616	$6,821,866	$6,559,552	$7,582,474	$8,726,692	$10,205,158	$24,494,215
250,000 CY	Contract Cost	$6,029,800	$5,835,700	$12,480,000	$11,804,800	$14,084,800	$13,259,800	$13,952,800	$16,286,700	$28,722,987	$48,344,800
	Design	$241,192	$233,428	$499,200	$472,192	$563,392	$530,392	$558,112	$651,468	$1,148,919	$1,933,792
	Sampling &	$92,454	$92,454	$92,454	$92,454	$92,454	$92,454	$92,454	$92,454	$92,454	$92,454
	Coordination &	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000	$80,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$602,980	$583,570	$1,248,000	$1,180,480	$1,408,480	$1,325,980	$1,395,280	$1,628,670	$2,872,299	$4,834,480
	TOTAL	$7,046,426	$6,825,152	$14,399,654	$13,629,926	$16,229,126	$15,288,626	$16,078,646	$18,739,292	$32,916,659	$55,285,526
500,000 CY	Contract Cost	$15,674,100	$8,567,900	$25,909,100	$21,417,200	$29,679,100	$24,327,200	$32,335,100	$39,486,200	$50,356,700	$100,304,100
	Design	$626,964	$342,716	$1,036,364	$856,688	$1,187,164	$973,088	$1,293,404	$1,579,448	$2,014,268	$4,012,164
	Sampling &	$104,978	$104,978	$104,978	$104,978	$104,978	$104,978	$104,978	$104,978	$104,978	$104,978
	Coordination &	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
	AQ Mitigation	$999,271	$216,097	$1,029,481	$306,775	$1,050,103	$587,949	$1,091,300	$1,132,600	$1,216,025	$533,419
	Contingency	$1,567,410	$856,790	$2,590,910	$2,141,720	$2,967,910	$2,432,720	$3,233,510	$3,948,620	$5,035,670	$10,030,410
	TOTAL	$19,072,723	$10,188,481	$30,770,833	$24,927,361	$35,089,255	$28,525,935	$38,158,292	$46,351,846	$58,827,641	$115,085,071
750,000 CY	Contract Cost	$23,299,100	$12,582,900	$43,159,100	$31,857,200	$48,806,600	$36,222,200	$55,490,600	$66,158,700	$82,405,700	$150,244,100
	Design	$931,964	$503,316	$1,726,364	$1,274,288	$1,952,264	$1,448,888	$2,219,624	$2,646,348	$3,296,228	$6,009,764
	Sampling &	$107,883	$107,883	$107,883	$107,883	$107,883	$107,883	$107,883	$107,883	$107,883	$107,883
	Coordination &	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000	$110,000
	AQ Mitigation	$1,488,876	$0	$1,507,436	$0	$1,538,370	$0	$1,600,237	$1,662,104	$1,847,703	$797,612
	Contingency	$2,329,910	$1,258,290	$4,315,910	$3,185,720	$4,880,660	$3,622,220	$5,549,060	$6,615,870	$8,240,570	$15,024,410
	TOTAL	$28,267,733	$14,562,389	$50,926,693	$36,535,091	$57,395,777	$41,511,191	$65,077,404	$77,300,905	$96,008,084	$172,293,769
1,000,000 CY	Contract Cost	$29,932,500	$16,592,900	$56,282,500	$42,292,200	$63,662,500	$48,112,200	$72,144,500	$83,122,500	$102,842,100	$199,192,500
	Design	$1,197,300	$663,716	$2,251,300	$1,691,688	$2,546,500	$1,924,488	$2,885,780	$3,324,900	$4,113,684	$7,967,700
	Sampling &	$120,213	$120,213	$120,213	$120,213	$120,213	$120,213	$120,213	$120,213	$120,213	$120,213
	Coordination &	$115,000	$115,000	$115,000	$115,000	$115,000	$115,000	$115,000	$115,000	$115,000	$115,000
	AQ Mitigation	$2,050,482	$419,131	$2,050,229	$420,298	$2,091,473	$422,243	$2,173,962	$2,256,451	$2,503,918	$2,007,068
	Contingency	$2,993,250	$1,659,290	$5,628,250	$4,229,220	$6,366,250	$4,811,220	$7,214,450	$8,312,250	$10,284,210	$19,919,250
	TOTAL	$36,408,745	$19,570,250	$66,447,492	$48,868,619	$74,901,936	$55,505,364	$84,653,905	$97,251,314	$119,979,125	$229,321,731
2,000,000 CY	Contract Cost	$59,312,500	$30,831,800	$112,012,500	$82,290,900	$126,712,500	$93,930,900	$143,756,500	$170,136,100	$204,948,100	$397,832,500
	Design	$2,372,500	$1,233,272	$4,480,500	$3,291,636	$5,068,500	$3,757,236	$5,750,260	$6,805,444	$8,197,924	$15,913,300
	Sampling &	$125,058	$125,058	$125,058	$125,058	$125,058	$125,058	$125,058	$125,058	$125,058	$125,058
	Coordination &	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000	$180,000
	AQ Mitigation	$4,042,232	$2,312,730	$4,091,726	$2,362,224	$4,174,214	$2,444,214	$4,339,193	$4,504,170	$4,999,104	$4,005,404
	Contingency	$5,931,250	$3,083,180	$11,201,250	$8,229,090	$12,671,250	$9,393,090	$14,375,650	$17,013,610	$20,494,810	$39,783,250
	TOTAL	$71,963,540	$37,766,040	$132,091,034	$96,478,908	$148,931,522	$109,830,498	$168,526,661	$198,764,382	$238,944,996	$457,839,512
4,000,000 CY	Contract Cost	$118,112,500	$49,980,400	$223,512,500	$152,979,000	$252,872,500	$176,230,900	$286,960,500	$339,536,100	$409,200,100	$795,152,500
	Design	$4,724,500	$1,999,216	$8,940,500	$6,119,160	$10,114,900	$7,049,236	$11,478,420	$13,581,444	$16,368,004	$31,806,100
	Sampling &	$135,642	$135,642	$135,642	$135,642	$135,642	$135,642	$135,642	$135,642	$135,642	$135,642
	Coordination &	$210,000	$210,000	$210,000	$210,000	$210,000	$210,000	$210,000	$210,000	$210,000	$210,000
	AQ Mitigation	$7,753,333	$4,403,816	$7,852,319	$4,502,803	$8,017,298	$4,667,781	$8,347,253	$8,677,209	$9,667,078	$8,002,077
	Contingency	$11,811,250	$4,998,040	$22,351,250	$15,297,900	$25,287,250	$17,623,090	$28,696,050	$33,953,610	$40,920,010	$79,515,250
	TOTAL	$142,747,225	$61,727,114	$263,002,211	$179,244,505	$296,637,590	$205,916,649	$335,827,865	$396,094,005	$476,500,834	$914,821,569

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN
DREDGING AND DISPOSAL TRANSPORTATION COST MATRIX - DREDGING PLANT AND WET HAUL DISTANCES

Cubic Yards Dredged	Cost Items	Containment Island Placement									
		≤2 Miles		10 Miles		20 Miles		30 Miles		60 Miles	
		Bucket	Pipeline	Bucket	Pump-Off	Bucket	Pump-Off	Bucket	Pump-Off	Bucket	Pump-Off
1000 CY	Contract Cost	$440,700	$569,000	$440,700	$815,100	$589,500	$839,600	$589,500	$868,000		
	Design	$35,256	$45,520	$35,256	$65,208	$47,160	$67,168	$47,160	$69,440		
	Sampling &	$61,908	$61,908	$61,908	$61,908	$61,908	$61,908	$61,908	$61,908		
	Coordination &	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000		
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0		
	Contingency	$88,140	$113,800	$88,140	$163,020	$117,900	$167,920	$117,900	$173,600		
	TOTAL	$678,004	$842,228	$678,004	$1,157,236	$868,468	$1,188,596	$868,468	$1,224,948		
2000 CY	Contract Cost	$534,600	$657,200	$542,100	$929,200	$790,500	$986,500	$703,300	$1,043,300		
	Design	$42,768	$52,576	$43,368	$74,336	$63,240	$78,920	$56,264	$83,464		
	Sampling &	$61,908	$61,908	$61,908	$61,908	$61,908	$61,908	$61,908	$61,908		
	Coordination &	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000		
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0		
	Contingency	$106,920	$131,440	$108,420	$185,840	$158,100	$197,300	$140,660	$208,660		
	TOTAL	$798,196	$955,124	$807,796	$1,303,284	$1,125,748	$1,376,628	$1,014,132	$1,449,332		
5000 CY	Contract Cost	$797,000	$892,200	$822,400	$1,271,500	$1,016,100	$1,441,700	$1,014,100	$1,583,700	$1,242,900	$2,039,000
	Design	$63,760	$71,376	$65,792	$101,720	$81,288	$115,336	$81,128	$126,696	$99,432	$163,120
	Sampling &	$64,057	$64,057	$64,057	$64,057	$64,057	$64,057	$64,057	$64,057	$64,057	$64,057
	Coordination &	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$159,400	$178,440	$164,480	$254,300	$203,220	$288,340	$202,820	$316,740	$248,580	$407,800
	TOTAL	$1,136,217	$1,258,073	$1,168,729	$1,743,577	$1,416,665	$1,961,433	$1,414,105	$2,143,193	$1,706,969	$2,725,977
10,000 CY	Contract Cost	$1,256,986	$1,293,935	$1,310,686	$1,841,989	$1,370,745	$2,190,775	$1,570,959	$2,474,775	$1,917,081	$3,385,475
	Design	$100,559	$103,515	$104,855	$147,359	$109,660	$175,262	$125,677	$197,982	$153,366	$270,838
	Sampling &	$75,749	$75,749	$75,749	$75,749	$75,749	$75,749	$75,749	$75,749	$75,749	$75,749
	Coordination &	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$251,397	$258,787	$262,137	$368,398	$274,149	$438,155	$314,192	$494,955	$383,416	$677,095
	TOTAL	$1,736,691	$1,783,986	$1,805,427	$2,485,495	$1,882,303	$2,931,941	$2,138,577	$3,295,461	$2,581,613	$4,461,157
26,000 CY	Contract Cost	$2,722,800	$2,514,400	$2,751,200	$3,607,600	$3,268,200	$4,511,000	$3,257,800	$5,263,400	$3,960,600	$7,639,800
	Design	$108,912	$100,576	$110,048	$144,304	$130,728	$180,440	$130,312	$210,536	$158,424	$305,592
	Sampling &	$75,839	$75,839	$75,839	$75,839	$75,839	$75,839	$75,839	$75,839	$75,839	$75,839
	Coordination &	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000	$52,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$272,280	$251,440	$275,120	$360,760	$326,820	$451,100	$325,780	$526,340	$396,060	$763,980
	TOTAL	$3,231,831	$2,994,255	$3,264,207	$4,240,503	$3,853,587	$5,270,379	$3,841,731	$6,128,115	$4,642,923	$8,837,211
50,000 CY	Contract Cost	$4,904,800	$4,499,200	$5,173,300	$6,406,000	$5,734,700	$8,172,600	$5,955,200	$9,603,600	$7,202,900	$14,185,600
	Design	$196,192	$179,968	$206,932	$256,240	$229,388	$326,904	$238,208	$384,144	$288,116	$567,424
	Sampling &	$75,930	$75,930	$75,930	$75,930	$75,930	$75,930	$75,930	$75,930	$75,930	$75,930
	Coordination &	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$490,480	$449,920	$517,330	$640,600	$573,470	$817,260	$595,520	$960,360	$720,290	$1,418,560
	TOTAL	$5,736,402	$5,274,018	$6,042,492	$7,447,770	$6,682,488	$9,461,694	$6,933,858	$11,093,034	$8,356,236	$16,316,514
75,000 CY	Contract Cost	$7,383,000	$6,499,700	$7,581,800	$9,258,500	$8,058,200	$11,887,100	$8,686,700	$14,059,100	$10,493,400	$20,917,800
	Design	$295,320	$259,988	$303,272	$370,340	$322,328	$475,484	$347,468	$562,364	$419,736	$836,712
	Sampling &	$76,110	$76,110	$76,110	$76,110	$76,110	$76,110	$76,110	$76,110	$76,110	$76,110
	Coordination &	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$738,300	$649,970	$758,180	$925,850	$805,820	$1,188,710	$868,670	$1,405,910	$1,049,340	$2,091,780
	TOTAL	$8,561,730	$7,554,768	$8,788,362	$10,699,800	$9,331,458	$13,696,404	$10,047,948	$16,172,484	$12,107,586	$23,991,402
100,000 CY	Contract Cost	$9,735,800	$8,391,000	$10,000,800	$12,116,600	$10,993,700	$15,618,600	$11,435,700	$18,514,600	$14,350,400	$27,659,600
	Design	$389,432	$335,640	$400,032	$484,664	$439,748	$624,744	$457,428	$740,584	$574,016	$1,106,384
	Sampling &	$78,078	$78,078	$78,078	$78,078	$78,078	$78,078	$78,078	$78,078	$78,078	$78,078
	Coordination &	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000	$69,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Contingency	$973,580	$839,100	$1,000,080	$1,211,660	$1,099,370	$1,561,860	$1,143,570	$1,851,460	$1,435,040	$2,765,960
	TOTAL	$11,245,890	$9,712,818	$11,547,990	$13,960,002	$12,679,896	$17,952,282	$13,183,776	$21,253,722	$16,506,534	$31,679,022
250,000 CY	Contract Cost	$23,811,300	$20,242,000	$24,473,800	$29,241,000	$26,758,700	$37,992,600	$27,858,700	$45,247,600	$34,146,900	$68,127,600
	Design	$952,452	$809,680	$978,952	$1,169,640	$1,070,348	$1,519,704	$1,114,348	$1,809,904	$1,365,876	$2,725,104
	Sampling &	$89,771	$89,771	$89,771	$89,771	$89,771	$89,771	$89,771	$89,771	$89,771	$89,771
	Coordination &	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000
	AQ Mitigation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$838,130
	Contingency	$2,381,130	$2,024,200	$2,447,380	$2,924,100	$2,675,870	$3,799,260	$2,785,870	$4,524,760	$3,414,690	$6,812,760
	TOTAL	$27,329,653	$23,260,651	$28,084,903	$33,519,511	$30,689,689	$43,496,335	$31,943,689	$51,767,035	$39,112,237	$78,688,365
500,000 CY	Contract Cost	$49,134,100	$38,477,200	$50,029,100	$47,246,600	$51,395,400	$56,068,800	$53,866,200	$56,026,500	$61,627,300	$70,146,500
	Design	$1,965,364	$1,539,088	$2,001,164	$1,889,864	$2,055,816	$2,242,752	$2,154,648	$2,241,060	$2,465,092	$2,805,860
	Sampling &	$101,554	$101,554	$101,554	$101,554	$101,554	$101,554	$101,554	$101,554	$101,554	$101,554
	Coordination &	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
	AQ Mitigation	$988,200	$216,452	$999,800	$1,442,085	$1,025,129	$2,286,015	$1,044,946	$3,129,945	$1,104,397	$5,157,557
	Contingency	$4,913,410	$3,847,720	$5,002,910	$4,724,660	$5,139,540	$5,606,880	$5,386,620	$5,602,650	$6,162,730	$7,014,650
	TOTAL	$57,202,628	$44,282,014	$58,234,528	$55,504,763	$59,817,439	$66,406,001	$62,653,968	$67,201,709	$71,561,073	$85,326,121
750,000 CY	Contract Cost	$73,509,100	$57,467,200	$74,851,600	$70,416,600	$76,531,600	$76,334,000	$80,548,700	$83,406,500	$92,238,700	$104,579,000
	Design	$2,940,364	$2,298,688	$2,994,064	$2,816,664	$3,061,264	$3,053,360	$3,221,948	$3,336,260	$3,689,548	$4,183,160
	Sampling &	$103,883	$103,883	$103,883	$103,883	$103,883	$103,883	$103,883	$103,883	$103,883	$103,883
	Coordination &	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000
	AQ Mitigation	$1,479,820	$317,757	$1,503,601	$2,152,085	$1,533,327	$3,417,980	$1,563,053	$4,683,875	$1,584,551	$8,481,559
	Contingency	$7,350,910	$5,746,720	$7,485,160	$7,041,660	$7,653,160	$7,633,400	$8,054,870	$8,340,650	$9,223,870	$10,457,900
	TOTAL	$85,519,077	$66,069,248	$87,073,308	$82,665,892	$89,018,234	$90,677,623	$93,627,454	$100,006,168	$106,975,552	$127,940,502
1,000,000 CY	Contract Cost	$96,892,500	$76,452,200	$98,362,500	$87,164,200	$100,212,500	$101,356,500	$102,322,500	$110,816,500	$115,786,100	$139,036,500
	Design	$3,875,700	$3,058,088	$3,934,500	$3,486,568	$4,008,500	$4,054,260	$4,092,900	$4,432,660	$4,631,444	$5,561,460
	Sampling &	$115,576	$115,576	$115,576	$115,576	$115,576	$115,576	$115,576	$115,576	$115,576	$115,576
	Coordination &	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000
	AQ Mitigation	$1,962,695	$420,347	$1,970,622	$2,862,083	$1,980,531	$4,549,944	$1,990,439	$6,237,804	$2,020,165	$11,301,384
	Contingency	$9,689,250	$7,645,220	$9,836,250	$8,716,420	$10,021,250	$10,135,650	$10,232,250	$11,081,650	$11,578,610	$13,903,650
	TOTAL	$112,675,721	$87,831,431	$114,359,448	$102,484,847	$116,478,357	$120,351,930	$118,893,665	$132,824,190	$134,271,895	$170,058,570
2,000,000 CY	Contract Cost	$193,272,500	$150,650,900	$196,232,500	$173,084,200	$199,932,500	$201,496,500	$208,576,100	$220,396,500	$230,336,100	$276,836,500
	Design	$7,730,900	$6,026,036	$7,849,300	$6,923,368	$7,997,300	$8,059,860	$8,343,044	$8,815,860	$9,213,444	$11,073,460
	Sampling &	$119,783	$119,783	$119,783	$119,783	$119,783	$119,783	$119,783	$119,783	$119,783	$119,783
	Coordination &	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000
	AQ Mitigation	$3,916,659	$2,341,307	$3,932,512	$3,504,438	$3,952,329	$5,309,954	$3,972,147	$7,115,470	$4,031,598	$12,532,018
	Contingency	$19,327,250	$15,065,090	$19,623,250	$17,308,420	$19,993,250	$20,149,650	$20,857,610	$22,039,650	$23,033,610	$27,683,650
	TOTAL	$224,587,092	$174,423,116	$227,977,345	$201,160,209	$232,215,162	$235,355,747	$242,088,684	$258,707,263	$266,954,535	$328,465,411
4,000,000 CY	Contract Cost	$386,072,500	$289,739,000	$391,952,500	$344,924,200	$399,352,500	$401,756,500	$416,456,100	$439,556,500	$459,476,100	$552,436,500
	Design	$15,442,900	$11,589,560	$15,678,100	$13,796,968	$15,974,100	$16,070,260	$16,658,244	$17,582,260	$18,379,044	$22,097,460
	Sampling &	$129,688	$129,688	$129,688	$129,688	$129,688	$129,688	$129,688	$129,688	$129,688	$129,688
	Coordination &	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000	$250,000
	AQ Mitigation	$7,824,585	$3,945,923	$7,856,292	$6,226,574	$7,895,926	$9,077,388	$7,935,561	$11,928,203	$8,054,464	$20,480,647
	Contingency	$38,607,250	$28,973,900	$39,195,250	$34,492,420	$39,935,250	$40,175,650	$41,645,610	$43,955,650	$45,947,610	$55,243,650
	TOTAL	$448,326,923	$334,628,071	$455,061,830	$399,819,850	$463,537,464	$467,459,486	$483,075,203	$513,402,301	$532,236,906	$650,637,945

ATTACHMENT B

COST SUMMARY REPORT

I. INTRODUCTION

The purpose of this document is to summarize the process that developed the cost estimates related to dredging and placement of dredged material from various sized projects in Long Island Sound (LIS). The New England District Cost Section was tasked with developing these cost estimates as part of the LIS Dredged Material Management Plan (DMMP) and the LIS Programmatic Environmental Impact Statement (PEIS). As part of the DMMP, three dredging methods (mechanical, hopper, and hydraulic/pipeline) were considered along with five placement options (open water, near shore, beach nourishment, upland, marsh creation, and containment island). The Project Delivery Team (PDT) decided to include 15 project quantities; 1,000 CY, 2,000 CY, 5,000 CY, 10,000 CY, 26,000 CY, 50,000 CY, 75,000 CY, 100,000 CY, 250,000 CY, 500,000 CY, 750,000 CY, 1,000,000 CY, 2,000,000 CY, and 4,000,000 CY. The PDT also included nine disposal distances; 1 mile, 2 miles, 5 miles, 10 miles, 20 miles, 30 miles, 50 miles, 60 miles, and 120 miles. The disposal distances vary with the type of dredge and the placement method used. Table 1 summarizes the dredge types and placement methods and distances assumed for each case estimated.

Table 1. Disposal Methods

LONG ISLAND SOUND DMMP - DREDGING AND DISPOSAL COST MATRIX

DREDGE TYPES	
B	Bucket Dredge (Includes Tugs and Scows)
H	Hopper Dredge
PL	Pipeline Dredge (Cutterhead)
PH	Pump-Off Hopper Dredge

DREDGING PLANT AND WET HAUL DISTANCES - DREDGING & TRANSPORT COST MATRIX

	Cubic Yards Dredged	Ocean or Nearshore Disposal - Haul Distances						Beach Nourishment Direct Placement		Beach Nourishment Pump-Off Placement				Containment, Island or Upland Dewatering Site - Including Cost of Rehandling Ashore and Trucking Where Needed						
		≤5 Miles	10 Miles	20 Miles	30 Miles	60 Miles	120 Miles	≤1 Mile	2 Miles	5 Miles	10 Miles	20 Miles	50 Miles	0≤2 Miles No Haul	5 Miles	10 Miles	20 Miles	30 Miles	60 Miles	Railroad to PA Mines
17	1,000	B & H	B & H	B & H	B			PL	PL	PH	PH	PH	PH	B & PL	B & PL	B	B	B		
18	2,000	B & H	B & H	B & H	B	B		PL	PL	PH	PH	PH	PH	B & PL	B & PL	B	B	B		
19	5,000	B & H	B & H	B & H	B	B		PL	PL	PH	PH	PH	PH	B & PL	B & PL	B	B	B	B	
20	10,000	B & H	B & H	B & H	B	B		PL	PL	PH	PH	PH	PH	B & PL	B & PL	B	B	B	B	
20	26,000	B & H	B & H	B & H	B	B	B	PL	PL	PH	PH	PH	PH	B & PL	B & PL	B	B	B	B	B
20	50,000	B & H	B & H	B & H	B	B	B	PL	PL	PH	PH	PH	PH	B & PL	B & PL	B	B	B	B	B
20	75,000	B & H	B & H	B	B	B	B	PL	PL	PH	PH	PH	PH	B & PL	B & PL	B	B	B	B	B
20	100,000	B & H	B & H	B	B	B	B	PL	PL	PH	PH	PH	PH	B & PL	B & PL	B	B	B	B	B
19	250,000	B & H	B	B	B	B	B	PL	PL	PH	PH	PH	PH	B & PL	B & PL	B	B	B	B	B
19	500,000	B & H	B	B	B	B	B	PL	PL	PH	PH	PH	PH	B & PL	B & PL	B	B	B	B	B
13	750,000	B & H	B	B	B	B	B							B & PL	B & PL	B	B	B	B	B
13	1,000,000	B & H	B	B	B	B	B							B & PL	B	B	B	B	B	B
13	2,000,000	B & H	B	B	B	B	B							B & PL	B	B	B	B	B	B
13	4,000,000	B & H	B	B	B	B	B							B & PL	B	B	B	B	B	B
13	6,000,000	B & H	B	B	B	B	B							B & PL	B	B	B	B	B	B
257	Estimates: For each plant type, haul distance and dredge project volume, provide an estimate of required dredging plant, mob-demob, dredging and haul cost.																			

II. BASIS/CALCULATION BACKGROUND

The dredging costs were developed using the Corps of Engineers Dredge Estimating Program (CEDEP). CEDEP was created and is currently maintained by US Army Corps of Engineers (USACE) Walla Walla District Cost Engineering Branch. It should be noted that the CEDEP software is listed as “for Official Use Only” by the Tri-Service government personnel on the Walla Walla District Cost Engineer Branch website. Costs to open water or near shore placement of dredged material are also based on CEDEP results while the upland, marsh creation, and containment island disposal methods included additional cost items necessary for those portions of that type of project. Unit costs for each of these additional items were established in the initial planning stages and held constant through all cases where they are necessary. These unit costs were established using recent, historic dredging and disposal estimates along with professional expertise in this area.

III. ASSUMPTIONS

A. GENERAL DREDGING

There are several general assumptions that were held constant throughout all the dredging and disposal estimates. All Local Area Factor inputs in CEDEP were held constant; these include Present Year (2011), Economic Index (8102), Labor Adjustment Factor (1.120), Full Cost of Money Rate (2.625%/year), Dates of Money Rate (January to June 2011), Annual Months Available for Dredging (10 months), and Current Fuel Price ($3.56/gal) (USACE fuel costs were based on averages at the time costs were developed). All CEDEP estimates were completed as Planning Estimates, which include contractor profit. All estimates utilize the Percent of Net Pay as the Non-Pay Computation Method and assume zero percent net-pay losses. All estimates assume a 2.0 foot bank height with the project size representing the required dredging depth. The remainder of the dredging prism (paid overdepth, not dug, and non-pay yardage) was assumed to be zero in all estimates.

Contractor profit is dependent on the size of the project. The estimates with project sizes 1,000 CY through 10,000 CY were assumed to be completed by local contractors who were assumed to mobilize from a much closer distance (lowering mobilization costs) and earn less profit than those larger project sizes (26,000 CY through 4,000,000 CY). Contractor's profit for performing the smaller projects was assumed to be eight percent while the contractor profit on larger projects was assumed to be ten percent.

With each type of dredge (mechanical, hopper, hydraulic/pipeline) there are different size dredges; mechanical has multiple bucket sizes (10 CY, 21 CY, 26 CY, and 56 CY clamshells), hopper projects have multiple dredge boat capacities (generic small [1300 CY capacity], generic medium [3,800 CY capacity], and generic large [7,600 cy capacity]), and hydraulic/pipeline projects have multiple pipeline diameters (12", 14", 16", 18", 20", 22", 24" 27", and 30" diameter cutter-suction heads). The dredge size/capacity was selected for each case based on previous dredging and disposal projects and professional expertise. As an example, to dredge and provide beach nourishment for 75,000 CY of material, when only traveling 5 miles to the placement site, a small hopper dredge is suitable. When dredging and traveling 50 miles to place the same quantity of material, a medium hopper dredge, with a significantly higher capacity is more applicable due to the longer haul distance.

In completing the summary sheets for each project size (or quantity) in regards to costs, additional assumptions were made. Dredge efficiency is assumed to be the efficiency of removing dredged material. Project duration (in months) is the greater of the Dredging time and Hauling time from the CEDEP CHKLIST (or summary) sheet. A majority of the information on the summary sheets is derived from the CEDEP summary sheet.

1. MECHANICAL DREDGING

Contractors for smaller mechanical dredging projects were assumed to mobilize/demobilize from only 50 miles away, and to use a much smaller crew and require less time for the project. Contractors for the larger mechanical dredging projects would mobilize/demobilize from 200 miles away and require more time to complete the project with a larger crew.

All mechanical dredge estimates assume excavating a sandy material with a 60-second bucket cycle time and 10 percent additional time for cleanup dredging with 65 percent time efficiency. Certain hauling production factors were also held constant including “time to prepare scow for tow” (15 minutes), “speed to disposal area” (5 mph), “speed from disposal area” (6 mph), “disposal at placement site” or “pumpout at upland dewatering site” (15 minutes), “disengage scow tow” (15 minutes), and towing time efficiency (70 percent). Scow capacity was also assumed to include 90 percent usable volume and 60 percent solids in all mechanical dredging estimates.

The time allotted for “disposal at placement site” or “pumpout for an upland dewatering site” was held at an average of 15 minutes. It is recognized that the disposal at an ocean placement site is approximately 1 minute and that pumpout at a dewatering site will vary depending on the size of the particular scow being used. It was felt that since this particular factor had a minimum impact on overall project duration (which is more driven by the time for excavation) that having a constant average time would provide a good average representation of costs for such a wide range of project sizes and placement options.

Additionally, the cost estimates assumed that there were no crew quarters on the dredge boat, no survey boat utilized, and no crew boat used in all mechanical dredging estimates. Other pricing adjustments, such as costs for miscellaneous navigation, weather issues, equipment wear items, and permits and environmental issues, were included in all mechanical dredging estimates, but varied based on small or large project size. Small projects included costs of $10,000/month for miscellaneous navigation/weather issues, $10,000/month for equipment wear items, and $10,000/project for permits and environmental issues. Larger projects included costs of $20,000/month, $25,000/month, and $20,000/project for these adjustments, respectively. The number of scows and tugs necessary for each project size were determined, again, based on previous dredging and disposal projects, professional expertise, and industry standards. Scows with tugs were added to allow hauling to match dredging production as closely as possible. Although this assumption may appear to have resulted in an unrealistic number of scows and tugs working on these projects, if these adjustments were not made then the cost would increase significantly due to lost dredging production while the dredge plant was idle waiting for the return of scows.

2. HOPPER DREDGING

Contractors for smaller hopper dredging projects were assumed to mobilize/demobilize from only 50 miles away, using a much smaller crew and having a shorter duration than requirements for mechanical dredging. Contractors for the larger hopper dredging projects would mobilize/demobilize from 500 miles away and require more time and a larger crew.

All hopper dredge estimates assume excavating a mostly sandy material (80 percent sand, 20 percent mud) and assumed 10 percent additional time for cleanup dredging with 54.5 percent time efficiency. Where gravity placement of dredged material was used a 5 minutes for each placement time was assumed.

Certain production factors were also held constant in all hopper dredging estimates including “turns/cycle” (1 each), “time per turn” (2 minutes), “speed to disposal area” (8 mph), and “speed from disposal area” (10 mph).

The default Plant Ownership and Operating costs, with the inclusion of a tender tug added, were held constant throughout all hopper dredging estimates. All optional dredge operating adjustment factors were kept at the CEDEP default values. No other pricing adjustments were included in any hopper dredging estimates. Where pumpout to a dewatering site was used, the default pumpout rate was assumed and a booster pump was included in the optional plant (plant ownership and operating, part 2 of 2) at a cost of $200,000.

Costs for travel and provisions were included in all hopper dredge estimates. Frequency of relief travel for the dredge crew is every 28 days, cost of travel tickets is $400/round trip, zero Government personnel are assumed on the dredge, and provisions and supplies is $35.00/man/day.

3. PIPELINE DREDGING

Contractors for smaller pipeline dredging projects were assumed to mobilize/demobilize from only 50 miles away, utilize a much smaller crew and do so in shorter duration than mechanical dredging. Contractors for the larger pipeline dredging projects would mobilize/demobilize from 250 miles away and require more time and a larger crew.

Pipeline dredging estimates with beach nourishment assume dredging a completely sandy material (100% sand) while pipeline dredge estimates with all other disposal types assume dredging a mostly silty material (70 percent mud and silt, 20 percent loose sand) and assumed 10 percent additional time for cleanup dredging with a 55 percent time efficiency. Pipeline length is directly attributed to the distance of the placement site from the dredge and was assumed in each case, as was the number of booster pumps necessary to perform the work. Equivalent pipeline length was held constant at 25 feet.

The default HP & Booster Factor Adjustments were held throughout all pipeline dredging estimates. Other pricing adjustments, including costs for a bulldozer, frontend loader, and dump truck (for operations on shore and upland) as well as permits, were also included in all pipeline dredging estimates. These costs are $45,000/month, $21,000/month, $30,000/month, and $10,000/project for these items, respectively.

B. GENERAL DISPOSAL

The dredging and disposal/placement costs calculated by CEDEP include limited disposal/placement options. CEDEP only calculates costs to the point where the dredged material leaves the dredging equipment. Additional costs were included to account for other disposal methods (besides open water/near shore placement). The following information summarizes the unit costs associated with each placement option. Additional disposal costs are calculated utilizing the unit costs below, multiplied by the particular project size, unless otherwise noted.

BEACH NOURISHMENT (BY PIPELINE DREDGE and HOPPER w/ PUMPOUT DREDGE)

Beach nourishment – $3.00/cy

UPLAND – ON-SITE – NO HAUL (BY MECHANICAL DREDGE)

Rehandling Cost into Dewatering Area – $3.00/cy
Dewatering Site Preparation and Diking – $3.00/cy
Dewatering Site Operation and Closure – $3.00/cy
Monitoring – $10,000/year for 5 years

UPLAND – ON-SITE – NO HAUL (BY PIPELINE DREDGE)

Dewatering Site Preparation and Diking – $3.00/cy
Dewatering Site Operation and Closure – $3.00/cy
Monitoring – $10,000/year for 5 years

UPLAND – DEWATERED AND TRUCKED (BY MECHANICAL DREDGE)

Rehandling Cost into Dewatering Area – $3.00/cy
Dewatering Site Preparation and Diking – $3.00/cy
Dewatering Site Operation and Closure – $3.00/cy
Rehandling and Trucking (5 miles) – $11.50/cy (project quantity + 20% mat'l expansion)
Rehandling and Trucking (10 miles) – $16.85/cy (project quantity + 20% mat'l expansion)
Rehandling and Trucking (20 miles) – $22.41/cy (project quantity + 20% mat'l expansion)
Rehandling and Trucking (30 miles) – $29.80/cy (project quantity + 20% mat'l expansion)
Rehandling and Trucking (60 miles) – $39.63/cy (project quantity + 20% mat'l expansion)
Disposal Fee at Final Site - $10.00/cy (project quantity + 20% mat'l expansion)
Managing and Monitoring Upland Site – $20,000/year for 5 years

UPLAND – DEWATERED AND RAILED (BY MECHANICAL DREDGE)

Rehandling Cost into Dewatering Area – $3.00/cy
Dewatering Site Preparation and Diking – $3.00/cy
Dewatering Site Operation and Closure – $3.00/cy
Rehandling and Trucking to Rail Side 30 miles – $29.80/cy (project quantity + 20% mat'l expansion)
Haul by Rail to Reclamation Site and Offload – $101.25/cy (project quantity + 20% mat'l expansion)
Disposal Fee at Final Site - $10.00/cy (project quantity + 20% mat'l expansion)
Managing and Monitoring Upland Site – $20,000/year for 5 years

UPLAND – DEWATERED AND TRUCKED (BY PIPELINE DREDGE)

Dewatering Site Preparation and Diking – $3.00/cy
Dewatering Site Operation and Closure – $3.00/cy
Rehandling and Trucking (5 miles) – $11.50/cy (project quantity + 20% mat'l expansion)
Rehandling and Trucking (10 miles) – $16.35/cy (project quantity + 20% mat'l expansion)
Disposal Fee at Final Site - $10.00/cy (project quantity + 20% mat'l expansion)
Managing and Monitoring Upland Site – $20,000/year for 5 years

MARSH CREATION – DEWATERED AND TRUCKED (BY MECHANICAL DREDGE)

Rehandling Cost into Dewatering Area – $6.00/cy
Rehandling Cost and Trucking to Marsh (60 miles) – $39.63/cy (project quantity + 20% mat'l expansion)
Marsh Site Preparation and Diking (5 foot depth) – $275,000.00/acre (convert project quantity to acres assuming 5 foot marsh depth)
Marsh Site Fill Operation and Closure – $30,000.00/acre
Marsh Planting and Drainage Channels – $20,000.00/acre
Marsh Site Monitoring (12 quarters) - $3,000.00/quarter

MARSH CREATION (BY PIPELINE DREDGE)

Marsh Site Preparation and Diking (5 foot depth) – $275,000.00/acre (convert project quantity to acres assuming 5 foot marsh depth)

Marsh Site Fill Operation and Closure – $30,000.00/acre
Marsh Planting and Drainage Channels – $20,000.00/acre
Marsh Site Monitoring (12 quarters) - $3,000.00/quarter

CAD CELL (BY MECHANICAL DREDGE)

CAD Cell Excavation with Tow 15 miles to Open Ocean Disposal – $20.15/cy (project quantity + 25% mat'l expansion + 15% freeboard)
CAD Cell Capping (3 foot thickness) – $20.15/cy (8.15% of CAD Cell Excavation quantity above)CAD Cell Monitoring (12 quarters) – $3,000.00/quarter

CONTAINMENT ISLAND (BY MECHANICAL DREDGE)

Containment Site Tipping Cost (Construction & Placement) (Containment Site 2 to 30 miles) – $76.00/cy
Containment Site Tipping Cost (Construction & Placement) (Containment Site 60 miles only) – $81.00/cy
Containment Site Tipping Cost (Monitoring & Management) (20 years) – $3,000.00/year

CONTAINMENT ISLAND (BY PIPELINE DREDGE)

Containment Site Tipping Cost (Construction & Placement) (Containment Site 2 miles) – $66.00/cy
Containment Site Tipping Cost (Monitoring & Management) (20 years) – $3,000.00/year

CONTAINMENT ISLAND (BY HOPPER DREDGE w/ PUMPOUT)

Containment Site Tipping Cost (Construction & Placement) (Containment Site 10 miles) – $71.00/cy
Containment Site Tipping Cost (Construction & Placement) (Containment Site 20 to 60 miles) – $76.00/cy
Containment Site Tipping Cost (Monitoring & Management) (20 years) – $3,000.00/year

C. EQUIPMENT HOURS

In addition to producing cost estimates, the Cost Section was tasked with calculating equipment hours for of the equipment necessary to complete a given project with the assumed dredge type and disposal method. In completing the summary sheets for each project size (or quantity) in regards to equipment hours, as with the costs, various assumptions were made. Dredging and hauling time/productivity from the CEDEP summary sheets was used to determine dredge hours. Scow equipment time is equal to 0.25 hours per load hauled and placed. Equipment hours for mobilization and demobilization should assume 200 miles for mechanical, 250 miles for pipeline, and 500 miles for hopper dredges at a travel speed of 5 miles/hour. It was assumed that mobilization/demobilization was for local scows and only required 25 mile haul each at a travel speed of 5 miles/hour. It was assumed that a workboat was necessary for the same dredging duration of any dredge. It was assumed the pump barge necessary to pump from the hopper dredge would operate for the same period of time as the hopper dredge itself. Table 2 provides a summary of the equipment hours assumed for frontend loaders, bulldozers, and trucks when they are necessary.

The PDT agreed upon a set list of equipment necessary to perform the dredging and disposal operations given the dredge type and disposal method. The equipment list assumed for each dredge type and disposal option is listed below. It should be noted that equipment horsepower (HP) was also noted for each piece of equipment. The HP increases as the equipment size increases. For instance, the small hopper dredge is approximately 4,125 HP while the large

hopper dredge is approximately 18,000 HP. HP rating for all dredge-related equipment was obtained from CEDEP while HP from all other equipment was obtained from industry standards.

Table 2. Equipment Hours

Equipment Hours (Non-dredging group)							
		5K	10K	26K	50K	75K	100K
Beach Nourishment	L	50	100	260	500	750	1000
	D	50	100	260	500	750	1000
	T	25	50	130	150	375	750
Upland	L	75	150	390	750	1125	1500
	D	75	150	390	750	1125	1500
	T	50	100	260	500	750	1000
Marsh Creation	L	75	150	390	750	1125	1500
	D	75	150	390	750	1125	1500
	T	50	100	260	500	750	1000
Containment Island	L	100	200	520	1000	1500	2000
	D	100	200	520	1000	1500	2000
	T	75	150	390	750	1125	1500
Rail to PA	L	100	200	520	1000	1500	2000
	D	100	200	520	1000	1500	2000
	T	75	150	390	750	1125	1500
Trucking Hours	5 mi	10 mi	20 mi	30 mi	60 mi	@ 30 mph avg	
	.33	.66	1.32	1.98	3.96	12 CY per load	

*Loaders (L), Dozers (D), Trucks (T)

Table 2. Continued.

Equipment Hours (Non-dredging group)									
		1K	2K	250K	500K	750K	1000K	2000K	4000K
Beach Nourishment	L	10	20	1500	3000	4500			
	D	10	20	1500	3000	4500			
	T	5	10	1125	2250	3375			
Upland	L	15	30	2250	4500	6750			
	D	15	30	2250	4500	6750			
	T						4500		
Marsh Creation	L	15	30	2250	4500				
	D	15	30	2250	4500				
	T	10	20	1500	3000				
Containment Island	L	20	40	3000	6000				
	D	20	40	3000	6000				
	T	15	30	2250	4500				
Rail to PA	L	20	40		3000				
	D	20	40		3000				
	T	15	30		2250				
Trucking Hours	5 mi	10 mi	20 mi	30 mi	60 mi	@ 30 mph avg			
	.33	.66	1.32	1.98	3.96				

The required equipment for the various types of dredge equipment and placement options are shown below.

MECHANICAL DREDGE – OPEN WATER DISPOSAL

Dredge, Mob/Demob Tug, Tow Scow Tug, Dump Scow(s), and Workboat

HOPPER DREDGE – OPEN WATER DISPOSAL

Dredge, Tug (assumed for half of dredge duration), Workboat, and Mob/Demob Dredge

PIPELINE DREDGE – BEACH NOURISHMENT

Dozer, Loader, Truck, Dredge, Tug (assumed for half of dredge duration), Mob/Demob Dredge, and Workboat

HOPPER DREDGE w/ PUMPOUT – BEACH NOURISHMENT

Dozer, Loader, Truck, Dredge, Tug (assumed for half of dredge duration), Pump Barge, Mob/Demob Dredge, and Workboat

MECHANICAL DREDGE – UPLAND (NO HAUL)

Loader, Dozer, Truck, Mob/Demob Tug, Dredge, Tug, Crane & Bucket, Pump, Scows, and Workboat

MECHANICAL DREDGE – DEWATERED AND TRUCKED UPLAND

Loader, Dozer, Truck, Mob/Demob Tug, Dredge, Tug, Crane & Bucket, Pump, Scows, Workboat, and Truck to Upland

PIPELINE DREDGE – UPLAND (NO HAUL)

Loader, Dozer, Truck, Mob/Demob Tug, Dredge, Tug, Booster Pump, and Workboat

PIPELINE DREDGE – DEWATERED AND TRUCKED UPLAND

Loader, Dozer, Truck, Mob/Demob Tug, Dredge, Tug, Booster Pump, Workboat, and Truck to Upland

MECHANICAL DREDGE – DEWATERED AND RAILED UPLAND

Loader, Dozer, Truck, Rail Hopper Dump, Locomotive, Dredge, Tug, Mob/Demob Tug, Crane & Bucket, Pump Out, Trucking to Rail Site, and Workboat

MECHANICAL DREDGE – MARSH CREATION

Loader, Dozer, Truck, Mob/Demob Tug, Dredge, Tug, Pump Out, Workboat, Truck to Marsh

PIPELINE DREDGE – MARSH CREATION

Loader, Dozer, Truck, Dredge, Tug, Pump Out, and Workboat

MECHANICAL DREDGE – CAD CELL

Dredge, Mob/Demob Tug, Tug, Dump Scow, and Workboat

MECHANICAL DREDGE – CONTAINMENT ISLAND

Loader, Dozer, Truck, Dredge, Mob/Demob Tug, Tug, Crane & Bucket, Dump Scow, Pump Out, and Workboat

PIPELINE DREDGE and HOPPER DREDGE w/ PUMPOUT – CONTAINMENT ISLAND

Loader, Dozer, Truck, Dredge, Tug, Booster Pump, Workboat, Mob/Demob Dredge

IV. SAMPLE CALCULATIONS

Sample calculations have been included for several cases in the 75,000 CY project size. Where the same dredge type and disposal method was used with several disposal distances, the shortest and longest distance is shown for example purposes. CEDEP CHKLIST printouts are attached as are the Cost Detail Sheets for the cases listed below.

A. 75KCY-OW-5M-B

1. COST

Required inputs based on project size and assumptions listed above are entered in CEDEP. The program computes dredging and disposal costs (in unit prices per cubic yard) as well as mobilization and demobilization costs and project duration. An excerpt from the program is included below.

MOBIL & DEMOB COST:	$247,252	BID QUANTITY	75,000	C.Y.
		UNIT COST...	$15.95	PER C.Y.
	75KCY-OW-5M-B	EXCAV. COST.	$1,196,250	
CHECKLIST FOR INPUT DATA.		TIME.....	1.42	MONTHS

These costs are input into the Cost Detail Sheet.

Mob/Demob = $247,252
Dredge and Disposal = $15.95/cy x 75,000 cy = $1,196,250
Total Cost = $1,443,502

This step was completed for all estimates without deviation; therefore this step will not be displayed for the cases below. Due to the open water disposal method assumed for this case, there are no additional cost factors.

2. EQUIPMENT HOURS

PG 1.....PROJECT -	75KCY-OW-5M-B		PG 7.....DREDGES -	1	
LOCATION -	LONG ISLAND SOUND DMMP		SCOWS @ DREDGE -	1	
INVIT # -	TEMPLATE		TOWING VESSELS -	1	
DATE OF EST. -	Mar 14, 2012		SCOWS PER TOW -	1	
EST. BY -	M. Remy		ADDITIONAL SCOWS -	0	
MOB. BID ITEM # -	1		TOT SCOWS ON JOB -	2	
EXCAV. BID ITEM # -	2				
			PG 8....QTRS ON DREDGE? -	NO	
PG 2.....TYPE OF EST. -	Planning Estimate		SURVEY BOAT? -	NO	
CONTRACTOR'S O.H. -	17.0%		CREW BOAT? -	NO	
CONTRACTOR'S PROFIT -	10.0%				
CONTRACTOR'S BOND -	2.0%		PG 9...SP COST/MO (1ST) -	$20,000	Misc Nav & Weather Issues
			SP COST/MO (2ND-14TH) -	$25,000	From Sheet D\4, Teeth & Cables
PG 3...BANK HEIGHT -	2 ft		SPECIAL COST LS (1ST) -	$20,000	Permits and Environ Issues
REQ'D EXCAVATION -	75,000 cyds		SP COST LS (2ND-14TH) -	$0	From Sheet E
PAY OVERDEPTH -	0 cyds				
CONTRACT AMOUNT -	75,000 cyds		PG 10....PRESENT YEAR -	2011	
NOT DREDGED -	0 cyds		ECONOMIC INDEX -	8102	
NET PAY -	75,000 cyds		LAF -	1.120	
NONPAY YARDAGE -	0 cyds		INTEREST RATE -	2.625%	/yr
GROSS YARDAGE -	75,000 cyds		TIME PERIOD -	Jan-Jun 2011	
LOSSES -	0.0 % of Net Pay		PIPELINE AVAILABILITY -	0	mos/yr
TOTAL BANK HEIGHT -	2.0 ft		BUCKET AVAILABILITY -	10	mos/yr
			HOPPER AVAILABILITY -	0	mos/yr
PG 4.....DREDGE SEL. -	10 CY CLAMSHELL		FUEL PRICE -	$3.56	/gal
TYPE OF MATERIAL -	SAND				
BUCKET SIZE -	8				
BUCKET FILL FACTOR -	0.70				
OPTIMUM BANK -	5.5				
BANK FACTOR -	0.36		EXCAVATION PRODUCTION -	111	cy/hr (gross)
			EXCAVATION EWT -	65.0%	(475 hrs/mo)
PG 5.....BUCKET CYCLE -	60 Seconds		EXCAVATION TIME -	1.42	months
OTHER FACTOR -	1.00	0			
CLEANUP -	10% More Time		HAULING PRODUCTION -	209	cy/hr (gross)
TIME EFFICIENCY -	65.0% of EWT		HAULING EWT -	70.0%	(511 hrs/mo)
			HAULING TIME -	0.7	months
PG 6...TUG DESCRIPT. -	3000 HP Diesel--Twin Screw				
PREPARE SCOW TOW -	15 min		DREDGING TIME -	1.42	months
HAUL DIST -	5 mi		EXCAVAT EWT (ADJUSTED) -	475	hrs/mo (65.1% EWT)
SPEED TO D/A -	5 mph (60 min)		HAULING EWT (ADJUSTED) -	252	hrs/mo (34.5% EWT)
SPEED FROM D/A -	6 mph (50 min)				
DUMP OR PUMPOUT -	15 min		PRODUCTION (GROSS) -	52,725	cy per month
DISENGAGE TOW -	15 min		PRODUCTION (CONTRACT) -	52,725	pay cy per month
TOW EFFICIENCY -	70 %				
SCOW DESCRIPTION -	1,000 CY Split Hull Scow				
USEABLE VOLUME -	90 %				
% SOLIDS -	60 % (540 cy/load)				

Dredge hours = 1.42 months x 475 hours/month = 674.5 hours
Mob/Demob tug (With 2 total scows on job, and assuming 1 tug per scow, will require a total of 2 tugs) = 2 tugs x 4 trips (2 round-trips for each tug, both coming to and leaving from the site) x 25 miles each trip / 5 mph ocean-going travel time = 40 hours
Tug = 75,000 cy (project size) / 209 cy/hr (hauling production) = 358.85 hours
Dump Scows = 75,000 cy (project size) / 540 cy/load x 0.25 hours/load = 34.72 hours
Workboat = Dredge hours = 675.5 hours

B. 75 KCY Hopper Dredging Project with open water placement 5 miles from dredging site

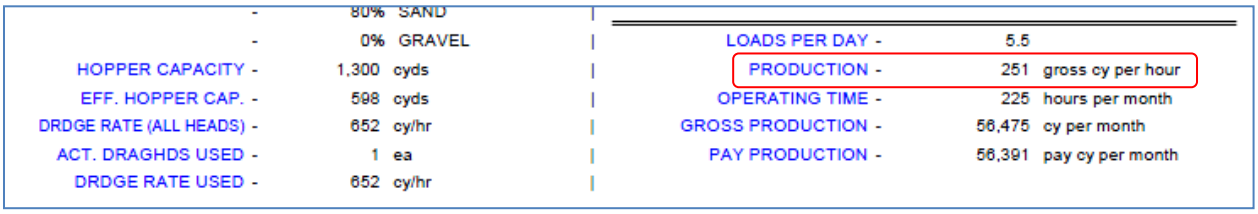
1. COST

MOBIL & DEMOB COST:	$379,396	BID QUANTITY	75,000	C.Y.
		UNIT COST...	$15.17	PER C.Y.
	75KCY-OW-5M-H	EXCAV. COST.	$1,137,750	
CHECKLIST FOR INPUT DATA.		TIME.....	1.33	MONTHS

Again, these costs are input into the Cost Detail Sheet.

Mob/Demob = $379,396
Dredge and Disposal = $15.17/cy x 75,000 cy = $1,137,750
Total Cost = $1,517,146

2. EQUIPMENT HOURS

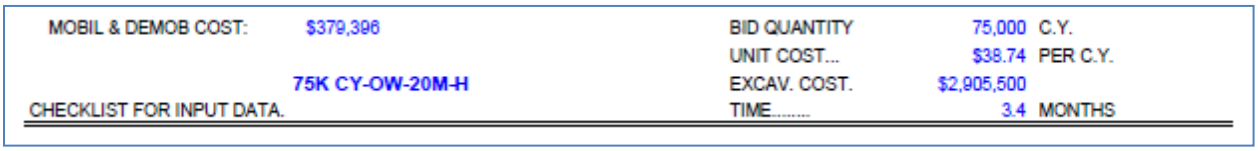


-	80%	SAND			
-	0%	GRAVEL	LOADS PER DAY -	5.5	
HOPPER CAPACITY -	1,300	cyds	PRODUCTION -	251	gross cy per hour
EFF. HOPPER CAP. -	598	cyds	OPERATING TIME -	225	hours per month
DRDGE RATE (ALL HEADS) -	652	cy/hr	GROSS PRODUCTION -	56,475	cy per month
ACT. DRAGHDS USED -	1	ea	PAY PRODUCTION -	56,391	pay cy per month
DRDGE RATE USED -	652	cy/hr			

Dredge hours = 75,000 cy / 251 cy/hour = 298.80 hours
Tug (assumed necessary for half time of dredge for hopper cases) = 298.80 / 2 = 149.40 hours
Workboat = Dredge hours = 298.80 hours
Mob/Demob Dredge = 500 miles / 5 mph = 100 hours

C. 75KCY-OW-20M-H

1. COST



MOBIL & DEMOB COST:	$379,396	BID QUANTITY	75,000	C.Y.
		UNIT COST...	$38.74	PER C.Y.
	75K CY-OW-20M-H	EXCAV. COST.	$2,905,500	
CHECKLIST FOR INPUT DATA.		TIME.....	3.4	MONTHS

Mob/Demob = $379,396
Dredge and Disposal = $38.74/cy x 75,000 cy = $2,905,500
Total Cost = $3,284,896

2. EQUIPMENT HOURS

The same calculations apply to this case as the 75KCY-OW-5M-H above.

D. 75KCY-OW-120M-B

1. COST

MOBIL & DEMOB COST:	$837,976	BID QUANTITY	75,000	C.Y.
		UNIT COST...	$82.18	PER C.Y.
	75KCY-OW-120M-B	EXCAV. COST.	$6,163,500	
CHECKLIST FOR INPUT DATA.		TIME.....	1.42	MONTHS

Mob/Demob = $837,976
Dredge and Disposal = $82.18/cy x 75,000 cy = $6,163,500
Total Cost = $7,001,476

2. EQUIPMENT HOURS

The same calculations apply to this case as the 75KCY-OW-5M-B above.

E. 75KCY-BN-1M-PL

1. COST

Again, the Mob/Demob and dredge/disposal unit price is obtained from CEDEP. Additionally, due to the additional cost of beach nourishment disposal, there is an additional line item to capture that cost utilizing the unit cost discussed previously.

Mob/Demob = $440,469
Dredge and Disposal = $12.09/cy x 75,000 cy = $906,750
Beach Preparation and Spreading = $3.00/cy x 75,000 cy = $225,000
Total Cost = $1,572,219

2. EQUIPMENT HOURS

This case includes beach nourishment and requires loader, dozer and truck hours, which can be obtained from Table 2 for the 75,000 cy case, which are 750 hours, 750 hours, and 375 hours, respectively.

SHORE -	1,000	ft			
TOTAL -	6,280	ft			
AVE. PIPELINE -	5,280	ft	PRODUCTION -	264	gross cy per hour
COST CATEGORY -	2	SAND	OPERATING TIME -	341	hours per month
EQUIVALENT -	5	ft	GROSS PRODUCTION -	90,024	cy per month
DESCRIPTION -	Vertical Lift of Discharge Pipe.		PAY PRODUCTION -	90,024	pay cy per month
BASIS OF PRODUCTION -	5,285	Feet (Ave + Equiv)			

Dredge hours = 75,000 cy / 264 cy/hour = 284.09 hours
Tug (assumed necessary for half time of dredge for pipeline cases) = 284.09 / 2 = 142.05 hours
Mob/Demob Dredge = 250 miles / 5 mph = 50 hours
Workboat = Dredge hours = 284.09 hours

F. 75KCY-BN-5M-PH

1. COST

Mob/Demob = $548,143
Dredge and Disposal = $25.62/cy x 75,000 cy = $1,921,500

Beach Preparation and Spreading = $3.00/cy x 75,000 cy = $225,000
Total Cost = $2,694,643

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

G. 75,000CY-Beach Nourishment-50 miles-Pump-off Hopper

1. COST
Mob/Demob = $1,046,221
Dredge and Disposal = $25.62/cy x 75,000 cy = $1,921,500
Beach Preparation and Spreading = $3.00/cy x 75,000 cy = $225,000
Total Cost = $2,694,643

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

H. 75,000CY-Dewatered Upland -2Miles-Mechanical Bucket

1. COST
Mob/Demob = $247,252
Dredge and Tow = $13.95/cy x 75,000 cy = $1,046,250
Rehandling Cost to Place in Dewatering Area = $3.00/cy x 75,000 cy = $225,000
Dewatering Site Prep & Diking = $3.00/cy x 75,000 cy = $225,000
Dewatering Site Operation & Closure = $3.00/cy x 75,000 cy = $225,000
Total Cost = $2,068,502

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

I. 75,000CY-Dewatered Upland-5Miles-Mechanical Bucket

1. COST

Because this case involves rehandling of the material, the inclusion of a material expansion factor (20 percent) is required when computing the rehandling and trucking costs below. 75,000 cy x 1.20 = 90,000 cy.

Mob/Demob = $247,453
Dredge and Tow = $13.95/cy x 75,000 cy = $1,046,250
Rehandling Cost place in to Dewatering Area = $3.00/cy x 75,000 cy = $225,000
Dewatering Site Prep & Diking = $3.00/cy x 75,000 cy = $225,000
Dewatering Site Operation & Closure = $3.00/cy x 75,000 cy = $225,000
Rehandling and Trucking 5 miles to final placement site = $11.50/cy x 90,000 cy = $1,035,000
Disposal Fee at Final Site = $10.00/cy x 90,000 cy = $900,000
Total Cost = $4,003,703

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

J. 75,000CY-Dewatered Upland-2Miles-Pump-off Hopper

1. COST
Mob/Demob = $408,315
Dredge and Pump = $15.47/cy x 75,000 cy = $1,160,250
Rehandling Cost to place in Dewatering Area = $3.00/cy x 75,000 cy = $225,000
Dewatering Site Prep & Diking = $3.00/cy x 75,000 cy = $225,000
Dewatering Site Operation & Closure = $3.00/cy x 75,000 cy = $225,000
Management & Monitoring of Upland Site 5 years = $20,000.00/year x 5 years = $100,000
Total Cost = $2,118,565

2. EQUIPMENT HOURS
Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

K. 75,000CY-Dewatered Upland-10Miles-Hydraulic Pipeline

1. COST
Mob/Demob = $430,167
Dredge and Pump = $14.68/cy x 75,000 cy = $1,101,000
Dewatering Site Prep & Diking = $3.00/cy x 75,000 cy = $225,000
Dewatering Site Operation & Closure = $3.00/cy x 75,000 cy = $225,000

Rehandling and Trucking 10 miles to final placement site = $16.35/cy x 90,000 cy = $1,471,500
Disposal Fee at Final Site = $10.00/cy x 90,000 cy = $900,000
Management & Monitoring of Upland Site 5 years = $20,000.00/year x 5 years = $100,000
Total Cost = $4,452,667

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

L. 75,000CY-Dewatered Upland-60 Miles-Mechanical Bucket

1. COST
Mob/Demob = $481,487
Dredge and Tow = $13.06/cy x 75,000 cy = $979,500
Rehandling Cost to place in Dewatering Area = $3.00/cy x 75,000 cy = $225,000
Dewatering Site Prep & Diking = $3.00/cy x 75,000 cy = $225,000
Dewatering Site Operation & Closure = $3.00/cy x 75,000 cy = $225,000
Rehanding and Trucking 60 miles to final placement site = $39.63/cy x 90,000 cy = $3,566,700
Disposal Fee at Final Site = $10.00/cy x 90,000 cy = $900,000
Total Cost = $6,702,687

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

M. 75,000CY-Dewatered Upland-Pennsylvania Mine via railway-Mechanical Bucket

1. COST
Mob/Demob = $247,252
Dredge and Tow = $13.95/cy x 75,000 cy = $1,046,250
Rehandling Cost to place in Dewatering Area = $3.00/cy x 75,000 cy = $225,000
Dewatering Site Prep & Diking = $3.00/cy x 75,000 cy = $225,000
Dewatering Site Operation & Closure = $3.00/cy x 75,000 cy = $225,000
Rehanding and Trucking 30 miles to final placement site = $29.80/cy x 90,000 cy = $2,682,000
Haul by Rail to Reclamation Site and Offload = $101.25/cy x 90,000 cy = $9,112,500
Disposal Fee at Final Site = $10.00/cy x 90,000 cy = $900,000
Total Cost = $14,763,002

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

N. 75,000CY-Marsh Creation-2Miles-Mechanical Bucket

1. COST

Because this case involves marsh creation, the project quantity needs to be converted to acres with a 5 foot depth to calculate the additional marsh costs. 75,000 cy x 27 ft/cy / 5 foot depth / 43,560 ft/acre = 9.3 acre.

Mob/Demob = $247,252
Dredge and Tow = $13.95/cy x 75,000 cy = $1,046,250
Rehandling Cost to to place in Dewatering Area = $3.00/cy x 75,000 cy = $225,000
Rehanding and Trucking to Marsh 60 miles = $29.80/cy x 90,000 cy = $2,682,000
Marsh Site Prep & Diking 5 Foot Fill Depth = $275,000/acre x 9.3 acre = $2,556,818
Marsh Site Fill Operation & Closure = $30,000/acre x 9.3 acre = $278,926
Marsh Planting and Drainage Channels = $20,000/acre x 9.3 acre = $185,950
Marsh Site Monitoring = $3,000/quarter x 12 quarters = $36,000
Total Cost = $8,301,146

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

O. 75,000CY-Marsh Creation-2Miles-Pipeline dredge

1. COST

Mob/Demob = $417,235
Dredge and Pump = $14.30/cy x 75,000 cy = $1,046,250
Marsh Site Prep & Diking for a 5 Foot Fill Depth = $275,000/acre x 9.3 acre = $2,556,818
Marsh Site Fill Operation & Closure = $30,000/acre x 9.3 acre = $278,926
Marsh Planting and Drainage Channels = $20,000/acre x 9.3 acre = $185,950
Marsh Site Monitoring = $3,000/quarter x 12 quarters = $36,000
Total Cost = $4,547,429

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

P. 75,000CY-Containment Cell-2Miles-Mechanical Bucket

1. COST

This case involves CAD Cell disposal which requires CAD Cell creation. The quantity of material required to be removed from the cell is calculated as 75,000 cy (project size) x 1.25 (bulking of dredged material) x 1.15 (CAD cell freeboard) = 107,813 cy. In addition, the CAD Cell requires a 3 foot cap which is calculated as 40 percent of the cell excavation volume: 107,813 x 0.40 = 46,875 cy.

Mob/Demob = $256,728
Dredge and Tow dredge material to CAD Cell 2 miles = $15.49/cy x 75,000 cy = $1,161,750
CAD Cell Excavation with 15 mile haul to ocean disposal = $20.35/cy x 107,813 cy = $2,193,984
CAD Cell Capping = $29.80/cy x 46,875 cy = $726,094
CAD Cell Monitoring = $3,000/quarter x 12 quarters = $36,000
Total Cost = $8,301,146

It is difficult to develop a "standard" estimate for CAD cells since how the CAD cells need to be constructed, the size of the CAD Cell cap, etc. are really project specific. For example the physical characteristics of the material being removed to create the CAD cell will determine what side slopes, if any, are needed for the CAD cell. In a stiff material such as Boston Blue Clay the CAD cell walls can be near vertical (no side slope) where in a gravel material a 3 horizontal to 1 vertical side slope is usually required. Whether side slopes are required and what material they are can greatly impact the footprint of the top of the CAD cell and therefore the volume of material required for the CAD cell cap. In developing the estimates a conservative view was taken since it is more likely that side slopes are needed for the CAD cell than not.

Dredged material that is placed into a CAD cell is usually unsuitable, silty dredged material. After this dredged material is placed into a CAD cell, the dredged material will consolidate over time reducing the elevation of the top of the dredged material in the CAD cell and strengthening the material so that it may support a cap. Typically the material in the CAD cell is allowed to consolidate approximately six months before the cap is placed.

This consolidation reduces the volume of material that in situ would be 75,000 cy in the example above to a much lower volume which "makes room" for the cap that is placed after consolidation occurs.

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

Q. 75,000CY-Containment Island-2Miles-Mechanical Bucket

1. COST

Mob/Demob = $258,786
Dredge and Tow dredged material 2 miles to containment site = $18.19/cy x 75,000 cy = $1,364,250
Containment Site Tipping Cost (Construction & Placement) = $76.00/cy x 75,000 cy = $5,700,000
Containment Site Tipping Cost (Monitoring & Management) = $3,000/year x 20 years = $60,000
Total Cost = $7,383,036

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

R. 75,000CY-Containment Island-2Miles-Hydraulic Pipeline

1. COST

Mob/Demob = $417,235
Dredge and Tow dredged material 2 miles to containment site= $14.30/cy x 75,000 cy = $1,072,500
Containment Site Tipping Cost (Construction & Placement) = $66.00/cy x 75,000 cy = $4,950,000
Containment Site Tipping Cost (Monitoring & Management) = $3,000/year x 20 years = $60,000
Total Cost = $6,499,735

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

S. 75,000CY-Containment Island-10Miles-Pump-off Hopper

1. COST

Mob/Demob = $640,989
Dredge and Tow 2 miles to containment site = $43.10/cy x 75,000 cy = $3,232,500
Containment Site Tipping Cost (Construction & Placement) = $71.00/cy x 75,000 cy = $5,325,000
Containment Site Tipping Cost (Monitoring & Management) = $3,000/year x 20 years = $60,000
Total Cost = $9,258,489

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

T. 75,000CY-Containment Island-60Miles-Mechanical Bucket

1. COST

Mob/Demob = $509,381
Dredge and Tow dredged material 2 miles to containment site= $51.32/cy x 75,000 cy = $3,849,000
Containment Site Tipping Cost (Construction & Placement) = $81.00/cy x 75,000 cy = $6,075,000
Containment Site Tipping Cost (Monitoring & Management) = $3,000/year x 20 years = $60,000
Total Cost = $10,493,381

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

U. 75,000CY-Containment Island-60Miles-Pump-off Hopper

1. COST

Mob/Demob = $632,575
Dredge and Tow dredged material 2 miles to containment site = $193.67/cy x 75,000 cy = $14,525,250
Containment Site Tipping Cost (Construction & Placement) = $76.00/cy x 75,000 cy = $5,700,000
Containment Site Tipping Cost (Monitoring & Management) = $3,000/year x 20 years = $60,000
Total Cost = $20,917,825

2. EQUIPMENT HOURS

Equipment hours for this case are calculated similarly to previous cases. The CEDEP CHKLIST or summary sheet is utilized along with the previously discussed assumptions to calculate the equipment hours.

V. RESULTS

The dredging and disposal cost estimates and calculated equipment hours are summarized for each project size, dredge type, and disposal method on a one-page summary sheet entitled "LONG ISLAND SOUND DMMP – DISPOSAL COST ANALYSIS" with a subtitle stating the

project size, disposal method, disposal distance, and dredge type in a short-hand form. For instance, 75KCY-OW-20M-B, translates to the 75,000 CY project size with Open Water disposal and a 20 mile haul dredged mechanically (with a Bucket).

These summary sheets were not compiled by the Cost Section but were, instead, sent to AECOM where they were compiled into a Rough Order of Magnitude (ROM) estimate tool/spreadsheet where one would input Dredging Location, Dredging Equipment Type, Dredge Size, Volume of Dredged Material, Disposal Method and Location, and Transport to Disposal Method and the tool/spreadsheet would provide costs in the form of Mobilization, Dredging, Disposal Transport, and Disposal. This tool, again, provides a ROM cost for a variety of dredging methods and disposal options for material potentially removed from the Long Island Sound.

ATTACHMENT C

AECOM AIR QUALITY SUMMARY

Technical Memorandum

Long Island Sound Dredged Material Management Plan

Evaluation of Air Quality Compliance for Disposal of Dredged Material

Prepared for:
US Army Corps of Engineers, New England District

Prepared By:

AECOM

November 2014

This page intentionally left blank.

Table of Contents

1 Introduction 1-1
2 Regulatory Framework 2-1
2.1 Criteria Pollutants and National and State Ambient Air Quality Standards 2-1
2.2 Pollutants of Concern 2-2
2.3 NAAQS Attainment Status 2-3
2.3.1 New York-Northern New Jersey-Connecticut-Long Island Metropolitan Nonattainment Region 2-3
2.3.2 Greater Connecticut Region 2-5
2.3.3 Providence Region 2-6
2.4 Clean Air Act Conformity Rule 2-6
2.4.1 General Conformity and Transportation Conformity Rules 2-7
2.4.2 General Conformity *de minimis* Levels 2-7
2.5 General Conformity Rule Emissions Analysis 2-8
2.6 Environmental Review Process 2-10
2.6.1 The National Environmental Policy Act 2-10
2.6.2 State Environmental Quality Review Process 2-10
2.7 Regulations Applicable to LIS DMMP-Associated Projects 2-12
2.7.1 Federal Action 2-12
2.7.2 Private Action 2-12
3 Air Emissions Analysis Methodology 3-1
3.1 Activity Data Development 3-1
3.1.1 Development of Dredging Scenarios 3-1
3.1.2 Transport 3-4
3.1.3 Disposal/Dewatering Site Activities 3-6
3.1.4 Commuter Vehicles 3-10
3.2 Emission Factor Modeling 3-10
3.2.1 Nonroad Equipment 3-10
3.2.2 Trucks and Commuter Vehicles 3-11
3.2.3 Tugs 3-11
3.2.4 Locomotives 3-11
3.3 Emissions Workbook 3-11
3.4 Compliance Measures 3-11
3.5 Potential Mitigation Measures 3-12
4 DDMP Cost 4-1
4.1 Dredged Material Disposal Cost 4-1

4.2 Emission Offsets Cost 4-3
5 Brief Emissions and Cost Workbook User's Guide 5-1
5.1 Overview 5-1
5.2 Main Inputs 5-2
5.3 Itemized Inputs 5-2
5.3.1 Dredging 5-2
5.3.2 Disposal 5-3
5.3.3 Transport to Disposal 5-5
5.3.4 Additional Upland Disposal Inputs 5-6
5.4 DMD Cost Inputs 5-7
5.5 Emission Offsets Inputs 5-7
6 References 6-1

List of Tables

Table 2-1 National Ambient Air Quality Standards for Criteria Pollutants 2-2
Table 2-2 New York-Northern New Jersey-Connecticut Metropolitan Nonattainment and Maintenance Areas 2-4
Table 2-3 Greater Connecticut Nonattainment and Maintenance Areas 2-6
Table 2-4 Rhode Island Nonattainment Areas 2-6
Table 2-5 De *Minimis* Emission Levels for Criteria Air Pollutants 2-8
Table 3-1 Mechanical Dredge Modules 3-2
Table 3-2 Hydraulic Cutterhead Dredge Modules 3-3
Table 3-3 Hopper Dredge Modules 3-3
Table 3-4 Tug-Hauled Scow Transport 3-4
Table 3-5 Hopper Dredge Transport 3-5
Table 3-6 Truck-Hauled Transport 3-5
Table 3-7 Railroad-Hauled Transport 3-5
Table 3-8 Pipeline Transport 3-6
Table 3-9 Open Water Disposal – Scows and Hoppers 3-7
Table 3-10 Beach Nourishment 3-7
Table 3-11 Containment Island Disposal 3-8
Table 3-12 CAD Cell Mechanical Dredge Disposal 3-8
Table 3-13 Marsh Creation 3-9
Table 3-14 Upland Dewatering 3-10
Table 4-1 Mechanical Dredging Costs 4-1
Table 4-2 Hydraulic Dredging Costs 4-2
Table 4-3 Hopper Dredging Costs 4-2
Table 4-4 Additional Dredging-Related Costs 4-3

1 Introduction

Air quality refers to the state of the air around us. Good air quality refers to clean, clear, unpolluted air and poor air quality occurs when pollutants reach high enough concentrations to endanger human health and/or the environment. Air quality in the United States (U.S.) is determined by comparing ambient air concentrations of specific pollutants identified by the United State Environmental Protection Agency (USEPA) to criteria or guidelines that are considered to be acceptable exposure levels.

Air quality can be affected by air pollutants produced by mobile sources and stationary sources, which are fixed or immobile facilities. Mobile sources include vehicular traffic, construction and dredging equipment, diesel locomotives, etc., while stationary sources include industrial stacks, vents, parking garages, diesel freight yards and other fixed sources.

Potential local and regional air quality impacts could occur from the dredging and dredged material disposal operation activities from individual project alternatives that are being studied as part of the Long Island Sound Dredged Material Management Plan (LIS DMMP). This memorandum evaluates the potential implications and demonstrates air quality compliance of LIS DMMP-associated projects.

This technical memorandum is organized as follows:

- Chapter 1 provides and introduction to the evaluation of air quality compliance of LIS DMMP - associated projects.
- Chapter 2 discusses the regulatory framework, including criteria and other pollutants, National and State Ambient Air Quality Standards, Clean Air Act Conformity Rule, the environmental review process, and regulations applicable to LIS DMMP- associated projects.
- Chapter 3 covers the air emissions analysis methodology including input, emissions factor modeling, compliance, and potential mitigation measures.
- Chapter 4 provides the cost analysis including both dredged material disposal cost and emission offset cost.
- Chapter 5 consists of the Emissions Workbook User's Brief Guide

2 Regulatory Framework

2.1 Criteria Pollutants and National and State Ambient Air Quality Standards

The USEPA, under the requirements of the 1970 Clean Air Act (CAA) as amended in 1977 and 1990, has established National Ambient Air Quality Standards (NAAQS) for six contaminants, referred to as criteria pollutants (40 CFR 50). The six criteria pollutants are carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter with diameters up to 10 µm (PM_{10}), particulate matter with diameters up to 2.5 µm ($PM_{2.5}$), lead (Pb), and sulfur dioxide (SO_2). The NAAQS standards include primary and secondary standards.

The primary standards were established at levels sufficient to protect public health with an adequate margin of safety. The secondary standards were established to protect the public welfare from the adverse effects associated with pollutants in the ambient air, such as damage to plants and ecosystems.

On January 22, 2010, USEPA announced a new 1-hour NO_2 standard of 100 parts per billion (ppb) while retaining the annual average NO_2 standard. The 1-hour standard was adopted to protect against health effects associated with short-term exposures to NO_2, which are generally highest on and near major roads. The final rule for the new hourly NAAQS was published in the Federal Register on February 9, 2010, and the standard became effective on April 12, 2010.

On June 22, 2010, the USEPA issued a final rule effective on August 23, 2010 updating the NAAQS for sulfur dioxide (SO_2) (75 Federal Register 35520). The USEPA revised the primary SO_2 NAAQS to provide requisite protection of public health with an adequate margin of safety by establishing a new 1-hour SO_2 standard at a level of 75 parts per billion (ppb), based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The USEPA also revoked both the then existing 24-hour and annual primary SO_2 standards.

On January 15, 2013, the USEPA issued a final rule effective on March 18, 2013 updating the NAAQS for fine particle pollution (particulate matter less than or equal to 2.5 microns in diameter [$PM_{2.5}$]) (78 Federal Register 3086). The USEPA revised the annual $PM_{2.5}$ primary standard by lowering the level from 15.0 to 12.0 micrograms per cubic meter (µg/m^3). The primary standards were established to protect human health, including the health of "sensitive" populations such as asthmatics, children, and the elderly.

The 24-hour $PM_{2.5}$ primary standard is being retained at a level of 35 µg/m^3. The USEPA is revising the Air Quality Index for $PM_{2.5}$ to be consistent with the final primary $PM_{2.5}$ standards. With regard to the primary standard for coarse particles (particulate matter less than or equal to 10 microns in diameter [PM_{10}]), the USEPA is retaining the current 24-hour PM_{10} standard of 150 µg/m^3. There is no annual standard for PM_{10}.

In order to implement the new standard, new monitoring requirements mandate that monitors be placed where emissions impact populated areas. States will need to make adjustments to the existing monitoring network in order to ensure that monitors meeting the network design regulations for the new standards are sited and operational in the future. Therefore the USEPA has not designated areas which do not meet the new standards.

Table 2-1
National Ambient Air Quality Standards for Criteria Pollutants

Pollutant		*Primary/Secondary*	*Averaging Time*	*Level*	*Form*
Carbon Monoxide		Primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
Lead		Primary and Secondary	Rolling 3- month average	0.15 µg/m(1)	Not to be exceeded
Nitrogen Dioxide		Primary	1-hour	100 ppb	98th percentile, averaged over 3 years
		Primary and Secondary	Annual	53 ppb(2)	Annual mean
Ozone		Primary and Secondary	8-hour	0.075 ppm(3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution	$PM_{2.5}$	Primary	Annual	12 µg/m(3) (4)	Annual mean, averaged over 3 years
		Secondary	Annual	15 µg/m(3)	Annual mean, averaged over 3 years
		Primary and Secondary	24-hour	35 µg/m(3)	98th percentile, averaged over 3 years
	PM_{10}	Primary and Secondary	24-hour	150 µg/m(3)	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide		Primary	1-hour	75 ppb(5)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Notes (as of May 2013):
(1) Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
(2) The official level of the annual nitrogen dioxide standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of a clearer comparison to the 1-hour standard.
(3) Final rule signed March 12, 2008. The 1997 ozone standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years) and related implementation rules remain in place. In 1997, EPA revoked the 1-hour ozone standard (0.12 ppm, not to be exceeded more than once per year) in all areas, although some areas have continued obligations under that standard ("anti-backsliding"). The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to 1.
(4) Final rule signed January 15, 2013. The primary annual fine particle ($PM_{2.5}$) standard was lowered from 15 to 12 µg/m^3.
(5) Final rule signed June 2, 2010. The 1971 annual and 24-hour SO_2 standards were revoked in that same rulemaking. However, these standards remain in effect until one year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved.
Source: USEPA 2012.

2.2 Pollutants of Concern

The potential activities being studied under the LIS DMMP involve operation of mobile sources primarily consisting of motor vehicles, such as on-road trucks, construction and dredging non-road equipment, in-water vessels, and diesel locomotives. Primary air pollutants of concern are CO, PM (PM_{10} and $PM_{2.5}$) and O_3 precursors (nitrogen oxides [NO_x] and volatile organic compounds [VOCs]). Lead emissions from mobile sources have been virtually eliminated through the use of unleaded fuel, and are no longer of concern for mobile sources. Potential emissions of SO_2, also a $PM_{2.5}$ precursor, from mobile sources are insignificant in comparison with non-mobile emission sources, especially after the implementation of the USEPA's Clean Diesel Truck and Bus Rule (December 21, 2000) and Clean Air Nonroad Diesel Rule (May 11, 2004) that cut 99 percent of sulfur in diesel fuel. Therefore, potential air quality impacts of

mobile source emissions of CO, PM (PM_{10} and $PM_{2.5}$), NO_x, and VOCs are of possible concern and should be considered under the LIS DMMP.

Since no conventional stationary sources (i.e., the sources that are regulated under CAA Title V permit regulation) are induced from the dredging and dredged material disposal process, no state air permit regulations are applicable to the program.

2.3 NAAQS Attainment Status

Areas that meet the NAAQS standard for a criterion pollutant are designated as being "in attainment." Areas where criterion pollutant levels exceed the NAAQS are designated as "nonattainment." Ozone (O_3) nonattainment areas are further classified, based on the severity of the pollution problem, as marginal, moderate, serious, severe, or extreme. CO and PM_{10} nonattainment areas are classified as either moderate or serious.

A maintenance area is an area that has been redesignated as an attainment area from a former nonattainment area. However, during the maintenance period, most of the CAA rules for a nonattainment area are still applicable to a maintenance area.

The CAA, as amended in 1990, mandates that states with nonattainment areas adopt State Implementation Plans (SIPs) that target the elimination or reduction of the severity and number of violations of the NAAQS. SIPs set forth policies to expeditiously achieve and maintain attainment of the NAAQS. The SIP aims to improve air quality and includes an analysis of reasonably available control measures; an attainment demonstration; contingency plans for attainment; and stationary and mobile source budgets to address both stationary and mobile source emissions within the region covered. If an area has been redesignated as an attainment area from a former nonattainment area, the state is required to develop a long-term maintenance plan to ensure that the area remains continuously in attainment for the NAAQS.

In each state's SIP or Transportation Improvement Program (TIP) that conforms with the SIP, mobile source emissions budgets for non-road equipment operations from construction-related activities were established. These budgets are based on the anticipated regional non-road equipment usage growth (occurring over a baseline condition) and the gradual improvement in equipment emissions due to federal and/or state mobile source emissions control programs, such as engine-tiered performance standards and inspection and maintenance programs. An on-road regional motor vehicle emissions budget was also established to include the on-road truck component.

The current NAAQS designations for areas around Long Island Sound, within which the study area lies, are summarized below.

2.3.1 New York-Northern New Jersey-Connecticut-Long Island Metropolitan Nonattainment Region

Table 2-2 lists the counties where the existing ambient air quality conditions are of concern with respect to certain pollutants. The New York-Northern New Jersey-Connecticut Long Island Nonattainment Area is required to implement controls through SIP development for these pollutants.

Table 2-2
New York-Northern New Jersey-Connecticut Metropolitan Nonattainment and Maintenance Areas

O_3 Nonattainment Area (County)	$PM_{2.5}$ Nonattainment and Maintenance Area (County)	PM_{10} Nonattainment Area (County)	CO Maintenance Area (County)
New York	***New York Nonattainment***	***New York***	***New York***
Bronx	Bronx	New York	Bronx
Kings	Kings		Kings
Nassau	Nassau		Nassau
Suffolk	Suffolk		New York
New York	New York		Queens
Queens	Queens		Richmond
Richmond	Richmond		Westchester
Westchester	Westchester		
Rockland			***Northern New Jersey***
	Northern New Jersey Maintenance		Bergen
Northern New Jersey	Bergen		Essex
Bergen	Essex		Hudson
Essex	Hudson		Passaic
Hudson	Mercer		Union
Hunterdon	Middlesex		
Middlesex	Monmouth		***Connecticut***
Monmouth	Morris		
Morris	Passaic		Fairfield
Passaic	Somerset		Litchfield
Somerset	Union		
Sussex			
Union	***Connecticut Maintenance***		
	Fairfield		
Connecticut	New Haven		
Fairfield			
Middlesex			
New Haven			

Ozone

On August 9, 2007, the New York State Department of Environmental Conservation (NYSDEC) submitted a proposed revision to the O_3 SIP for demonstrating attainment by June 15, 2013. This SIP revision contains the 2002 baseline emission inventory, projection inventories for 2008, 2011 and 2012, a predictive photo-chemical modeling attainment demonstration by June 15, 2013, and the control measures and programs that will be implemented by the state in order to demonstrate attainment with the 8- hour O_3 standard.

In order to improve air quality conditions within nonattainment or maintenance areas, the Connecticut Department of Energy and Environmental Protection (CTDEEP), who is responsible to develop the SIP to achieve attainment or maintain attainment of the NAAQS, submitted the O_3 SIP to USEPA on December 28, 2012. The SIP satisfies the requirements related to the CAA section 110(a)(1) and (2) for the O_3 NAAQS including such basic requirements as emissions inventories, monitoring and modeling to assure attainment and maintenance of the NAAQS.

Particulate Matter

On October 27, 2009, NYSDEC submitted a proposed SIP revision entitled "*New York State Implementation Plan for $PM_{2.5}$ (Annual NAAQS): Attainment Demonstration for the New York Metropolitan Area.*" This SIP, or attainment demonstration, includes inventory data for both the base and projection years, proposed emission limits, and modeling results showing the effect of the control measures needed to reach attainment. The CAA requires that attainment be reached as expeditiously as practicable, but no later than the beginning of the year prior to the attainment date. Additionally, this SIP contains a discussion of the applicable Reasonable Further Progress requirements, as well as contingency measures that apply.

Based on historical data showing no exceedances of PM_{10} NAAQS, NYSDEC withdrew the PM_{10} SIP and submitted a request on January 14, 2013 to USEPA for redesignation of the nonattainment area classified originally in 1995.

On June 22, 2012, CTDEEP submitted the final $PM_{2.5}$ redesignation request and maintenance plan as the $PM_{2.5}$ SIP, for Connecticut's portion of the New York-New Jersey-Connecticut $PM_{2.5}$ nonattainment area. The plan demonstrated that Connecticut's air quality met both the 1997 annual and the 2006 24-hour $PM_{2.5}$ NAAQS due to a combination of national, regional and local control measures implemented to reduce emissions and presented a maintenance plan that ensures continued attainment through the year 2025. On September 24, 2013, USEPA published its approval of the $PM_{2.5}$ redesignation request, establishing October 24, 2013 as the effective date of redesignation to attainment for Connecticut's portion of the New York-New Jersey-Connecticut area for both the 1997 annual and 2006 24-hour $PM_{2.5}$ NAAQS.

Carbon Monoxide

New York City, Westchester, and Nassau counties are designated as part of New York-Northern New Jersey-Long Island CO maintenance area. In November 1999, NYSDEC submitted a request to the USEPA to redesignate the New York portion of the CO nonattainment area from nonattainment to attainment of the NAAQS.

The USEPA approved the request because the New York portion met the redesignation requirements set forth in the CAA and New York's CO maintenance plans provide for the continued attainment of the CO NAAQS. CO emissions in the region have been significantly reduced in recent years due in large part to vehicle inspection and maintenance requirements and cleaner-burning fuels.

2.3.2 Greater Connecticut Region

In the Greater Connecticut region, the nonattainment or maintenance designation areas are summarized in Table 2-3. Hartford, Litchfield, New London, Tolland, and Windham Counties comprise the Greater Connecticut moderate nonattainment area for the O_3 standard, a second nonattainment area within Connecticut.

Table 2-3
Greater Connecticut Nonattainment and Maintenance Areas

O_3 Nonattainment Area (County)	PM_{10} Maintenance Area (County)	CO Maintenance Area (County)
Hartford Litchfield New London Tolland Windham	City of New Haven	Middlesex New Haven Hartford Tolland

Also included in this maintenance area are some cities and townships in Connecticut such as: all cities and townships in Fairfield County and Bridgewater and New Milford townships in Litchfield County

2.3.3 Providence Region

The Providence, Rhode Island Region has been designated as a nonattainment area for O_3 with a county list consisting of all five counties in the state shown in Table 2-4.

Table 2-4
Rhode Island Nonattainment Areas

O_3 Nonattainment Area (County)
Bristol Kent Newport Providence Washington

In February 30, 2008, the Rhode Island Department of Environmental Management (RIDEM) submitted the "*State Implementation Plan (SIP) to Demonstrate Attainment of the Eight-Hour National Ambient Air Quality Standard for Ozone in the Rhode Island Nonattainment Area*" to the USEPA to demonstrate that the Rhode Island nonattainment area, which is the entire State of Rhode Island, will be in attainment of the 8-hour NAAQS for O_3 by the end of the 2009 O_3 season. The SIP also demonstrates that, by 2008, Rhode Island will achieve the Reasonable Further Progress goals that are prescribed by the CAA and subsequent USEPA guidance.

2.4 Clean Air Act Conformity Rule

The Clean Air Act Amendments (CAAA) of 1990 expanded the scope and content of the act's conformity provisions in terms of their relationship to a SIP. Under Section 176(c) of CAAA, a project is in "conformity" if it corresponds to a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving their expeditious attainment. Conformity further requires that such activities would not:

- Cause or contribute to any new violations of any standards in any area.
- Increase the frequency or severity of any existing violation of any standards in any area.

- Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The CAAA prohibits federal agencies from engaging in, supporting, providing financial assistance for, licensing, permitting, or approving any activity that does not conform to an applicable SIP. Federal agencies must determine that a federal action conforms to the SIP before proceeding with the action.

2.4.1 General Conformity and Transportation Conformity Rules

The USEPA has developed two sets of conformity regulations for federal actions, differentiated into transportation projects and non-transportation-related projects as follows:

- Transportation projects funded, developed or approved under the Federal Aid Highway Program or Federal Transit Act, which are governed by the "transportation conformity" regulations (40 CFR Parts 51 and 93), effective on December 27, 1993 and revised on August 15, 1997.
- Non-transportation projects that require an approval from federal agencies other than Federal Highway Administration or Federal Transit Administration, which are governed by the "general conformity" regulations (40 CFR Parts 6, 51 and 93) described in the final rule for *Determining Conformity of General Federal Actions to State or Federal Implementation Plans* published in the *Federal Register* on November 30, 1993. The general conformity rule (GCR) became effective January 31, 1994 and was revised on March 24, 2010.

The LIS DMMP is not a transportation program under the criteria described above, and therefore, the GCR applies.

The GCR contains exemptions from the general conformity process. Certain federal actions are deemed by USEPA to conform because of the thorough air quality analysis that is necessary to comply with other statutory requirements. Examples of these actions include those subject to the New Source Review (NSR) program, Prevention of Significant Deterioration (PSD) permits, and remedial activities under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Other federal actions that are exempt from the GCR process include those actions which would result in no increase in emissions, or an increase in emissions that is clearly *de minimis*. Examples include continuing or recurring activities, routine maintenance and repair, administrative and planning actions, land transfers, and routine movement of mobile assets.

2.4.2 General Conformity *de minimis* Levels

To focus general conformity requirements on those federal actions with the potential to have significant air quality impacts, threshold (*de minimis*) rates of emissions were established in the final rule. A formal conformity determination is required when the annual net total of direct and indirect emissions from a federal action occurring in a nonattainment or maintenance area for a criteria pollutant would equal or exceed the annual *de minimis* level for that pollutant. Table 2-5 lists the *de minimis* levels for each criteria pollutant.

Table 2-5
De *Minimis* Emission Levels for Criteria Air Pollutants

Pollutant	Nonattainment Designation	Tons/Year
Ozone*	Serious	50
	Severe	25
	Extreme	10
	Other nonattainment or maintenance areas outside ozone transport region	100
	Marginal and moderate nonattainment areas inside ozone transport region	50/100**
Carbon Monoxide	All	100
Sulfur Dioxide	All	100
Lead	All	25
Nitrogen Dioxide	All	100
Particulate Matter ≤ 10 microns	Moderate	100
	Serious	70
Particulate Matter ≤ 2.5 microns***	All	100
Notes: * Applies to ozone precursors – volatile organic compounds (VOC) and nitrogen oxides (NO_X); ** VOC/NO_X; *** Applies to $PM_{2.5}$ and its precursors.		

Based on the nonattainment and maintenance areas listed in Tables 2-2 to 2-4, the applicable *de minimis* levels for those federal action projects (e.g., US Army Corps Engineers [USACE] approval action) within those nonattainment or maintenance areas would include, where appropriate:

- 100 tons per year (tpy) for NOx
- 50 tpy for VOC
- 100 tpy for $PM_{2.5}$
- 100 tpy for CO.

Since the disposal activities within the only PM_{10} nonattainment/maintenance areas (i.e., New York County and the City of New Heaven as shown in Tables 2-2 and 2-3) would be limited, the evaluation of compliance does not consider the effects with these areas.

2.5 General Conformity Rule Emissions Analysis

The GCR analysis for a Federal action examines the impacts of the direct and indirect net emissions from mobile and stationary sources. Direct emissions are emissions of a criterion pollutant or its precursors that are caused or initiated by a Federal action and occur at the same time and place as the action. Indirect emissions, occurring later in time and/or farther removed in distance from the action itself, must be included in the determination if both of the following apply:

- The federal agency can practicably control the emissions and has continuing program responsibility to maintain control.

- The emissions caused by the federal action are reasonably foreseeable.

Increased direct and indirect NO_x, VOC, $PM_{2.5}$, and CO emissions would result from the following potential demolition and construction activities associated with the potential actions being studied under the LIS DMMP:

- Use of diesel and gas-powered dredging and dredged material disposal non-road construction equipment.
- Movement of trucks, vessels, and locomotives during dredged material disposal activities.
- Commuting vehicles from dredging and construction workers.

Under the GCR, emissions of any LIS DMMP projects and/or project components involving federal funding or federal agency approval need to be compared to *de minimis* levels on an annual basis. If the total direct and indirect emissions for the applicable nonattainment or maintenance criterion pollutant (or its relevant precursors) do not exceed the *de minimis* levels, the federal action is determined to conform for the pollutant under study with minimal potential air quality impact. Conversely, if the total annual emissions of a pollutant are above the *de minimis* value, a formal GCR determination is applicable for that pollutant.

There are basically four ways to demonstrate conformity with the SIP under the formal GCR determination:

- Emissions are included in the SIP – so that for any criteria pollutant, the total of direct and indirect emissions from the action are specifically identified and accounted for in the applicable SIP's attainment or maintenance demonstration.
- Emission offsets are identified – so that the total emissions (including direct and indirect emissions) from the action are fully offset within the same nonattainment or maintenance area. This may be accomplished through a revision to the applicable SIP or a similarly enforceable measure that effects emission reductions so that there is no net increase in emissions of that pollutant.
- Emissions do not exceed the emission budget – so that the total emissions (including direct and indirect emissions) from the action is determined and documented by the state agency primarily responsible for the applicable SIP to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would not exceed the emissions budgets specified in the applicable SIP.
- State governor's office presents assurance in the form of a SIP revision – so that the total emissions (including direct and indirect emissions) from the action is determined by the state agency primarily responsible for the applicable SIP to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would exceed an emissions budget specified in the applicable SIP. Under these conditions, the State Governor or the Governor's designee for SIP actions makes a written commitment to USEPA which includes:

  (1) A specific schedule for adoption and submittal of a revision to the SIP which would achieve the needed emission reductions prior to the time emissions from the federal action would occur;

  (2) Identification of specific measures for incorporation into the SIP which would result in a level of emissions which, together with all other emissions in the nonattainment or

maintenance area, would not exceed any emissions budget specified in the applicable SIP;

(3) A demonstration that all existing applicable SIP requirements are being implemented in the area for the pollutants affected by the federal action, and that local authority to implement additional requirements has been fully pursued;

(4) A determination that the responsible federal agencies have required all reasonable mitigation measures associated with their action; and

(5) Written documentation including all air quality analyses supporting the conformity determination.

2.6 Environmental Review Process

Depending on the scale of each LIS DMMP project, those projects with the potential to result in both local or regional air quality adverse impacts are typically required as part of the overall environmental resource impact study to undergo federal and/or state project-level environmental review processes.

2.6.1 The National Environmental Policy Act

The National Environmental Policy Act (NEPA) of 1969 requires the consideration of environmental issues in Federal agency planning and decision-making. The Council on Environmental Quality (CEQ) regulations, as contained in 40 Code of Federal Regulations (CFR) Parts 1500 to 1508, directs Federal agencies on how to implement the provisions of NEPA.

Under NEPA, federal agencies must prepare an environmental assessment (EA) or environmental impact statement (EIS) for any Federal action, except those actions that are determined to be "categorically excluded." An EIS is prepared for those Federal actions that may significantly affect the quality of the human environment. A programmatic EIS for the LIS DMMP is currently being prepared by the USACE.

An EA is a concise public document that provides sufficient analysis for determining whether the potential environmental impacts of a proposed action are significant, resulting in the preparation of an EIS, or if not significant, resulting in the preparation of a Finding of No Significant Impact (FONSI). Thus, if the lead agency were to determine that the individual project under the LIS DMMP would have a significant impact on the quality of the human environment, an EIS would be prepared and a final Record of Decision (ROD) would be made by the lead agency on the proposed action after the completion of the EIS.

2.6.2 State Environmental Quality Review Process

2.6.2.1 New York

New York's State Environmental Quality Review Act (SEQR) requires all state and local government agencies to consider environmental impacts equally with social and economic factors during discretionary decision-making. This means state agencies must assess the environmental significance of all actions they have discretion to approve, fund, or directly undertake. SEQR requires the agencies to balance the environmental impacts with social and economic factors when deciding to approve or undertake an action.

If an action is determined not to have significant adverse environmental impacts, a determination of nonsignificance (negative declaration) is prepared. If an action is determined to have potentially significant adverse environmental impacts, an EIS is required.

The SEQR process uses the EIS to examine ways to avoid or reduce adverse environmental impacts related to a proposed action. This includes an analysis of all reasonable alternatives to the action. The SEQR "decision making process" encourages communication among government agencies, project sponsors and the general public. SEQR applies to all state or local government agencies including districts and special boards and authorities whenever they must approve or fund a privately or publicly sponsored action. It also applies whenever an agency directly undertakes an action. Applicants who seek project approval or government funding may be responsible for preparing an EA or EIS.

In the SEQR process, when actions consist of several steps or sets of activities, the entire set must be considered the action, even if several separate agencies are involved. Segmentation of an action into components for individual review is contrary to the intent of SEQR.

2.6.2.2 Connecticut

The Connecticut Environmental Policy Act (CEPA) establishes environmental policy for the state of Connecticut. It requires an Environmental Impact Evaluation (EIE) for any state action which could potentially impact the natural environment. The lead agency is responsible for preparing the EIE, which is reviewed and approved by the Office of Policy and Management once it is completed.

CEPA states that, with a few exceptions, the sponsoring state agency must prepare an EIE before undertaking any action that may have significant impacts on the environment. Like the Federal EIS, the EIE must include a range of alternatives along with the No Action option. The EIE must consider the impacts on each environmental resource, including air quality, for each alternative.

Once the lead agency has completed an EIE, it is made available for public review and comment for a 45 day period. Upon the expiration of the review and comment period, the lead agency issues a Record of Decision and the EIE is submitted to the State Office of Policy and Management (OPM) for final review of the evaluation's adequacy. If the EIE is found to be inadequate, the OPM will require an EIE supplement from the lead agency, or may reject it entirely if the EIE is seriously flawed.

2.6.2.3 Rhode Island

As described previously, the RIDEM submitted its SIP to the USEPA in 2008 to demonstrate attainment of O_3 NAAQS for the Providence nonattainment area. Rhode Island has the same emissions standards for non-road mobile sources and marine diesel engines as those promulgated by USEPA, and has applied these standards in generating the emissions inventory for the demonstration of reasonable further progress and attainment. The emission sources associated with the LIS DMMP projects would be subject to the EPA performance standards, and therefore, would be consistent with the SIP.

2.7 Regulations Applicable to LIS DMMP-Associated Projects

2.7.1 Federal Action

The CAAA GCR is applicable to any project-level action requiring federal funding and approval. The annual project-level air emissions (direct and indirect) potentially resulting from the LIS DMMP will be estimated using the most current planning tools and will be compared with the GCR-established *de minimis* levels to determine whether a formal SIP conformity determination is required. If the annual emissions levels are greater than the corresponding *de minimis* thresholds, a formal GCR determination should be considered according to the manner described in Chapter 4.4. Currently, the emission budgets in the SIP for non-road mobile sources do not account for major harbor dredging activities, such as those considered in the LIS DMMP, therefore, the most feasible solution among the four measures is to make a positive project-level GCR determination through a demonstration that:

- Emissions will be included in the future SIP; or
- Emission offsets are identified.

However, both methods require a substantial regulatory process and are difficult to achieve (e.g., identify available emissions credits for construction emissions offset purposes). In order to avoid the unnecessary lengthy regulatory process or difficulties, a reevaluation of potential overly conservative assumptions used for project-level emissions estimates should be conducted that would lead to more reasonable and realistic emissions forecasts. Other feasible annual emission reduction measures can be further considered as appropriate such as implementing alternative dredging methods, using cleaner equipment, modifying the project schedule, etc. to demonstrate that the annual project-level air emissions would not exceed the applicable *de minimis* levels for certain LIS DMMP alternatives.

2.7.2 Private Action

The GCR is not directly applicable to any project action carried through by a private entity, which is not under continuous federal agency responsibility or control. These project components would essentially be required to follow the applicable state environmental review process to determine if the project-level air emissions would have the potential to:

- Cause or contribute to new or existing violations of NAAQS in the area.
- Increase the frequency or severity of an existing NAAQS violation in the area.
- Delay timely attainment of NAAQS, or required interim emission reductions, or other milestones in any area.

Given the temporary nature of construction activity emissions, potential air quality impacts are often addressed qualitatively in NEPA and state environmental documents. However, for large-scale construction projects which may last many years at a local site, construction emissions impacts are often considered to be similar to operational emissions impacts under this condition. Accordingly, a more refined project-level air quality emissions and concentration modeling analysis may be warranted.

Project-level air quality impacts are generally evaluated on two scales:

- Microscale level for CO and $PM_{2.5}$: a microscale analysis (i.e., hot spot analysis) of mobile source-related impacts along mobile source traveling routes or at mobile source operation sites

such as a dredging site or disposal site provides estimates of localized pollutant concentrations for direct comparison to the NAAQS. USEPA has published nonattainment area $PM_{2.5}$ hot spot analysis guideline, *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas* (USEPA 2010), that can be used to predict project-level air quality concentrations to make a direct comparison with NAAQS to satisfy both NEPA and state environmental review requirements.

- Mesoscale level for nitrogen oxides (NO_x) and volatile organic compounds (VOCs), which are precursors of O_3. Ozone is a pollutant of regional concern in nonattainment areas and is subject to air transport phenomena under different weather conditions; therefore O_3-related impacts are generally evaluated on a regional basis by the appropriate regional metropolitan planning organization or MPO, through a regional emissions analysis. The regional emissions analysis is a part of the TIP and addresses the regional emission impacts from all projects that are included in the TIP. Once the TIP has been determined to conform to the SIP, the projects it includes do not require a regional emissions analysis on a project level, since their emissions are included in the TIP's emissions analysis. Therefore the project preferred alternative will exempt from regional emissions analysis if it is included in the conforming TIP.

Although the GCR is not directly applicable to a private project, using the federal approach in the same context, which compares project-level annual emissions levels with corresponding GCR *de minimis* levels, can be considered a useful tool to screen out those potential actions studied under the LIS DMMP that have minimal air quality impacts. Furthermore, using the emissions reduction approach (implementing alternative dredging methods, using cleaner equipment, modifying project schedule, etc.) as defined previously for a federal action, can further reduce the number of projects that would not be *de minimis* on air emissions for a specific nonattainment pollutant.

3 Air Emissions Analysis Methodology

3.1 Activity Data Development

In order to predict the air emissions from activities associated with the LIS DMMP various scenarios were developed and models were run. These activity resource data were used to predict emissions and cost estimates for dredging projects in the Long Island Sound.

3.1.1 Development of Dredging Scenarios

The USACE New England District developed various dredging scenarios to be evaluated as summarized in the task's Scope of Work. The dredging scenarios include estimates of equipment sizes (type and horsepower) and operating hours required for the dredging and disposal, including transportation and processing as appropriate and mobilization and demobilization. Consequently, emissions for the execution of the work itself are based directly on these estimates. The formulas described in the following sections were used to calculate equipment operating requirements to provide emissions estimates for the various scenarios.

To streamline the emissions estimation process, the equipment requirements were sorted into "modules" according to the key variables that drive the equipment selection and operating time (e.g., project size, pumping distance, etc.). Modules include dredge method, disposal method, and the distance and method of transport for disposal, among other parameters. The respective options are identified for each key variable and equipment requirements are identified on a scalable (typically, per unit volume of dredged material) basis. The various options can then be combined to determine the emissions from the various scenarios developed by USACE. These models are intended for use by individuals familiar with the practical aspects of dredging projects and who would therefore make informed decisions as to equipment selection, disposal method and transportation that are consistent with the project being estimated.

The basic dredging technologies considered are mechanical dredging by bucket and hopper dredges, and hydraulic pipeline cutterhead dredges.

3.1.1.1 Mechanical Dredges

The equipment associated with mechanical dredging includes a workboat, the dredge plant itself, a tug for general support and a mobilization and demobilization (M&D) tug. Productivity of a bucket dredge is driven primarily by the bucket size and secondarily by the mechanical power necessary to move that bucket. The larger the bucket, the more material that may be removed per bite, but the dredge power plant must also be larger. Bucket size is optimized to reflect site conditions, which may include (among factors) total depth of dredging, total quantity of dredging, and material type. Supporting equipment is directly tied to this decision, and therefore bucket size is considered the only driving variable for establishing dredge operational time.

Based on USACE-provided data, 10-cubic yards (CY) buckets are paired with 1,295-horsepower (HP) dredges, 26-CY buckets are paired with 9,830 HP dredges and 54 CY buckets are paired with 10,220 HP dredges as summarized in Table 3-1. A 100-HP workboat is required for the same duration as the dredge, corresponding to project size. A 3,300 HP M&D tug is required for times varying from 90 to 150 hrs, depending on disposal distance and disposal type, but does not appear to vary with project size. 110 hours represents the M&D tug requirement equal to or exceeding that required in 80 percent of the scenarios;

therefore, it is assumed that the M&D tug is required for 110 hours per job for mechanical dredge mobilizations. A 100-HP workboat is also required for the same operating hours as the dredge. Mechanical dredge module assumptions are summarized in Table 3-1.

Table 3-1
Mechanical Dredge Modules

Equipment	Hours per 1,000 CY dredged
1,295 HP dredge w/ 10 CY bucket	9
9,830 HP dredge w/ 26 CY bucket	5
10,220 HP dredge w/ 54 CY bucket	3.3
100 HP workboat	Same as dredge
3,300 HP M&D tug	110 hours per project
Emissions location: dredging site	

3.1.1.2 Hydraulic Cutterhead Dredges

The equipment associated with hydraulic dredging includes a workboat, the dredge plant itself, a tug and an M&D tug. Booster pumps may also be required, but depend on the pumping distance as a primary variable and are therefore considered as a separate module. Productivity of a hydraulic dredge is driven primarily by horsepower; the larger the horsepower, the more material that may be removed per hour. In practice suction line diameter is a consideration – too small or large a diameter, and the dredge does not operate effectively. Based on review of the aggregated data from the Corps, however, while four diameters were nominally considered (12-, 16-, 24- and 30-inch), only for the two smaller diameters were different suction line sizes considered for the same horsepower dredge, and the productivity variations could be considered negligible. In addition, since suction line diameter would typically increase with horsepower anyway, diameter (for an estimate such as this) can reasonably be considered at most a secondary variable, and is therefore not considered further in establishing equipment requirements for emissions calculations.

Occasional substantial deviations in correlations between horsepower and productivity appear to be outliers based on review of overall trends. There, is however, an observed break in the productivity trend observed for 1,000 and 2,000 CY projects with a 2,035 HP dredge as compared to projects of 5,000 CY or more. Accordingly, different productivity rates for small projects are identified in the module. The aggregated data for tug utilization for hydraulic dredges indicates that a 3,300 HP tug is generally required for half of the operating hours of the dredge. Finally similar to the mechanical dredge, a 100-HP workboat is required for the same operating hours as the dredge. Hydraulic dredge module assumptionss are summarized in Table 3-2.

Table 3-2
Hydraulic Cutterhead Dredge Modules

Equipment	Hours per 1,000 CY dredged
2,035 HP dredge (projects less than 5,000 CY)	6.6
2,035 HP dredge (projects of 5,000 CY or more)	4.5
3,625 HP dredge	2.9
9,620 HP dredge	1.8
19,230 HP dredge	0.9
3,300 HP tug	One-half of the dredge operating hours
100 HP workboat	Same as dredge
3,300 HP M&D tug	80 hours per project
M&D dredge	80 hours per project
Emissions location: dredging site	

3.1.1.3 Hopper Dredges

The equipment associated with dredging by hopper in the aggregated data includes a workboat, the dredge plant itself, a tug and M&D of the dredge. The aggregated hours for some pieces of this equipment account for the dredging itself as well as transport and disposal, which vary based on distance and type of disposal. For the purposes of the dredging work only, only the M&D of the dredge as well as equipment hours for the workboat and dredge plant that do not vary based on disposal distance or type were considered. The portion of those equipment hours that do vary based on distance or type of disposal site are separated and considered in the transport modules. For M&D of the dredge, either 80 or 100 hours were identified in the data; for conservatism, 100 hours was used for all scenarios to eliminate an additional variable. Hopper dredge module assumptions are summarized in Table 3-3.

Table 3-3
Hopper Dredge Modules

Equipment	Hours per 1,000 CY Dredged
4,125 HP hopper dredge	2.0
4,125 HP pump-off hopper dredge	2.3
11,085 HP hopper dredge	0.9
11,085 HP pump-off hopper dredge	1.6
18,000 HP hopper dredge	0.4
18,000 HP pump-off hopper dredge	0.7
100 HP workboat	Same as dredge
3,300 HP tug	One-half of the dredge operating hours
M&D of dredge	100 hours per project
Emissions location: dredging site	

3.1.2 Transport

The equipment associated with transport of dredged material may include tugs, trucks, railroad locomotives and booster pumps, depending on the dredging method and ultimate disposal location. The assumptions for the scow, hopper, and transport are detailed below.

3.1.2.1 Tug-Hauled Scow

The assumptions underlying the data provided by USACE varied from case to case, such as the size of the scows. The aggregated data was adjusted to reflect a common assumption of total transport hours minus the dump scow operating hours (which are dependent on the project size only, independent of the distance to the disposal site), divided by the number of scow-miles actually required for transport. The resulting coefficients varied greatly, but based on review of the data a value of 0.75 is considered the most appropriate coefficient. Assumptions for tug-hauled scow transport are summarized in Table 3-4.

Table 3-4
Tug-Hauled Scow Transport

Equipment	Hours
3,300 HP tug (transport only)	0.75 * (project size / scow size)* disposal distance (miles)
170 HP crane & bucket (offload for non-open dump projects)	Project size / 300
Notes: Emissions location: allocate tug proportionally along transport route. *For project and scow sizes, use actual size in CY (not thousands of CY in KCY).	

3.1.2.2 Hopper Dredge Transport

The assumptions underlying the data provided by USACE varied, but in general approximately 0.46 hours are required per scow-mile traveled for transport to open-water disposal locations in hopper dredges, plus one hour per load for dumping. In addition, pump-off hoppers also require the use of pumps to offload dredged material, which does not vary The aggregated data is inconsistent regarding the use of pumps for offloading of pump-off hoppers, for example they are not shown for projects exceeding 100 thousand CY [KCY]. The pump operating time mirrors the total dredge operating time (inclusive of transport), although pump-off time would be a function of the project size only and not the transport distance. To provide a conservative estimate, it is assumed that the pump is nevertheless required for the same total operating time as the dredge (dredging plus transport time). Assumptions used for hopper dredge transport are summarized in Table 3-5.

Table 3-5
Hopper Dredge Transport

Equipment	Hours
Hopper dredge (same as used for dredging module)	0.46 * (project size / hopper size) * disposal distance (miles)
700 HP pump (offload for pump-off hoppers only, regardless of disposal option)	Same as dredge (total of dredging module and transport module hours)
Notes: Emissions location: allocate proportionally along transport route. *For project and hopper sizes, use actual size in CY (not in KCY).	

3.1.2.3 Truck Transport

For truck transport to upland disposal or rail transloading sites, it was generically assumed that a 400-HP truck would be used. In most cases, a 20-CY truck capacity was assumed, although this should be reduced when required due to weight or length restriction on transport or at the disposal site. Total truck mileage is therefore the total project volume divided by 20, and multiplied by the round-trip distance to the selected facility (upland site or transloading location). Assumptions used for truck-hauled transport are summarized in Table 3-6.

Table 3-6
Truck-Hauled Transport

Equipment	Mileage
400 HP truck	Total volume (CY) / truck capacity (CY) * round-trip distance (miles)
Notes: Emissions location: allocate proportionally along transport route. Adjust half of loads as empty and half fully loaded for emission factors. Split of highway/arterial factors is site-specific.	

3.1.2.4 Railroad Transport

Based on data provided by USACE for a 2,500-HP railroad locomotive transporting dredged material the unit transport time ranges from 20 hours per 1,000 CY for the smallest (1,000 CY) project size to 2.08 hours per CY for all project sizes from 50,000 CY and up. Assumptions used for railroad-hauled transport are summarized in Table 3-7.

Table 3-7
Railroad-Hauled Transport

Equipment	Hours per 1,000 CY Dredged
2,500 HP Railroad Locomotive	
1 KCY projects	20
2 KCY projects	10
5 - 26 KCY projects	4

Equipment	Hours per 1,000 CY Dredged
>=50 KCY projects	2.08
Rail Hopper Dump 100 HP	
1 KCY projects	15
2 KCY projects	7.5
5 - 26 KCY projects	3
>=50 KCY projects	2.5
Notes: Emissions location: allocate locomotive proportionally along transport route and rail hopper dump at destination. Assuming rail is not available at the dewatering site, also include trucking mileage for trans-loading using the truck-haul module.	

3.1.2.5 Pipeline Transport

By necessity, booster pump operation for pipeline transport equals the operational uptime of the dredge itself. The distance to the dewatering location (end point for hydraulic pipelines) is generally between 0 and 2 miles for all scenarios. The aggregated data is inconsistent regarding number of booster pumps or application (e.g., they are not shown for projects exceeding 1 million CY [MCY]). To provide a conservative estimate, it was assumed that a minimum of 1 booster pump would be required for all pipeline operations. In most cases, truck or rail transport of dredged material will also be needed for dewatered material; these equipment hours should be added using the appropriate module (Tables 3-6 and 3-7). Assumptions used for pipeline transport are summarized in Table 3-8.

Table 3-8
Pipeline Transport

Equipment	Hours per 1,000 CY Dredged per Mile
700 HP booster pump	Same as dredge
Notes: Emissions location: site of dredging	

3.1.3 Disposal/Dewatering Site Activities

Depending on the specific type of disposal site, the equipment associated with disposal and dewatering site activities may include loaders, dozers, cranes and buckets, booster pumps, and dump scows.

3.1.3.1 Open Water Disposal

Equipment operating hours for open-water disposal options are directly related to the size of the project and the size and type of the transport vessel. Based on the aggregated data, the operating time per dump is constant. Assumptions used for open water disposal are summarized in Table 3-9.

Table 3-9
Open Water Disposal – Scows and Hoppers

Equipment	Hours per 1,000 CY Dredged
Dump Scows	
250 HP Dump Scow Engine	0.46 hour * total volume / scow size
3,300 HP tug (during dump time only)	0.46 hour * total volume / scow size
Hopper Dredges	
Hopper dredge (same as used for dredging module)	1 hour * (project size / hopper size)
Notes: Emissions location: at disposal site.	

3.1.3.2 Beach Nourishment

Equipment required for beach nourishment includes loaders, dozers and trucks. Based on the aggregated data, the equipment hours required for both a dozer and loader are 10 hours per 1 KCY dredged for projects less than 250 KCY, and 6 hours for projects of 250 KCY or greater. In addition, a 400 HP truck is required for 5 hours per 1 KCY dredged for projects up to 75 KCY, and required for 7.5 hours per 1 KCY dredged for projects of 100 KCY or more. Assumptions used for beach nourishment are summarized in Table 3-10.

Table 3-10
Beach Nourishment

Equipment	Hours per 1,000 CY Dredged
250 HP Loader & 200 HP Dozer	
Projects less than 250 KCY	10
Projects 250 KCY or more	6
400 HP Truck	
Projects less than 500 KCY	5
Projects 500 KCY or more	7.5
Notes: Emissions location: beach nourishment site. Pipeline transport for one mile should be added if dredging technology is hopper dredge (direct placement for hydraulic dredging	

3.1.3.3 Containment Island

Equipment required for containment island disposal includes loaders, dozers and trucks. Based on the aggregated data, the equipment hours required for both a dozer and loader are 20 hours per 1 KCY dredged for projects less than 250 KCY, and 12 hours for projects of 250 KCY or greater. In addition, a 400 HP truck is required for 15 hours per 1 KCY dredged for projects up to 250 KCY, and 9 hours per 1 KCY dredged for projects of 250 KCY or more. Assumptions used for containment island disposal are summarized in Table 3-11.

Table 3-11
Containment Island Disposal

Equipment	Hours per 1,000 CY dredged
250 HP Loader & 200 HP Dozer	
Projects less than 250 KCY	20
Projects 250 KCY or more	12
400 HP Truck	
Projects less than 250 KCY	15
Projects 250 KCY or more	9
Notes: Emissions location: Containment Island site.	

3.1.3.4 Confined Aquatic Disposal (CAD) Cells

CAD cell disposal construction is equivalent to the dredging and open water disposal of the volume of material necessary to accommodate the targeted dredge material. Dredging and open water disposal of 1.4375 times the volume of target material is needed in order to create the CAD cell itself (25% bulking factor plus 3 feet of capping material and freeboard). For the purposes of this module, the operating hours to construct the CAD cell were developed using the production rates established for mechanical dredging (Section 3.1.1.1). This is assumed to be a more accurate and defensible approach than attempting to isolate the target dredging and CAD cell dredging from within the total equipment hours provided in the aggregated data. The dredging of the target material itself is not included in this module, and must be estimated using the appropriate module. Assumptions used for CAD cell disposal are summarized in Table 3-12.

Table 3-12
CAD Cell Mechanical Dredge Disposal

Equipment	Hours per 1,000 CY Dredged
Creation of CAD Cell	
1,295 HP dredge w/ 10 CY bucket	13
9,830 HP dredge w/ 26 CY bucket	7.2
10,220 HP dredge w/ 54 CY bucket	4.7
100 HP workboat	Same as dredge
3,300 HP tug (transport and dumping)	0.75 * (1.4375 * Project size / scow size) * CAD material disposal distance + 0.46 hours * 1.4375 * project size / scow size
250 HP Dump Scow Engine	0.46 hours * 1.4375 * project size / scow size

Equipment	Hours per 1,000 CY Dredged
Placement of Targeted Material at CAD Cell	
3,300 HP tug (transport and dumping)	0.75 * (Project size / scow size) * project disposal distance + 0.46 hours * project size / scow size
250 HP Dump Scow Engine	0.46 hours * total volume / scow size
Emissions Locations For CAD cell dredging and placement of targeted material: site of CAD cell. For transport and dumping of CAD cell material: allocate tug proportionally along transport route. "CAD material disposal distance" refers to the travel distance from the site of the CAD cell to the location at which material excavated to form the CAD is to be disposed. "Project disposal distance" refers to the distance from the targeted dredging location to the CAD cell.	

3.1.3.5 Marsh Creation Site

Equipment required for a marsh creation site includes loaders, dozers and trucks. Based on the aggregated data, the equipment hours required are constant on a unit-dredged basis, with a decrease in the number of hours needed for loaders and dozers at 250 KCY and for trucks at 50 KCY. Assumptions used for marsh creation are summarized in Table 3-13.

Table 3-13
Marsh Creation

Equipment	Hours per 1,000 CY Dredged
250 HP Loader & 200 HP Dozer	
Projects less than 250 KCY	15
Projects 250 KCY or more	9
400 HP Truck	
Projects less than 50 KCY	10
Projects 50 KCY or more	6
Notes: Emissions location: marsh creation site.	

3.1.3.6 Upland Dewatering Site

Equipment required for an upland dewatering site includes loaders, dozers and trucks. Based on the aggregated data, the equipment hours required are constant on a unit-dredged basis, with decrease in the number of hours needed for loaders and dozers at 250 KCY and for trucks at 50 KCY.. The use of trucks is not consistently identified in the aggregated data for project sizes over 250 KCY, but it is included in enough scenarios of these larger project sizes to establish the trend in operating hours. It is assumed that the trucking component should be included for all scenarios. Assumptions used for upland dewatering are summarized in Table 3-14.

Table 3-14
Upland Dewatering

Equipment	Hours per 1,000 CY dredged
250 HP Loader & 200 HP Dozer	
Projects less than 250 KCY	15
Projects 250 KCY or more	9
400 HP Pruck	
Projects less than 50 KCY	10
Projects 50 KCY or more	6
Notes: Emissions location: dewatering site.	

3.1.4 Commuter Vehicles

In practice, dredging operations employ shifts from 8 to 12 hours in length, depending on site access and local labor conditions. It is assumed that a round-trip of a site worker in a passenger vehicle is required for every 10 hours of total equipment operations, on average.

3.2 Emission Factor Modeling

3.2.1 Nonroad Equipment

Estimates of the operational emissions from nonroad dredging and dredged material disposal equipment were developed based on the estimated hours of equipment use as described previously and the emission factors for each type of equipment. Criteria emission factors were taken from USEPA's NONROAD emission factor model (USEPA 2009a) for Tier 2 engines associated with the national default model database for nonroad engines. This approach is considered conservative since currently Tier III and IV cleaner engines have been widely implemented in large scale projects. All equipment was assumed to be diesel-powered.

The USEPA recommends the following formula to calculate hourly emissions from nonroad engine sources including cranes, front end loaders, and other machines:

$M_i = N \times HP \times LF \times EF_i$

where:

M_i = mass of emissions of i^{th} pollutants during inventory period;
N = source population (units);
HP = average rated horsepower;
LF = typical load factor; and
EF_i = average emissions of i^{th} pollutant per unit of use (e.g., grams per horsepower-hour).

3.2.2 Trucks and Commuter Vehicles

USEPA's Motor Vehicle Emission Simulator (MOVES) software was used to predict truck and commuter vehicle running emission factors for all criteria pollutants and CO_2. Because these vehicles can originate from and travel through various counties among several states, the emissions factors from these vehicles were modeled by selecting inputs available in the model established for several default representative counties for each affected state based on the proximity to dredging sites. The selected representative counties for each affected state include:

- New York: Nassau
- Connecticut: New Haven
- Rhode Island: Newport
- New Jersey: Hudson
- Pennsylvania: Allegheny

These emissions factors were then multiplied by the estimated truck and commuting vehicle operating hours forecasted to determined the project-associated on-road vehicle indirect emissions.

3.2.3 Tugs

Tugs emissions were calculated using the methodologies that are essentially the same as those used for nonroad equipment discussed previously. Emission factors, load factors, and power values related to diesel engines were taken from *Current Methodologies in Preparing Mobile Source Port-related Emission Inventories* (USEPA 2009b).

3.2.4 Locomotives

Locomotive emissions were calculated using estimated running hours and size described in Section 2 and the emission factors for Tier II locomotive engines obtained from *Emission Factors for Locomotives* (USEPA 2009c).

3.3 Emissions Workbook

A comprehensive emissions workbook was developed as part of the efforts described in this report to predict project-specific emissions by incorporating: 1) activity input data primarily established by the USACE and 2) source-specific emissions factors and load factors established by using USEPA-developed modeling tool and guideline documents. A brief user's guide for this workbook can be found in Chapter 5.

3.4 Compliance Measures

Air quality is defined by ambient air concentrations of specific pollutants of concerns. Project level impacts can be predicted by a direct comparison with the NAAQS through a refined concentration modeling analysis. Nonetheless, the GCR provides a measure to screen out those projects with minimal air quality concerns in terms of project-level annual emissions levels. If the project-generated annual

emission level is below the *de minimis* threshold for a specific nonattainment/maintenance pollutant, the project is presumed to have minimal air quality impact for that pollutant. This emission-based comparison is a much simpler approach and is particularly useful for a programmatic action that lacks specific design information for an individual project at an early planning stage. Although the GCR applies to federal actions, this approach can be used in the same context to screen a private program/project. The project would be unlikely to have significant air quality concerns if the project-generated annual emissions are below the GCR *de minimis* levels.

This report uses the GCR *de minimis* levels as the thresholds to determine whether the project would have potential significant impacts. It should be noted that exceedances of the GCR *de minimis* levels are only the indicators of potential air quality concerns and the project warrants a formal conformity determination to further assess its impact significance.

Therefore the GCR *de minimis* levels are selected here for identifying those projects that are deemed to be in compliance with the SIPs. For those projects with potential exceedances of the GCR *de minimis* levels, a formal determination will be required including implementing those options identified in Section 2.5 including emissions offsets.

3.5 Potential Mitigation Measures

If direct and/or indirect emissions exceed the *de minimis* threshold for a specific nonattainment pollutant as a result of a project, a formal conformity determination is required through more refined air quality impact analyses for localized pollutants, such as PM and CO. For regional pollutants, such as NOx or VOC, one of the four options identified in Section 2.5 could be selected. However, the commonly used alternative mitigation options in addressing project-level potential air quality concerns applicable to the LIS DMMP could include:

1) Source control: reducing emissions to the levels that are below the *de minimis* thresholds by committing to the use of cleaner equipment during the process, such as using Tier III and/or Tier IV engines.

2) Schedule modification: extending dredging and disposal schedule to reduce emissions levels below the *de minimis* thresholds on an annual basis.

3) Emissions offsets: retiring the same amount of emissions generated by the project through purchasing available emissions credits.

4 DDMP Cost

4.1 Dredged Material Disposal Cost

Cost data for key components of the dredging work was provided by the USACE in the form of total and unit prices (where applicable) for major components of the work (e.g., dredging, dewatering, disposal, etc.). The prices were all-inclusive and did not break out the portions of the cost attributable to individual factors such as fuel cost, labor cost and equipment costs. Therefore, for the purposes of the model all costs were used directly. A fuel cost of $4.20 per gallon was used for all cost data provided by the USACE. The cost computation modules are summarized for mechanical dredging, hydraulic dredging, hopper dredging, and additional dredging costs in Tables 4-1 through 4-4, respectively. These numbers may be revised if detailed cost breakdown information becomes available in the future.

Table 4-1
Mechanical Dredging Costs

Mobilization Costs	
Dredge (10 CY bucket) and one 1/1.5/3 KCY scow	$130,000
Dredge (26 CY bucket) and one 1/1.5/3 KCY scow	$177,000
Dredge (54 CY bucket) and one 6KCY scow	$229,000
Each additional 1/1.5/3 KCY scow and tug	$117,500
Each additional 6 KCY scow and tug	$183,500
Dredging Costs per CY	
10 CY bucket, 1 KCY job	$45
10 CY bucket, 2 KCY job	$31
10 CY bucket, 5 -10 KCY job	$17.25
10 CY bucket, 26 – 50 KCY job	$14.25
10 CY bucket, >=100 KCY job	$13.50
26 CY bucket	$23.35
54 CY bucket	$20.40
Scow Transport Costs per CY per Mile Travelled (total, round-trip to disposal or transload point)	
1/1.5 KCY scows	$0.155
6 KCY scows	$0.110

Table 4-2
Hydraulic Dredging Costs

Mobilization Costs	
Dredge (12 in cutter)	$390,000
Dredge (16 in cutter)	$410,000
Dredge (24 in cutter)	$520,000
Dredge (30 in cutter)	$550,000
Each booster pump	$10,000
Each tug	$10,000
Dredging and Pumping Costs per CY	
Dredge (12 in cutter), 1 & 2 KCY jobs	$32.50
Dredge (12 in cutter), 5 & 10 KCY jobs	$17.00
Dredge (12 in cutter), >=26 KCY jobs	$14.50
Dredge (16 in cutter)	$10.00
Dredge (24 in cutter)	$9.03
Dredge (30 in cutter)	$6.28

Table 4-3
Hopper Dredging Costs

Mobilization Costs	
1,300 CY Dump Hopper	$340,000
3,800 CY Dump Hopper	$590,000
7,600 CY Dump Hopper	$1,032,000
1,300 CY Pump Hopper (Beach Nourishment)	$550,000
3,800 CY Pump Hopper (Beach Nourishment)	$1,05,000
7,600 CY Pump Hopper (Beach Nourishment)	$1,372,000
12- or 16-in Pump Hopper (Cont. Island)	$640,000
Dredging Costs per CY	
1,300 CY Dump Hopper	$8.80
3,800 CY Dump Hopper	$6.89
7,600 CY Dump Hopper	$5.59
1,300 CY Pump Hopper (Beach Nourishment)	$28.50
3,800 CY Pump Hopper (Beach Nourishment)	$14.25
7,600 CY Pump Hopper (Beach Nourishment)	$12.00
12- or 16-in Pump Hopper (Cont. Island)	$14.20 (1, 2 or 5 KCY jobs) $12.60 (10 to 750 KCY jobs) $5.73 (1 MCY and larger jobs)
Transport Costs per CY per Mile Travelled (total, round-trip to disposal)	
1,300 CY Dump Hopper	$0.81
3,800 CY Dump Hopper	$0.40
7,600 CY Dump Hopper	$0.35
1,300 CY Pump Hopper (Beach Nourishment)	$0.40
3,800 CY Pump Hopper (Beach Nourishment)	$0.40
7,600 CY Pump Hopper (Beach Nourishment)	$0.35
12- or 16-in Pump Hopper (Cont. Island)	$1.50 (1 to 250 KCY jobs)

	$0.46 (500 KCY and larger jobs)

Table 4-4
Additional Dredging-Related Costs

Type	Cost Index
Beach Nourishment	$3/CY
Containment Island Tipping Cost	$76/CY
Containment Island Monitoring Cost	$3,000/yr for 20 yrs ($60,000 total)
Rehandling into Dewatering Area	$3/CY
Dewatering Site Prep	$3/CY
Dewatering Site Operation & Closure	$3/CY
CAD Cell Dredge, Disposal & Capping	$40.50/CY (up to 26 KCY) $36.30/CY (50 KCY and larger)
Upland Site Tipping Fee	$10/CY
Trucking Fees	($6.15 plus $0.35/mi – round trip) per CY
RR Haulage to Upland Site in PA	$101.25/CY + $29.80/CY second rehandling charge
Manage & Monitor Upland Site	$20,000/yr for 5 yrs ($100,000 total)
Manage & CAD Site	$5,000/yr for 12 yrs ($60,000 total)

4.2 Emission Offsets Cost

The cost of emissions offsets is market-driven. Emission Reduction Credit (ERC) trading is authorized by regulations primarily for the construction of new large stationary sources of air pollution known as New Source Review (NSR) rules. The principles behind the NSR rules are designed to permit new economic development in areas where air quality does not meet NAAQS. Since the air quality condition in the project area is already poor, the government would not allow new pollution resulting from a new facility or expansion of an existing major facility in these areas.

Both federal and state NSR rules require a new source that is a major source of air pollutants to: obtain a construction permit; install Best Available Control Technology (BACT) air pollution controls at the new source; conduct an alternatives analysis; and reduce total emissions of pollutants in the area by offsetting or reducing pollution from another source at that facility or from other facilities in the area. The purpose of the ERC trading program is to establish a bank of emission offsets that can be used to allow construction of new sources. The NSR offset rules create a market for ERCs that will be necessary for future industrial development. Although the ERC trading program is designed for stationary sources, using available stationary source ERCs to offset construction project-related emissions has been approved in the past by state agencies on a case-by-case basis. The federal NSR rules create an offset requirement, but there are no federal rules on ERC generation. Each state has its own emission offsets rules.

The program for trading ERCs is a combination of command and control regulation and free market mechanisms. Therefore, the cost of purchasing ERCs varies over time mainly due to market demand and supply. The supply conditions are also impacted by the state rule on the ERCs life time allowance.

The market unit prices shown and used in the emissions workbook are based on the average trading prices in 2013 provided by Evolution Markets, an ERC brokerage company. These state-specific ERC unit costs for purchasing credits were multiplied to the total emissions, if they exceed the *de minimis* thresholds, to determine the likely emission offset cost for each applicable nonattainment pollutant.

5 Brief Emissions and Cost Workbook User's Guide

5.1 Overview

This workbook measures emissions, costs, and offset emissions and costs due to dredging related activities in the Long Island Sound. All calculations are based on data from the USACE, which provided equipment data, operating hours and costs for more than 530 different dredging scenarios utilizing various combinations of project size, dredging technology and disposal options. Equipment operation profiles and cost data were extracted from the consolidated data and used to develop trend data that forms the basis of this workbook.

The workbook is organized such that the user provides input as described below in a linear fashion on the "Main Inputs," "Dredged Material Disposal [DMD] Cost Inputs," and "Emi Offset Inputs" tabs. The workbook then calculates emissions and costs, and results are provided to the user on several tabs. The "Total Emissions" tab presents the emissions of the regulated pollutants (VOCs, NOx, CO and $PM_{2.5}$) by state, broken down by the various stages of the project (i.e., dredging, transportation, dewatering, etc.), and alerts the user as to areas where the proposed project may exceed *de minimis* levels. The state-by-state breakdown is calculated using the location-specific data provided by the user. Consequently, selection of accurate locations for project-related emissions on the "Main Inputs" tab is essential to the results presented on the "Total Emissions" tab. Costs are presented on the "Total DMD Costs" tab, broken down according to major cost accounting categories included in the USACE data. These include mobilization, dredging, transport, and disposal costs. The "Emi Offsets" tab presents the results of the emissions offset calculations, including a breakdown of emissions by conformity region, and the corresponding offset costs.

The following sections describe the required inputs. For most entries, the user will select from a drop-down menu that presents allowable inputs for that item. Such inputs areas are highlighted in orange. Some items permit free-form numerical input because the required information is specific to the proposed project (e.g., travel distance between the dredging site and the disposal location); these items are highlighted in blue.

The workbook requires that the user proceeds linearly through the data input process on the "Main Inputs" tab, as some of the required inputs are conditional and depend on prior user selections. For example, the available sizes of the dredging plant depend on the dredging method selected (e.g., for mechanical dredge projects the equipment is sized by cubic yard of the clamshell bucket, while for hydraulic cutterhead projects the diameter of the intake line is selected). The workbook changes dynamically to present only relevant questions to the user. If the user changes a selection that impacts subsequent data entries, the affected inputs will be highlighted in red. However, the user is nevertheless urged to review all inputs after changing a selection in order to confirm that the selections are still reasonable in light of the changes.

The primary data entry location is the "Main Inputs" tab, where the user defines the parameters of the proposed project. These include selecting a dredging technology, project size, equipment size, dredged material disposal location, transportation method and schedule. Additional user input to allow calculation of additional specific items is included on the "DMD Cost Inputs" and "Emi Offsets Inputs" tabs; users are directed to enter information on these tabs only when specific additional output is required, as described further below.

5.2 Main Inputs

The main inputs are emissions, costs, and offsets. These are calculated based on the following activities:

- Dredging
- Dewatering
- Transport to dewatering
- Disposal
- Transport to disposal

5.3 Itemized Inputs

For each activity, certain itemized inputs are needed to calculate its impacts. A summary of the required inputs, and allowable values, are outlined below:

5.3.1 Dredging

- DMD Activity Length (months)
- Dredging Location
  - New York
  - Connecticut
  - Rhode Island
- Dredging Equipment Type
  - Mechanical dredge
  - Hopper dredge
  - Hydraulic pipeline (cutterhead) dredge

For each dredging equipment type there are different dredge sizes to choose from:

- Mechanical dredge
  - Bucket size (CY)
    - 10 CY
    - 26 CY
    - 54 CY
- Hopper dredge
  - Dredge size (CY)
    - 1,300 CY
    - 3,800 CY
    - 7,600 CY

- Hydraulic pipeline (cutterhead) dredge
  - Dredge size (in)
    - 12 in
    - 16 in
    - 24 in
    - 30 in
- Volume of dredged material (CY)
  - 1,000 CY
  - 2,000 CY
  - 5,000 CY
  - 10,000 CY
  - 26,000 CY
  - 50,000 CY
  - 75,000 CY
  - 100,000 CY
  - 250,000 CY
  - 500,000 CY
  - 1,000,000 CY
  - 2,000,000 CY
  - 4,000,000 CY

5.3.2 Disposal

- Disposal Methods
  - Upland
  - Beach Nourishment
  - Containment Island
  - CAD Cell
  - Open Water
  - Marsh Creation

For each disposal method there are various location types that can be used:

- Upland Disposal Location
  - New York
  - Connecticut
  - Rhode Island

  - New Jersey
  - Pennsylvania

- Beach Nourishment
  - Same as dredging location

- Containment Island / CAD Cell
  - Niantic, CT
  - Clinton, CT
  - New Haven, CT
  - Stratford, CT
  - Fairfield, CT
  - Huntington, NY

- Open Water
  - Western Long Island Sound
  - Central Long Island Sound
  - New London, CT
  - Cornfield Shoals Disposal Site
  - Rhode Island Sound Disposal Site

- Marsh Creation
  - This depends on dredging location
    - New York
    - Connecticut
    - Rhode Island

If CAD Cell is chosen as the disposal method then the following needs to be chosen:

- CAD Cell Dredge Size
  - 1,295 HP Dredge w/ 10 CY bucket
  - 9,830 HP Dredge w/ 26 CY bucket
  - 10,220 HP Dredge w/ 54 CY bucket

5.3.3 Transport to Disposal

Transport to Disposal Method (allowable options vary based on disposal method):

- Upland
  - Truck
  - Railway
- Beach Nourishment
  - Pipeline
  - Hopper dredge (if hopper dredge, dredging equipment is used)
- Containment Island
  - Tug-hauled scow
  - Pipeline
  - Hopper Dredge (if hopper dredge, dredging equipment is used)
- CAD Cell
  - Tug-hauled scow
  - Hopper dredge (if hopper dredge, dredging equipment is used)
- Open Water
  - Tug-hauled scow
  - Hopper dredge (if hopper dredge, dredging equipment is used)
- Marsh Creation
  - Tug-hauled scow
  - Hopper dredge (if hopper dredge, dredging equipment is used)

Transport distances are to be determined by the user based on the dredging projects' proximity to disposal and transloading sites:

- Distance to containment island (mi) (Travel distance over water; user should consider the navigability of the selected path)
- Distance to CAD cell (mi) (Travel distance over water; user should consider the navigability of the selected path)
- Distance to open water (mi) (Travel distance over water; user should consider the navigability of the selected path)
- Truck/Rail transport mileage per state for upland disposal (mi) (from transloading/dewatering site to the disposal facility; over water transport distance to bring dredged material to shore will be addressed below)
  - Enter the mileage that trucks or rail will travel through each of the following states (actual roadway or railway distance; navigation software can be used to determine actual mileage):

  - New York
  - Connecticut
  - Rhode Island
  - New Jersey
  - Pennsylvania

Capacity or size of transportation vessel (with vessel type selected depending on the type of disposal method chosen:

- Tug-hauled scow size (CY)
- Hopper dredge size (CY)
- Truck capacity (CY)

Enter the destination of railroad-hauled dredge material if railway is chosen as the transport to disposal method

- New York
- New Jersey
- Pennsylvania

5.3.4 Additional Upland Disposal Inputs

If upland disposal is chosen as the disposal method, dewatering emissions and costs will be calculated.

Dewatering

- Location of upland dewatering
  - New York
  - Connecticut
  - Rhode Island

Transport to Dewatering

- Transport to dewatering method
  - Hopper dredge (if hopper dredge, dredging equipment is used)
  - Tug-hauled Scow
  - Pipeline

- Enter the distance from dredging to dewatering site (mi) (for hopper dredge or tug-hauled scow, the user should consider the navigability of the selected path; for pipeline, the user should consider the feasibility of constructing and maintaining the pipeline along the selected path)

5.4 DMD Cost Inputs

Calculations for costs mostly utilize the inputs from the Main Inputs tab. However, costs for additional equipment that may increase overall productivity or account for site-specific issues are not considered in this section. Generally, additional equipment options in this workbook are limited to additional tugs and booster pumps for hydraulic cutterhead projects, if warranted by site conditions (navigation issues, elevation changes, excessive distance and/or excessive pipeline direction changes, etc.). If hydraulic pipeline (cutterhead) dredge is chosen as the dredging equipment type, then the following number of additional pieces of equipment after the initial need to be entered:

- The number of additional booster pumps
- The number of additional tugs.

5.5 Emission Offsets Inputs

If a proposed project exceeds *de minimis* emissions thresholds and emissions offsets are considered as an alternative to scheduling or design changes, the user should enter the relevant information on this tab in order to calculate approximate offset costs. The user should be aware that the regulations governing the use and availability or emissions offsets are complex, and the market for these credits is often volatile; in some cases, credits may not be available. If a project may require emissions offsets, users are urged to consult with appropriate regulators for guidance in obtaining the credits for emission offsets for the project necessary to complete the "Emi Offset Inputs" tab.

Emissions credits must be obtained from and applied within the specific nonattainment area(s) where the project-related emissions occur. Since the emission credits are filed on a state-by-state basis, emissions offsets may need to be obtained from multiple states, depending on the geographic areas where the emissions would be generated from the project. Consequently, the computation of emission offsets requires a range of additional inputs that localize the emissions.

- Dredging County
  - Depends on the dredging location specified in the Main Inputs tab
    - New York
      - Suffolk
      - Nassau
      - Queens
      - Bronx
      - Westchester
    - Connecticut
      - Fairfield
      - New Haven
      - Middlesex
      - New London

  - Rhode Island
    - Washington
    - Kent
    - Providence
    - Bristol
    - Newport

- Disposal County (for conformity regions only)
  - Depends on the disposal location specified in the Main Inputs tab
    - New York
      - Bronx
      - Kings
      - Nassau
      - New York
      - Orange
      - Queens
      - Richmond
      - Rockland
      - Suffolk
      - Westchester
    - Connecticut
      - Fairfield
      - Middlesex
      - New Haven
      - Hartford
      - Litchfield
      - New London
      - Tolland
      - Windham
    - Rhode Island
      - Washington
      - Kent
      - Providence
      - Bristol
      - Newport
    - New Jersey
      - Bergen
      - Essex
      - Hudson
      - Hunterdon
      - Middlesex

    - Monmouth
    - Morris
    - Passaic
    - Somerset
    - Sussex
    - Warren

  - Pennsylvania
    - Not Applicable

- Transport Mileage per Region (mi)
  - If total emissions within a state triggers emission offsets to be calculated, then mileage within a particular conformity region would need to be quantified. Those regions are listed below. See the workbook for the list of counties within a conformity region.
    - New York-Northern New Jersey-Long Island NY-NJ-CT 8-hour Ozone Nonattainment Area
      - New York, New Jersey, and Connecticut, individual portions
    - New York-Northern New Jersey-Long Island NY-NJ-CT Annual and Daily $PM_{2.5}$ Nonattainment Area
      - New York and Connecticut, individual portions
    - Greater Connecticut, CT 8-hour Ozone Nonattainment Area
    - Rhode Island, 8-hour Ozone Nonattainment Area

- Offset Emission Costs – Market as of November 13, 2013 ($/ton)
  - The cost indices, provided by the credit broker as of November 2013, are available to be updated based on up to date costs. They are the estimate of costs within each conformity region specified above.

6 References

US Army Corps of Engineers, New England District. 2013. Disposal of dredged material scenario and cost index worksheet. June 13, 2013.

US Environmental Protection Agency. 2009a. *NONROAD 2008a emission factor model*. Available at http://www.epa.gov/otaq/nonrdmdl.htm.

US Environmental Protection Agency. 2009b. *Current Methodologies in Preparing Mobile Source Port-related Emission Inventories.* Available at http://epa.gov/cleandiesel/documents/ports-emission-inv-april09.pdf.

US Environmental Protection Agency. 2009c. *Emission Factors for Locomotives.* Available at http://www.epa.gov/nonroad/locomotv/420f09025.pdf.

US Environmental Protection Agency. 1993. *40 CFR Parts 6, 51, and 93. Determining Conformity of Federal Actions to State or Federal Implementation Plans*. November 30, 1993.

US Environmental Protection Agency. 2010. *40 CFR Parts 51 and 93. Revision to the General Conformity Rule*. March 24, 2010.

US Environmental Protection Agency. 2012. Motor Vehicle Emission Simulator (MOVES) User Guide for MOVES2010b. June 2012.

LONG ISLAND SOUND

FINAL
DREDGED MATERIAL MANAGEMENT PLAN AND FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

APPENDIX E

SEDIMENT AND CONTAMINANT SOURCE REDUCTION

Appendix E – Source Reduction
Table of Contents

I Introduction E-1

II MS4 Program E-2

A. Background E-2

B. New York E-3

C. Connecticut E-14

D. Massachusetts E-15

III Stormwater General Permits and Additional State Regulations Related to Riparian Areas E-16

A Background E-16

B New York E-17

C Connecticut E-20

D Massachusetts & New Hampshire E-22

E Vermont E-23

IV Nonpoint Source Pollution E-25

A Background E-25

B New York E-25

C Connecticut E-28

D Massachusetts E-31

E New Hampshire E-34

F Vermont E-35

V Impaired Waters and Total Maximum Daily Loads (TMDL) E-36

A Background E-36

B New York E-36

C Connecticut E-38

D Massachusetts E-38

E New Hampshire E-39

F Vermont E-39

VI Literature Related to Best Management Practices (BMPs) E-40
A Background E-40
B New York E-41
C Connecticut E-41
D Massachusetts E-43
E New Hampshire E-43
F Vermont E-44
VII Watershed Management Program E-45
A Background E-45
B New York E-46
C Connecticut E-47
D Massachusetts E-51
E New Hampshire E-52
F Vermont E-55
VIII Harbor Management Plans E-59
A Background E-59
B New York E-59
C Connecticut E-61
IX Low Impact Development (LID) Examples E-63
A Background E-63
B New York E-63
C Connecticut E-64
X Beneficial Use of Dredged Material E-64
XI Source Reduction in Dredging Permits E-65
A Background E-65
B New York E-65
C Connecticut E-65
XII Road Sand E-66
A Background E-66
B New York E-66
C Connecticut E-66

I. INTRODUCTION

Pursuant to 40 CFR §228.15(b)(4)(vi)(C), and as discussed earlier in this document, the dredged material management plan (DMMP) for Long Island Sound is intended to help achieve the "goal of reducing or eliminating the disposal of dredged material in Long Island Sound." It is often less expensive to prevent sediment from entering waterways than it is to remove or treat it once it is there. To that end, the following chapter outlines programs that may reduce the volume of sediment carried by storm water and runoff from the states within the watershed (New York, Connecticut, Massachusetts, New Hampshire and Vermont) into Long Island Sound. In addition, because other pollutants are often attached to the sediments that are carried into Long Island Sound harbors and navigation channels, these programs may also result in a reduction of contaminants entering the Long Island Sound watershed. Each section below provides a brief overview of the program and a description of how that program is implemented in each state. Not every state within the Long Island Sound watershed participates in each program and some programs are only relevant to those bordering Long Island Sound (New York and Connecticut).

In the Long Island Sound watershed, there have been changes in land cover and population that could have an effect on the amount of sediment and pollutants entering the system. Developed land cover (as a percentage of total watershed area) increased by 0.20% (26,808 acres) from 13.82% in 2001 to 14.02% in 2006. Impervious cover (a subset of developed land cover) increased by 0.06% (8,093 acres) from 3.46% in 2001 to 3.51% in 2006. Forested land also decreased by 0.40% (41,320 acres) from 70.65% in 2001 to 70.25% in 2006. Additionally, the watershed population grew by 402,065 and population density increased by 28.8 persons per square mile, or 8%, from 1990 to 2010. Finally, although data from the University of Connecticut's Center for Land Use Education & Research indicate development in non-riparian and riparian areas, development in riparian areas is limited, possibly due to regulations aimed to limit the impact of developments on water quality.[1]

This is not a quantitative analysis of the amount of sediment entering Long Island Sound or the potential numeric reductions these programs may bring about. These are programs that are currently addressing or could be used to address sediment entering the Long Island Sound watershed. The United States Geological Survey (USGS) monitors turbidity daily at sites throughout the Long Island Sound watershed. Daily turbidity measurements began in 2010 on the Connecticut River in Haddam, CT (USGS 01193050) and Essex, CT (USGS 01194750). The data is available on the USGS National Water Information System website. In addition, in 2014, the USGS launched a Sediment Data Portal for active and historical discrete and daily suspended sediment monitoring sites.

Sources of sediment and contaminants can be point sources or nonpoint sources. A point source means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be

[1] NEIWPCC, LISS – Watershed Synthesis Section: A Preliminary and Qualitative Evaluation of the Adequacy of Current Stormwater and Nonpoint Source Nitrogen Control Efforts in Achieving the 2000 Long Island Sound Total Maximum Daily Load for Dissolved Oxygen, August 2014

discharged. Nonpoint source pollution generally results from overland runoff that is not channelized.[2]

II. MS4 PROGRAM

A. Background

Pursuant to 40 CFR 122.26(b)(8), a municipal separate storm sewer system (MS4) is "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains): (i) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act (CWA) that discharges to waters of the United States; (ii) designed or used for collecting or conveying storm water; (iii) which is not a combined sewer; and (iv) which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2."

To prevent harmful pollutants, including sediment, from being washed or dumped into an MS4, operators must obtain a National Pollutant Discharge Elimination System (NPDES) permit and develop a storm water management program. Phase I, issued in 1990, required medium and large cities or certain counties with populations of 100,000 or more to obtain NPDES permit coverage for their storm water discharges. Phase II, issued in 1999, requires regulated small MS4s in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their storm water discharges. Generally, Phase I MS4s are covered by individual permits and Phase II MS4s are covered by general permits. Each regulated MS4 is required to develop and implement a storm water management program to reduce the contamination of storm water runoff and prohibit illicit discharges.

The Phase II MS4 Program contains required elements called "minimum control measures" (MCMs) that, when implemented, should result in a significant reduction in pollutants discharged in receiving waters. These MCMs are: (1) public education/outreach; (2) public participation/involvement; (3) illicit discharge detection and elimination; (4) construction site runoff control; (5) post-construction runoff control; and (6) pollution prevention/good housekeeping. [3]

There are certain Best Management Practices (BMPs) that can be used to meet each MCM. The Nationwide Urban Runoff Program (NURP), a study conducted by the Environmental Protection Agency (EPA) from 1978–1983, monitored the levels of pollutants (including total suspended sediment (TSS)) in storm water runoff from 28 municipalities. The NURP data have been widely accepted and referenced as reasonable estimates of pollutant concentrations in urban storm water runoff. Based on a review of literature on BMP

[2] EPA – What is Nonpoint Source Pollution
[3] EPA – Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s)

effectiveness, EPA determined that MCM BMPs are 20% to 80% effective at removing sediment from storm water. Therefore, EPA assumed that BMPs would reduce pollutants in storm water by between 20% and 80%. The following chart shows the proportion of TSS loading reductions EPA attributed to Phase II MS4 municipalities on a daily and annual basis for both 20% and 80% BMP effectiveness:

BMP Efficiency %	Tons/Day Low	Tons/Day High	Tons/Year Low	Tons/Year High
20	1,751	2,783	639,115	1,015,795
80	7,006	11,131	2,557,190	4,062,815

Within the Long Island Sound watershed, the number of MS4s are as follows:

State	Phase I	Phase II
New York	1 (New York City)	84
Connecticut	1 (Stamford)	73
Massachusetts	0	38
New Hampshire	0	0
Vermont	0	0

B. New York

Effectively the entirety of the New York portion of the Long Island Sound watershed is designated an MS4 area under either Phase I or Phase II of the MS4 program. Figure E-1 above does not indicate what areas were designated as Phase I versus Phase II. The five boroughs that make up New York City (NYC) represent the Phase I MS4 area and the rest is covered under the Phase II MS4 regulations.

Phase I

While NYC is a designated Phase I MS4 area, most of NYC is serviced by combined sewer systems (CSS) and, therefore, relatively small portions of NYC are actually MS4 areas. NYC has a very detailed Long Term Control Plan (LTCP) for addressing combined sewer overflows (CSOs). The details of the NYC LTCP may be found on the NYC Department of Environmental Protection (NYCDEP) webpage.

The Phase I MS4 permit for NYC is currently being revised by the New York Department of Environmental Conservation (NYDEC). The draft permit has been released and the public comment period ended on March 7, 2014. The permit will be finalized after the comments have been addressed. Elements of the existing permit that have relevance to controlling sediment from storm water are provided in the following sections.

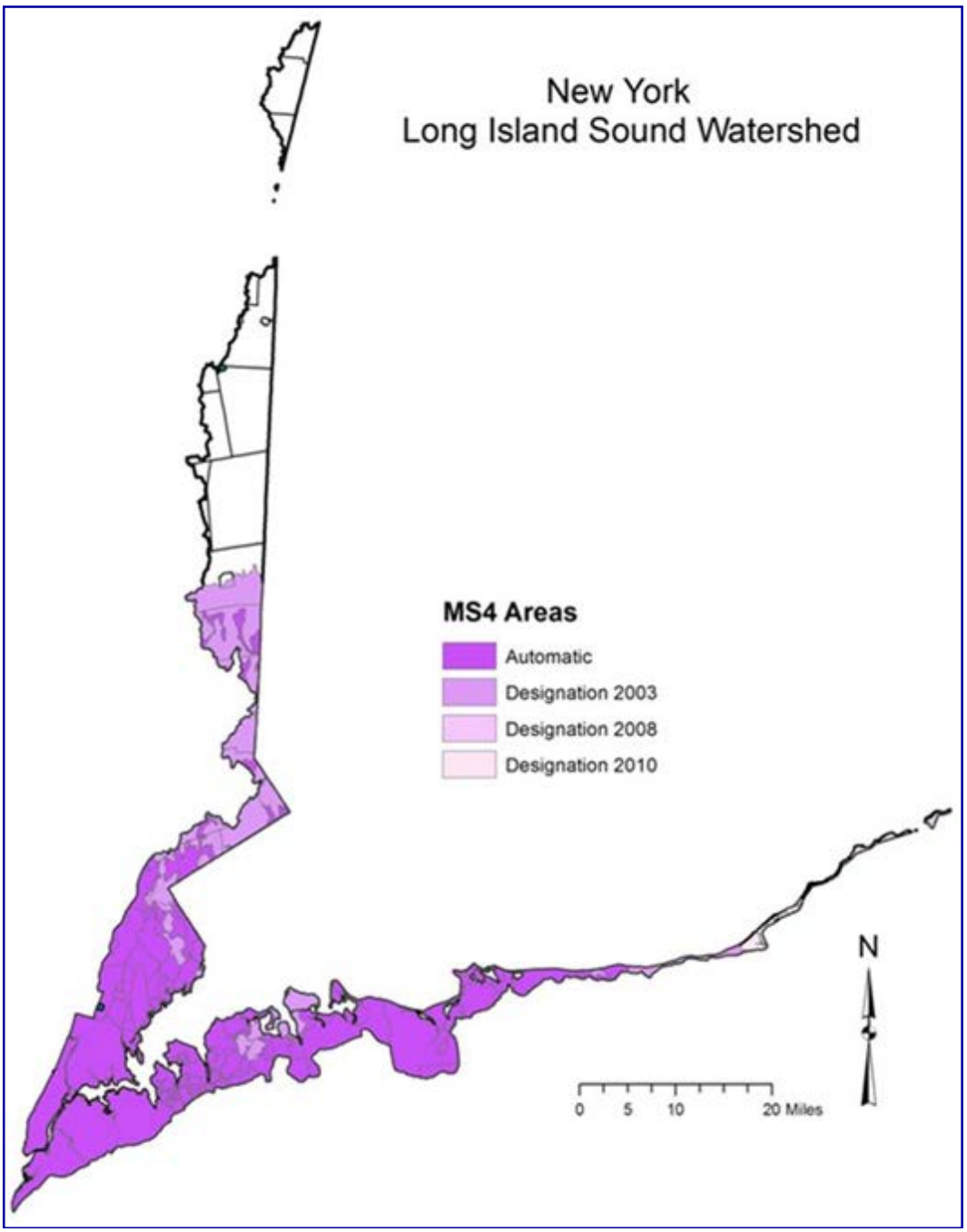


Figure E-1 - MS4 Areas in the New York Portion of the Long Island Sound Watershed. New York City is Phase I, while the remaining communities are Phase II MS4 areas.

NYCDEP Sewer Connection Application

Development projects that apply for new connection or changes to connection to the MS4 are required to meet the allowable flow requirements for the sewer. Projects that do not meet the allowable flow requirements of the sewer are required to provide for onsite storm water detention. Although storm water detention facilities are inadequate to meet

the Phase II storm water quality control goals, they can and are coupled with storm water quality controls to meet the goals.

Non-Traditional MS4s

Since the Phase II storm water regulations became effective in New York State in 2003, non-traditional MS4s such as federal and state government facilities and Metropolitan Transportation Authority facilities that discharge to the NYC MS4 or surrounding waterbodies are required to obtain coverage under the State Pollutant Discharge Elimination Systems (SPDES) General Permit for Storm water Discharges from MS4s.

These non-traditional MS4s are required to submit a Notice of Intent (NOI) to gain coverage under the SPDES General Permit, and prepare and implement a Storm water Management Plan (SWMP) for the storm water discharges from its MS4. The SWMP for these small MS4s must include the 6 MCMs: Public Education and Outreach on Storm water Impacts, Public Involvement/ Participation, Illicit Discharge Detection and Elimination, Construction Site Storm water Runoff Control, Post-Construction Storm water Management, and Pollution Prevention/Good Housekeeping for Municipal Operations.

NYC Green Infrastructure Plan

NYC is in the process of implementing the Green Infrastructure Plan, which was released in September 2010, to improve the quality of NYC's waterways by capturing and retaining storm water to reduce CSOs. While the current implementation of the Green Infrastructure Plan is mostly in CSS drainage areas, pilot projects are also being implemented in MS4 drainage areas and the Green Infrastructure Plan will eventually be extended to include MS4 areas. Storm water controls that can be implemented in MS4 drainage areas include green roofs, bio-swales, pocket wetlands, porous pavement, and rain barrels.

Street Sweeping

NYC engages in a citywide street sweeping program to clean the streets and reduce the entry of floatables into catch basins. The program is administered by the Department of Sanitation and evaluated through systematic street litter monitoring, known as the "Scorecard Program," conducted by the Mayor's Office of Operations. According to the Scorecard Program, city-wide street litter levels have improved somewhat over the past six years with clear improvements in the percent acceptable and percent filthy ratings.

Catch Basin Repairs and Maintenance

NYC conducted an initial catch basin inspection and hooding program in 1999. Since then, catch basin inspection and hooding continued in what is referred to as the "post-inspection" program which is conducted on a three-year cycle for all areas of the City.

Inspections and Cleaning:

Catch basin maintenance and repair work is a major focus of NYCDEP's Bureau of Water and Sewer Operations (BWSO) daily activities with BWSO devoting significant resources to these tasks both as part of the programmatic (scheduled) three year cycle and in response to complaints from the public. BWSO tracks inspection

progress in several ways: by community board, by managing progress towards the target of inspecting one third of the catch basins annually, by reviewing the number of basins inspected and cleaned on a regular basis, and by ensuring timely response to any issues reported by the public.

For the calendar year 2011, 42,873 catch basin inspections were completed at an approximate monthly average rate of 3,573 basins per month. NYCDEP also cleaned 31,957 catch basins in 2011.

Hood Replacement:
The provisions of the SPDES Permits require that the NYCDEP "shall replace missing or damaged catch basin hoods within 90 days after the date of the inspection for the basins known to be hooded upon completion of the catch basin hooding program". NYCDEP hooded 654 catch basins during the year 2011 across all the fourteen water pollution control plant (WPCP) drainage areas.

Catch Basin Retrofitting, Repair, and Reconstruction:
The SPDES permit provisions require that any retrofits for hooding compliance be completed by April 1, 2008. The SPDES provisions also require that catch basins requiring extensive repairs before a hood can be installed be hooded by January 2010. The NYCDEP BWSO uses three categories of work to achieve compliance with the SPDES requirements for retrofit, repair and reconstruction.

Retrofit: As defined in the SPDES permits and previous BMP reports, "retrofitting may include the replacement of street grating, restriction or elimination of curb cuts, installation of an outlet "90 degree elbow" catch basin sieves, or other device to limit street litter from entering the CSS as approved by the Department". For practical and efficiency purposes, the retrofit that NYCDEP has used for compliance with retrofitting requirement is the restriction (closure or absence) of catch basin curb cuts (curb inlet or curb piece). This is consistent with the WPCP SPDES permits which recognize that absence or closure of the catch basin curb inlet is an appropriate retrofit that minimizes the amount of street debris entering the basins.

Repair: The repair category refers to catch basin work done by NYCDEP in-house forces to allow a basin to accept a hood that cannot in its existing condition. Specifically, repairs refer to basin rehabilitation activities including brick work on portions of the basin, and/or replacement or rehabilitation of particular components of the basin. In the repairs category, the existing catch basin structure and footprint remains largely unchanged.

Reconstruction: The reconstruction category refers to the complete reconstruction of the basin, including the removal of the existing basin structure, excavation or placement of fill if needed to change the elevation of the basin or reconfigure the basin's connection to the sewer and the construction of an entirely new basin structure that meets all current design standards.

Public Education and Outreach

NYCDEP currently manages an extensive public education program that targets NYC students, teachers, parents, residents, community organizations, businesses, visitors, and internet users. The program is supported through the Visitor Center at the Newtown Creek WPCP, the Newtown Creek Nature Walk, outreach events at schools and public events, multimedia promotion, public exhibitions, support of volunteer programs, literature and publication distribution, promotional item distribution, and the NYCDEP website.

In 2011, the "Keep New York City Beautiful" organization remained active, focusing on citywide community-improvement programs such as litter prevention, neighborhood clean-ups, urban greenspace initiatives, tree plantings, and other activities. The "Keep New York City Beautiful" activities and impacts during 2011 included:

- Enhanced the collection of floatable litter by conducting beach and shoreline cleanups through a NYCDEP initiative, removing approximately 298 cubic yards of debris;
- Cleaned over 4,233 vacant lots citywide;
- Continued to collaborate with 64 Business Improvement Districts (BIDs) and hundreds of their cleaners to sweep, adopt litter baskets, and spruce up areas through a joint effort with the Departments of Sanitation and Small Business Services. They were also able to sign two more BIDS into law, which will begin providing services in 2012;
- Ticketed 387 dog walkers who failed to clean up after their dogs through a Sanitation Department public awareness campaign, bringing the total number of tickets issued under the program to 1,800;
- Since the inception of PlaNYC, have constructed 312 Greenstreets; and
- During the Fall Volunteer Planting Week in October, 2011, over 20,000 new trees were planted throughout the five boroughs. In addition, the following organizations planted over one million new trees:
  - Million Trees NYC (558,799)
  - Reforestation (291,321)
  - Street Trees (85,334)
  - Other (182,144)

Shoreline Survey and Outfall Identification Program

The NYCDEP completed a survey of the shoreline for outfalls tributary to the wastewater treatment plant (WWTP) drainage areas of Bowery Bay, Coney Island, Jamaica, Newtown Creek, North River, Red Hook, Tallman Island, and Wards Island in the first five year cycle from 1998 to 2003.

A shoreline survey of outfalls tributary to the WWTP drainage areas of the remaining six drainage areas of 26th Ward, Hunts Point, Oakwood Beach, Owls Head, Port Richmond, and Rockaway were completed in the second five year cycle from 2003 to 2008. A Shoreline Survey Report dated March 31, 2008 was submitted by the NYCDEP to the NYDEC that compiled the outfall information of the entire NYC shoreline obtained from shoreline survey and outfall identification program in the two five-year cycles, in response to the shoreline survey requirement in the SPDES Permit for the fourteen WPCPs.

Phase II

The Phase II rule requires statewide coverage of all operators of small MS4s that are located within the boundaries of a Bureau of the Census-defined "urbanized area". A small MS4 is any MS4 that is not already covered by the Phase I storm water program and operates within such an urbanized area or other areas designated by the State. An urbanized area is a densely settled core of census tracts and/or census blocks that have a population of at least 50,000, along with adjacent territories containing non-residential urban land uses, as well as, territories with low population density included to link outlying densely settled territory with the densely settled core.

The permitting authority is required to develop a set of designation criteria and apply them at a minimum to all small MS4s located outside of an urbanized area serving a jurisdiction with a population of at least 10,000 and a population density of at least 1,000 people/square mile. The following designation criteria have been adopted to designate additional MS4s in New York State:

Criteria 1
MS4s discharging to waters for which an EPA approved Total Maximum Daily Load (TMDL) required reduction of a pollutant associated with storm water beyond what can be achieved with existing programs (and the area is not already covered under automatic designation as urbanized area).

Criteria 2
MS4s contiguous to automatically designated urbanized areas (town lines) that discharge to sensitive waters classified as AA Special (fresh surface waters), AA (fresh surface waters) with filtration avoidance determination or SA (saline surface waters).

Criteria 3
Automatically designated MS4 areas are extended to Town, Village or City boundaries, but only for Town, Village or City implementation of MCMs (4) Construction Site Storm water Runoff Control and (5) Post Construction Storm water Management in Development and Redevelopment. This additional designation may be waived, by written request to the Department, where the automatically designated area is a small portion of the total area of the Town, Village or City (less than 15 %) and where there is little or no construction activity in the area outside of the automatically designated area (less than 5 disturbed acres per year).

An area may be additionally designated as a regulated small MS4 if the NYDEC determines that its discharges directly or indirectly cause, or have the reasonable potential to cause or contribute to an adverse impact on water quality.

Urban sources of pollution include improperly sited, designed and maintained on-site wastewater treatment (OSWT) systems or septic systems, pet wastes, lawn and garden fertilizers and pesticides, household chemicals that are improperly disposed of, automobile fluids, road deicing/anti/icing chemicals and vehicle emissions. Storm water that comes into contact with these sources has the potential to contain pollutants that further impact impaired

water bodies. These pollutants are known as Pollutants of Concern (POC) and include sediment, solids/floatables, oxygen-demanding substances, pathogens, fertilizers/nutrients, hydrocarbons, and metals.

To address the potential for these POC to be present in storm water discharge, the Phase II MS4 Permit requires that all covered entities develop and implement a SWMP that satisfies the requirements of each of the six MCMs developed by the EPA.

MS4s that discharge to impaired watersheds with TMDLs, or a watershed improvement strategy, must develop or modify their SWMP to comply with additional requirements that are included in the Watershed Improvements Strategy section (Part IX) of the permit, and/or meet waste load allocation. The MS4s are also required to demonstrate no net increase.

MCM 1 – Public Education and Outreach

Though Long Island Sound is not included in Part IX of Phase II MS4 General Permit, educational programs and outreach activities should be administered as outlined in 40 CFR 122.34(b). In terms of sediment as the POC, the Public Education and Outreach MCM 1 components may be planning and conducting an ongoing public education and outreach program designed to describe the impacts of sediment on water bodies. The program should identify potential sources of sediment in storm water runoff and describe steps that contributors can take to reduce sediment in storm water runoff. MCM 1 could also be the development, or acquisition if currently available, of specific educational material dealing with sources of sediment in storm water and pollutant reduction practices. At a minimum, the educational material should address understanding the sediment issue.

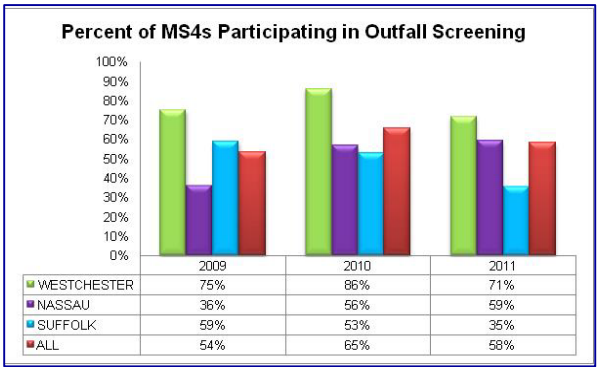
Strategies implemented for MCM 1 were varied between MS4s and were dependent on each MS4s needs from year to year. Overall those strategies included:

- Training for Construction Site Operators
- Direct mailings
- Public Displays and Kiosks
- List Serve
- Mailing Lists
- Newspaper Advertisements
- Public Events
- School Programs
- TV Advertisements
- Printed Materials

In data recorded from annual reporting years from 2009 to 2011 the percent of MS4s Implementing Education and Outreach Strategies increased from 93% to 99%. In 2011, over 489,000 people attended Public Events held by the MS4s to promote awareness and educate.

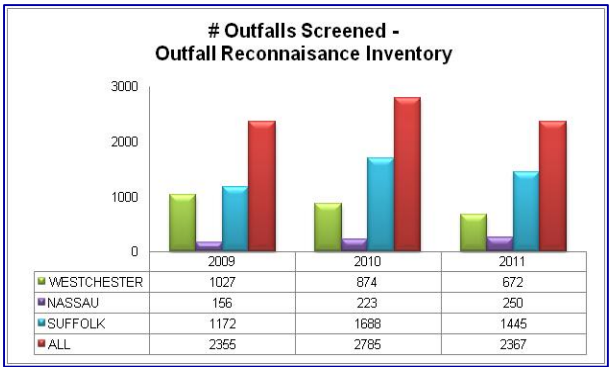
MCM 2 – Public Involvement/Participation

Review of the annual reports from 2009 through 2011 indicate that clean-up events and community meetings have the highest participation from MS4s in the Long Island Sound watershed of all the supplied categories for MCM 2. The data indicates that as public awareness increases through education and outreach, public participation is increasing as well.



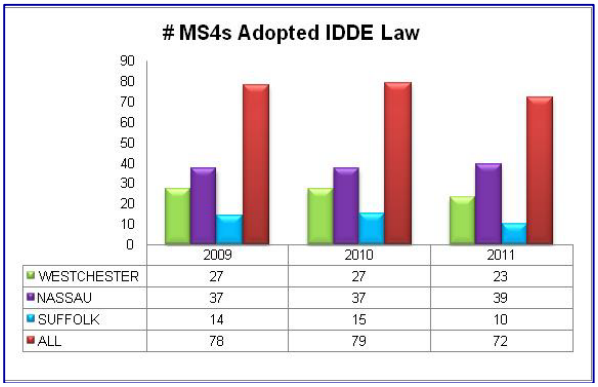
	2009	2010	2011
WESTCHESTER	75%	86%	71%
NASSAU	36%	56%	59%
SUFFOLK	59%	53%	35%
ALL	54%	65%	58%

Figure E-2



	2009	2010	2011
WESTCHESTER	1027	874	672
NASSAU	156	223	250
SUFFOLK	1172	1688	1445
ALL	2355	2785	2367

Figure E-3



	2009	2010	2011
WESTCHESTER	27	27	23
NASSAU	37	37	39
SUFFOLK	14	15	10
ALL	78	79	72

Figure E-4

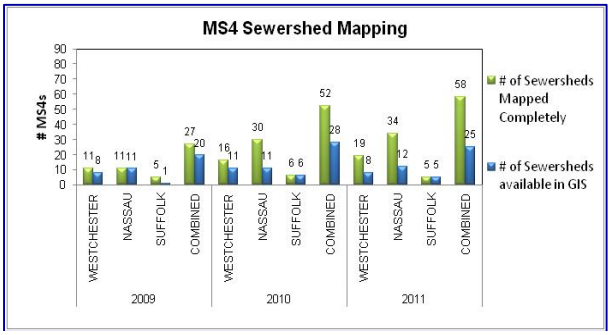


Figure E-5

Investigation, field work and mapping are key components at the center of MCM 3. MS4s showed a general increase in overall performance for the reporting years 2009 to 2011. It should be noted that Tropical Storm Irene in August 2011 may have had an impact on MS4s reporting procedures and regular day-to-day activities. The data shows an increase in activities from 2009 to 2010 and either no increase or a decrease in activities between 2010 and 2011. Of the 84 New York MS4s within the Long Island Sound watershed, 71 have 100% of the outfalls mapped within their jurisdiction. 65% of MS4s actively participated in Outfall Screening in 2010 (Figure E-2) with 2785 outfalls screened (Figure E-3). These numbers dropped to 58% and 2367 respectively in 2011. In 2010 the number of MS4s that have adopted an illicit discharge detection and elimination law was up to 79 (Figure E-4). Sewer-shed mapping has been completed by 58 of the 84 MS4s, up from 27 in 2009 (Figure E-5).

MCM 4 – Construction Site Storm Water Runoff Control

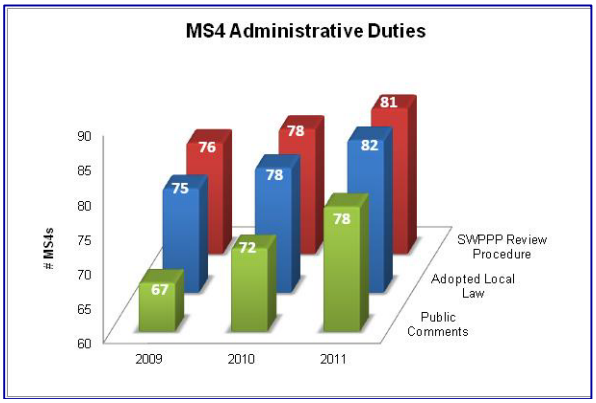
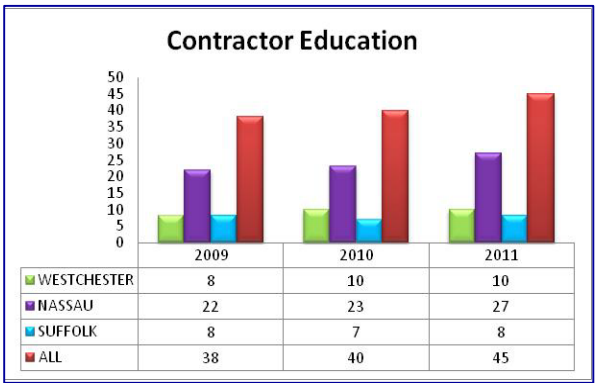


Figure E-6

Figure E-7



	2009	2010	2011
WESTCHESTER	8	10	10
NASSAU	22	23	27
SUFFOLK	8	7	8
ALL	38	40	45

Figure E-8

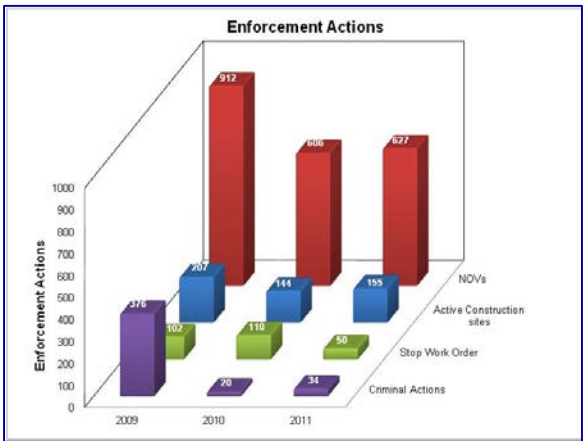


Figure E-9

MCM 4 is designed to help permittees address construction related requirements of the MS4 permit. An inventory of current ongoing construction and the MS4s attention to this construction activity and its education of the site operators is the foundation of MCM 4. There was an overall increase in the number of MS4s who actively participated in the administrative duties associated with this minimum control measure (Figure E-6). Close to 100% of all construction sites in the Westchester, Nassau and Suffolk MS4s contributing to the Long Island Sound were inspected in each reporting period (Figure E-7). There was a steady increase in MS4s reporting the number of contractors that received education on construction site storm water management (Figure E-8). This data has a correlation with a decrease in the number of enforcement actions performed by the MS4s over the 3 years (Figure E-9). The categories of enforcement actions include criminal actions, stop work orders, active construction sites, and notices of violation (NOVs).

MCM 5 – Post-Construction Storm Water Control Measures

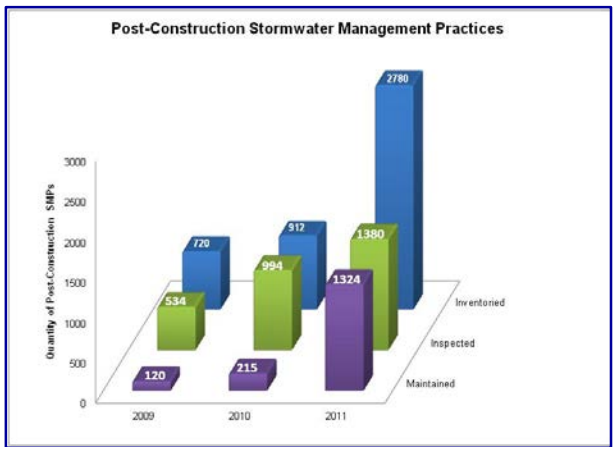
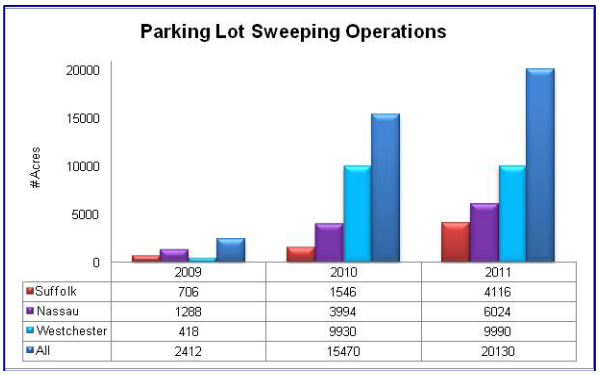


Figure E-10

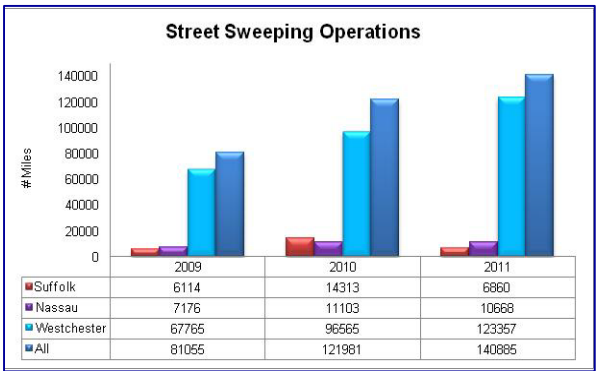
The Phase II regulations require regulated small MS4 operators to develop, implement, and enforce a program to address storm water discharges from new development and redevelopment sites that disturb greater than or equal to one acre to the MS4 (including projects that disturb less than one acre that are part of a larger common plan of development or sale). The regulations also require that the MS4 operator ensures that control measures are installed and implemented that prevent or minimize water quality impacts. The number of Post Construction Storm water Management Practices inspected, inventoried, and maintained increased for the MS4s contributing to the Long Island Sound watershed for the 3 consecutive reporting periods (Figure E-10).

MCM 6 – Pollution Prevention/Good Housekeeping for Municipal Operations



	2009	2010	2011
Suffolk	706	1546	4116
Nassau	1288	3994	6024
Westchester	418	9930	9990
All	2412	15470	20130

Figure E-11



	2009	2010	2011
Suffolk	6114	14313	6860
Nassau	7176	11103	10668
Westchester	67765	96565	123357
All	81055	121981	140885

Figure E-12

The MS4 Permit requires the operator of a regulated MS4 community to:

- Develop (for newly authorized MS4s) and implement a pollution prevention / good housekeeping program for municipal operations and facilities;
- Consider and incorporate cost effective runoff reduction techniques and green infrastructure in the routine upgrade of the existing storm water conveyance systems and

municipal properties to the maximum extent practicable. Some examples include replacement of closed drainage with grass swales, replacement of existing islands in parking lots with rain gardens, or curb cuts to route the flow through below grade infiltration areas or other low cost improvements that provide runoff treatment or reduction;

- Develop (for newly authorized MS4s), record, periodically assess and modify as needed measurable goals;
- Select and implement appropriate pollution prevention and good housekeeping BMPs and measurable goals to ensure the reduction of all POCs in storm water discharges to the maximum extent practicable; and
- Adopt techniques to reduce the use of fertilizers, pesticides, and herbicides, as well as potential impact to surface water.

There was an overall increase of all municipal maintenance operations from 2009 to 2011. This trend can be seen in the Parking Lot (Figure E-11) and Street Sweeping (Figure E-12) operations reported by the MS4s.

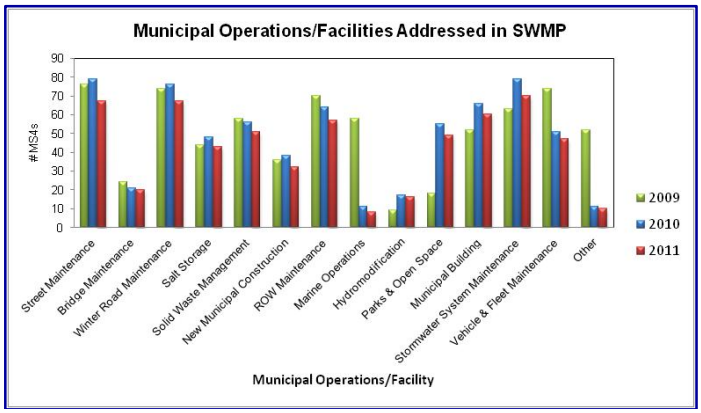


Figure E-13

The data collected in the Annual Report for MCM 6 also gives an indication of the range of Operations and Facilities that the MS4s are responsible for in terms of pollution prevention (Figure E-13). It can be considered from the data that not all operations are present in each MS4. The data also shows a decrease in operations in 2011, which may be indicative of Tropical Storm Irene in the latter half of the year. It is conceivable that regular maintenance gave way to emergency maintenance for the last 4 months of 2011.

MCM 6 indicates that, at minimum, good housekeeping must address operations that contribute or potentially contribute to POCs. This includes winter road maintenance, right of way maintenance, and street sweeping. More information can be found at the New York State Department of Transportation Snow and Ice Control website.

C. Connecticut

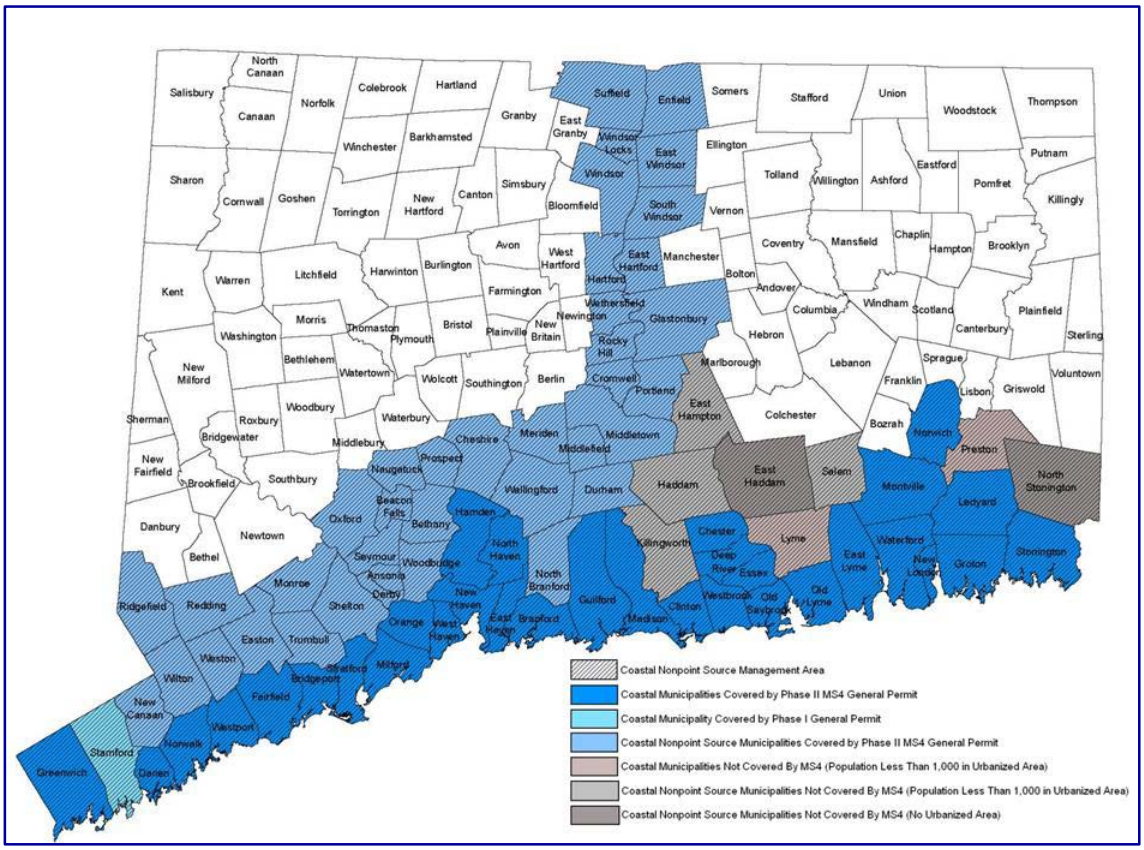


Figure E-14 – MS4 Areas in the Connecticut Coastal Nonpoint Source Pollution Control Management Area

Of the 36 coastal municipalities in Connecticut, 33 (91%) are covered by the current MS4 permit (Lyme and Preston have a population of less than 1,000 in the Urbanized Area and are not subject to the permit, and the City of Stamford is covered by the Phase I stormwater general permit). Of the 79 municipalities within Connecticut's coastal nonpoint source pollution program management area, 71 (90%) are covered by the MS4 and Phase I storm water general permits. Figure E-14 does not depict all MS4 towns within the LIS watershed. It represents, instead, the MS4 towns located within Connecticut's Coastal Nonpoint Source Pollution Control Management Area. This management area established for Connecticut's Coastal Nonpoint Source Pollution Control Program includes additional land areas beyond the state coastal boundary that have significant, measureable impact on coastal waters, thereby ensuring more effective management of relevant land and water uses. In deciding the extent of the management zone, the CT DEEP considered three critical factors: 1) land uses likely to contribute pollutants of concern to Long Island Sound based on land cover; 2) proximity to the Sound of those contributing land uses; and 3) the condition of coastal waters, including both areas of impaired uses and those that might be threatened by future development or other pollutant-contributing land uses. The management area is the portion of Connecticut that CT DEEP believes has the greatest effect on coastal water quality.

The Phase II municipal program requires municipalities to develop, implement, and enforce a program that addresses storm water runoff from new development and redevelopment sites on which land disturbance is greater than one acre and that discharge into a regulated MS4. Connecticut's Stormwater from Small MS4 General Permit requires each MS4 municipality to take steps to keep the stormwater entering its storm sewer systems clean before entering water bodies. This general permit is effective January 9, 2013 and expires on January 8, 2015. One important element of this permit is the requirement that towns implement public education programs to make residents aware that stormwater pollutants emanate from many of their everyday living activities, and to inform them of steps they can take to reduce pollutants in stormwater runoff. For more information, see the Connecticut MS4 Stormwater Program Fact Sheet (PDF).

Municipalities have 5 years to implement the SWMPs required by the general permit. SWMPs must address the six MCMs: (1) Public education and outreach; (2) Public participation; (3) Illicit discharge detection/elimination (map storm sewer outfalls, screen outfalls for non-stormwater discharges, establish an ordinance prohibiting non-stormwater discharges); (4) Construction stormwater management ; (5) Post-construction stormwater management (establish ordinance for post-construction stormwater management); and (6) Pollution Prevention/Good Housekeeping (street sweeping/catch basin cleaning criteria, training of town employees, evaluate system for possible upgrade/repair).

D. Massachusetts

The Massachusetts MS4 program is administered by EPA Region 1. The MS4 permit covering Massachusetts towns in the Connecticut River watershed is being updated from a previous draft that was released for comment in 2010. There are no Phase I and 38 MS4 Phase II communities in the Long Island Sound watershed currently covered by the 2003 MS4 permit that remains in effect. Upon final permit issuance of the new permit each community must develop or updated their Stormwater Management Program and modify or update their BMPs and measurable goals to meet the new permit conditions. The MS4 permit will set the requirements for meeting the six Minimum Control Measures as well as other appropriate conditions to meet water quality standards.[4]

Some examples of BMPs being used to reduce the amount of sediment entering the Long Island Sound watershed in the Massachusetts MS4 area in 2012 were:

- Chicopee, MA
  - Storm drain marking and stenciling at 106 catch basins.
  - Cleaning approximately 254 catch basins.
  - Operating three mechanical street sweepers continuously March – November.
  - BMPs to address TSS TMDL in Connecticut River (sources include lawn care products, litter, winter road maintenance materials, erosion from construction activities, and illicit sewer discharges).

[4] EPA – Draft Massachusetts Small MS4 General Permit

- Granby, MA
  - Purchased a catch basin cleaner and have created a database to better manage the maintenance of the stormdrain system, which has enabled the town to increase the number of catch basins cleaned per year.
  - All ongoing road maintenance projects incorporate deep sump catch basins and grass swales at a minimum.
- Hadley, MA
  - Cleaned approximately 50 to 60 catch basins using a vacuum truck, starting with high priority basins.
  - Rebuilt 15 catch basins found to be collapsing or otherwise failing
  - Construction of a containment area to store catch basin cleanings while sediment are being sampled for environmental compliance. Cleanings are then removed to the Northampton Landfill.
- Longmeadow, MA
  - Through a sanitary sewer maintenance program, inspected sewer interceptors along brook valleys to identify areas of breakage, erosion, or other physical conditions that may impair the integrity of the pipeline.
  - Cleaned and inspected approximately 951 catch basins and completed numerous repairs.
  - 100% of paved town streets swept in April, some more than once.

III. STORM WATER GENERAL PERMITS (NON-MS4) & ADDITIONAL STATE REGULATIONS RELATED TO RIPARIAN AREAS

A. Background

Storm water runoff is generated when precipitation from rain and snowmelt flows over land or impervious surfaces and does not percolate into the ground. As the runoff flows over the land or impervious surfaces (paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment, or other pollutants that could adversely affect water quality if the runoff is discharged untreated. The primary method to control storm water discharges is the use of BMPs. In addition, many storm water discharges are considered point sources and require coverage under an NPDES permit.[5]

Storm water discharges from construction activities (such as clearing, grading, excavating, and stockpiling) that disturb one or more acres, or smaller sites that are part of a larger common plan of development or sale, are regulated under the NPDES storm water program. Prior to discharging storm water, construction operators must obtain coverage under an NPDES permit.[6]

Activities that take place at industrial facilities, such as material handling and storage, are often exposed to the weather. As runoff from rain or snowmelt comes into contact with these activities, it can pick up pollutants and transport them to a nearby storm sewer system or

[5] EPA – Stormwater Program
[6] EPA – Construction General Permit

directly to a river, lake, or coastal water. To minimize the impact of storm water discharges from industrial facilities, the NPDES program includes an industrial storm water permitting component that covers ten categories of industrial activity that require authorization under an NPDES permit. The following are storm water discharges associated with industrial that require an NPDES permit (40 CFR 122.26(b)(14)(i-ix) and (xi)):

(i): Facilities subject to federal storm water effluent discharge standards in 40 CFR Parts 405-471
(ii): Heavy manufacturing (i.e. paper mills, chemical plants, petroleum refineries, and steel mills and foundries)
(iii): Coal and mineral mining and oil and gas exploration and processing
(iv): Hazardous waste treatment, storage, or disposal facilities
(v): Landfills, land application sites, and open dumps with industrial wastes
(vi): Metal scrap yards, salvage yards, automobile junkyards, and battery reclaimers
(vii): Steam electrical power generating plants
(viii): Transportation facilities that have vehicle maintenance, equipment cleaning, or airport deicing operations
(ix): Treatment works treating domestic sewage with a design flow of 1 million gallons a day or more
(xi): Light manufacturing (i.e. food processing, printing and publishing, electronic and other electrical equipment manufacturing, and public warehousing and storage)[7]

In addition, construction greater than 5 acres is considered an industrial activity, but it is regulated under the construction general permit.

All but five states are authorized to implement the Stormwater NPDES permitting program. Therefore, the vast majority of construction operators and industrial facilities will need to obtain NPDES permit coverage through their state. For others, the EPA is the permitting authority.[8]

B. New York

SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001)

The SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001) requires statewide coverage for projects that involve soil disturbance of one or more acres prior to commencing the construction activity. For the New York City East of Hudson watershed, this requirement also applies to construction projects disturbing 5,000 square feet to one acre. Construction activities include any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance.

Since the MS4 Phase II stormwater regulations became effective in New York State in 2003, construction activities involving soil disturbances greater than 1 acre in the NYC MS4 and

[7] EPA – Categories of Stormwater Discharge Associated with Industrial Activity
[8] EPA – Stormwater Discharges From Industrial Activities

surface water direct discharge drainage areas are required to obtain coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity. The SPDES General Permit for Stormwater Discharges from Construction Activity coverage in the NYC MS4 and direct discharge drainage areas is also required for construction activities involving soil disturbances of less than 1 acre, where the NYDEC has determined that a SPDES permit is required for storm water discharges based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to surface waters of New York State.

The permit requires that a Stormwater Pollution Prevention Plan (SWPPP) be developed and implemented to address erosion and sediment control practices, as well as, post-construction storm water management practices that will be used and/or constructed to reduce the pollutants in storm water discharges. At a minimum the SWPPP shall contain:

1. An erosion and sediment control component that includes the erosion and sediment control practices designed in conformance with the most current version of the New York State Standards and Specifications for Erosion and Sediment Control.
2. A post-construction storm water management practice component that includes practices designed in conformance with the most current version of the New York State Stormwater Management Design Manual.
3. Enhanced phosphorus removal component that includes practices in place and designed in conformance with the Enhanced Phosphorus Removal Standards contained in the New York State Stormwater Management Design Manual.

Since 2007, SWPPP requirements for construction storm water discharges have also been included in the renewals of individual SPDES Permits for large industrial facilities that have construction activities. Erosion and sediment controls are also included in the Permits issued by NYDEC for construction activities in the tidal and freshwater wetland areas. The post-construction storm water management practices that specifically address nitrogen removal are ponds, wetlands, infiltration practices and sand/organic filters.

SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (GP-0-12-001)

Industrial facilities engaged in activities defined in 40 CFR 122.26(b)(14)(i-ix) and (xi) are required to obtain permit coverage for storm water discharges to surface waters of New York State through either an individual industrial SPDES permit, the SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity, or provide certification using the No Exposure Exclusion that the industrial activities are not exposed to storm water.

Activities that take place at industrial facilities such as material handling and storage are often located in areas that are exposed to storm water. The SPDES Multi-Sector General Permit for Stormwater Discharges associated with Industrial Activity (GP-0-12-001) provides coverage for facilities engaged in industrial activities that have the potential to discharge storm water from a point source or outlet to any surface water body. These industrial activities have been organized into 31 specific industrial sectors based on

Occupational Safety and Health Administration (OSHA) classifications. Each sector has specific benchmark or effluent limitations that must be monitored on at least an annual basis.

The permit requires that all facilities covered under the Multi-Sector General Permit develop and implement a SWPPP to document the selection, design, installation and maintenance of control measures selected to meet discharge requirements. The SWPPP must also identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges. In addition, the plan shall describe and ensure the implementation of practices which are to be used to minimize the pollutants in storm water discharges associated with the industrial activity at the facility. SWPPPs are required to include structural and non-structural BMPs for each of the areas where industrial materials or activities are exposed to storm water. Permitted facilities are required to perform periodic and annual compliance inspections and maintenance of the BMPs. Monitoring requirements for permitted facilities include quarterly visual monitoring and annual dry weather monitoring for all facilities and benchmark monitoring for many sectors of industrial activities and numeric effluent guidelines for some sectors.

Any facility that directly discharges to a surface water body that has been identified as an impaired water body listed in the 303(d) list or has an established TMDL is subjected to quarterly monitoring if that facility has the potential to discharge the pollutant for which the water body has been impaired for. The 17 POCs specific to the permit that a water body can be impaired with are pH, ammonia, aquatic toxicity, cadmium, copper, cyanide, dissolved oxygen, floatables, mercury, nitrogen, nutrients, PCBs, phosphorus, priority organics, salts, silt/sediment, and turbidity. The SWPPP for any facility that is determined to discharge to such an impaired water body must address the measures that are in place to prevent all discharge of such pollutants. If it is determined that it is infeasible to prevent all discharge then the SWPPP must include a description of the type and location of existing and planned BMPs selected for each of the areas where the pollutant(s) of concern are exposed to storm water. These BMPs shall be selected to minimize the pollutant(s) of concern from being discharged to the impaired water body. The plan shall describe how each BMP is being, or will be implemented, for all the areas where the pollutant(s) of concern will be exposed to storm water.

The SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity was issued for the first time in 1998 and facilities in the NYC MS4 and surface water direct discharge drainage areas have been covered under this Permit. The individual SPDES Permits for large industrial facilities with industrial storm water component are required in the Permit to implement BMPs to control runoff.

Other Regulations to Protect Riparian Areas:

In addition to the above-referenced general permits, the following sections of the New York State Environmental Conservation Law help protect riparian areas:

- Article 15 – Protection of Waters
- Article 24 – Protection of Freshwater Wetlands
- Article 25 – Protection of Tidal Wetlands

There is also a Shoreline Protection (PDF) component of the Aquatic Habitat Protection Program.

C. Connecticut

General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (DEEP-WPED-GP-015)

The General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (Construction General Permit) requires developers and builders to implement SWMPs that will prevent the movement of soil and sediments off construction sites and into nearby streams and water bodies. This Construction General Permit applies to all discharges of storm water and dewatering wastewater from construction activities which result from the disturbance of one or more total acres of land area on a site regardless or project phasing. The current Construction General Permit became effective on October 1, 2013. For construction activities initiated after October 1, 1992, the permittee must install post-construction storm water management measures designed to remove suspended solids and floatables (i.e., oil and grease, other floatable liquids, floatable solids, trash, etc.) from storm water. A goal of 80 percent removal of total sediment load from the storm water discharge must be used in designing and installing storm water management measures. A key feature of the 2013 permit, sites are now required to be designed to provide retention of the runoff from the first inch of rain for post-construction storm water management, which will cut down on sediment discharges.

General Permit for the Discharge of Stormwater Associated with Industrial Activity (DEP-PERD-GP-014)

The General Permit for the Discharge of Stormwater Associated with Industrial Activity (Industrial General Permit) regulates industrial facilities with point source discharges that are engaged in specific activities listed in the permit. To register for this program, these facilities must submit a registration form, and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must include information about the site, an inventory of exposed materials, a summary of potential pollutants, a description of and schedule for implementation of storm water control methods, storm water monitoring, and site inspection. A revised Industrial General Permit became effective on October 1, 2011. All industrial facilities were required to re-register for the revised Industrial General Permit by June 1, 2011. The monitoring benchmark for TSS is 90 mg/l with additional lower benchmark requirements for certain industrial sectors.

General Permit for the Discharge of Stormwater Associated with Commercial Activity (DEP-PERD-GP-004)

The General Permit for the Discharge of Stormwater Associated with Commercial Activity (Commercial General Permit), unique to Connecticut, requires operators of large paved commercial sites such as malls, movie theaters, and supermarkets to undertake actions such as parking lot sweeping and catch basin cleaning to keep storm water clean before it reaches water bodies. The permittee must prepare and implement a facility maintenance plan that must include good housekeeping measures to ensure that all areas exposed to storm water are kept in such a condition as to minimize the possibility of discharging pollutants into a storm water collection system or the waters of the state. All parking areas, sidewalks, driveways and other impervious surfaces (except roofs) must be swept clean of sand, litter and any other possible pollutants at least twice a year, once between November 15 and December 15 (after leaf fall) and once during the month of April (after snow melt) and at other times as may be necessary. The facility maintenance plan must also include provisions for a monthly inspection by a member of the Pollution Prevention Team of all areas covered by the plan, a weekly inspection of the site for surface debris and the monthly inspection of all stormwater structures and outfalls on the site for floating or surface debris and sediment. Structures and outfalls must be cleaned of sediment and debris at least once a year during the month of April and at other times as necessary to prevent the discharge of pollutants from structures or outfalls.

Other State Regulations

The Connecticut Coastal Management Act (CCMA) requires that all development in the coastal boundary be consistent with the goals and policies established by the Act and that adverse impacts to coastal resources be avoided or minimized. Connecticut General Statutes (CGS) Section 22a-93(15)(A) specifically defines as an unacceptable adverse impact "degrading water quality through the significant introduction into either coastal waters or groundwater supplies of suspended solids, nutrients, toxics, heavy metals or pathogens, or through the significant alteration of temperature, pH, dissolved oxygen or salinity" (emphasis added). Municipal coastal site plan review approvals, state permit decisions and state and federal projects and consistency reviews must ensure that water quality is not degraded as defined above.

Public Act 91-170, An Act Concerning Zoning Regulations in Municipalities Adjacent to Long Island Sound and Increasing Regional Efforts in the Clean-up of Long Island Sound, is codified in the following sections of the CGS:

> Section 8-2(b): In any municipality that is contiguous to Long Island Sound the regulations adopted under this section shall be made with reasonable consideration for restoration and protection of the ecosystem and habitat of long island sound and shall be designed to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound. Such regulations shall provide that the commission consider the environmental impact on Long Island Sound of any proposal for development.

Section 8-35a(a): Each regional planning agency shall make a plan of development for its area of operation, showing its recommendations for the general use of the area. The plan of each region contiguous to Long Island Sound shall be designed to reduce hypoxia, pathogens, toxic contaminants and floatable debris in Long Island Sound.

Section 8-3b: ...The report of any regional planning agency of any region that is contiguous to Long Island Sound shall include findings and recommendations on the environmental impact of the proposal on the ecosystem and habitat of Long Island Sound.

D. Massachusetts & New Hampshire

In Massachusetts and New Hampshire, EPA is the permitting authority through the NPDES storm water program.

Construction General Permit

The majority of construction storm water discharges are permitted under the Construction General Permit (CGP). The final CGP was issued on February 16, 2012. There are promulgated effluent limitations for construction and development (40 CFR 450). All construction must meet these effluent limitations. The CGP requires compliance with these effluent limits and other permit requirements, such as the development of a SWPPP. All construction activities 1 acre or larger must obtain permit coverage. Construction activities less than 1 acre must also obtain coverage if they are part of a larger common plan of development or sale that totals at least 1 acre. Small construction activities (i.e. less than 5 acres) may qualify for a waiver. EPA Region 1 may designate construction activities disturbing less than 1 acre as needing to obtain an NPDES permit based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the United States.[9] The CGP requires that permittees "must design, install, and maintain erosion and sediment controls that minimize the discharge of pollutants from earth-disturbing activities." They are required to minimize the amount of soil exposed during construction activities, provide natural buffers or equivalent sediment controls, install perimeter controls, minimize sediment track-out, control discharges from stockpiled sediment or soil, minimize dust and disturbance of steep slopes, preserve topsoil, and minimize soil compaction. There are additional requirements for constructed stormwater conveyance channels, sediment basins, use of treatment chemicals, dewatering practices, and soil stabilization. If the permittee discharges to a surface water that is impaired for sediment, there are additional requirements for site inspection and stabilization.[10]

Multi-Sector General Permit

Stormwater discharges associated with industrial activity are covered under the Multi-Sector General Permit (MSGP). The MSGP expired on September 29, 2013. A proposed draft updating the current MSGP was published in the Federal Register on September 27, 2013 with a comment period ending December 26, 2013. Operators of industrial facilities in

[9] EPA – Construction General Permit
[10] EPA – Final Construction General Permit (PDF)

Massachusetts and New Hampshire requiring an NPDES Stormwater Permit may be eligible to obtain coverage under the MSGP if their activities are included within one of the 29 industrial sectors. A permit is required if the facility or site discharges to an MS4 or to waters of the United States, if the facility's industrial activities are listed among the eleven Categories of Industrial Activities, and if the facility or site does not qualify for a "no exposure" exclusion if their industrial materials and operations are not exposed to stormwater.[11] The MSGP requires that permittees must stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. Among other actions the permittee must take to meet this limit is the placement of flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants. In selecting, designing, installing, and implementing appropriate control measures, permittees are encouraged to consult with EPA's internet-based resources relating to BMPs for erosion and sedimentation, including the sector-specific *Industrial Stormwater Fact Sheet Series*, *National Menu of Stormwater BMPs*, and *National Management Measures to Control Nonpoint Source Pollution from Urban Areas*, and any similar State or Tribal publications[12].

E. Vermont

Stormwater Discharges from New Development & Redevelopment General Permit (3-9015)

The Stormwater Discharges from New Development and Redevelopment General Permit was issued March 20, 2013. Coverage under the Stormwater Discharges from New Development and Redevelopment General Permit is required for discharges of regulated storm water runoff from the construction, expansion, and redevelopment of impervious surfaces. The requirements for permit coverage are for:

- A discharge from new development equal or greater than 1 acre;
- A discharge from the expansion of an existing impervious surface, such that the total resulting impervious surface is equal to or greater than 1 acre;
- A discharge from the redevelopment of an existing impervious surface if the redeveloped portion of the existing impervious surface is equal to or greater than 1 acre;
- A discharge from a combination of expansion and redevelopment of an existing impervious surface, such that the total resulting impervious surface is equal to or greater than 1 acre;
- A discharge from any size of impervious surface if the Secretary determines that treatment is necessary to reduce the adverse impacts of the discharge due to the size of the impervious surface, drainage pattern, hydraulic connectivity, installation or modification of drainage or conveyance structures, location of the discharge, existing storm water treatment, or other factors identified by the Secretary; and
- A discharge from an existing impervious surface of equal to or greater than 1 acre if the Secretary has previously issued an individual storm water discharge permit or individual temporary pollution permit for the discharge or has previously granted coverage for the discharge under a storm water discharge general permit.[13]

[11] EPA – Multi-Sector General Permit
[12] EPA – Multi-Sector General Permit (PDF)
[13] Vermont Stormwater Discharges from New Development and Redevelopment General Permit

This permit also requires that solids, sediments and other pollutants collected and removed in the course of treatment or control of storm water runoff shall be disposed of in a manner to prevent it from entering the waters or wetlands. Also, any erosion or associated discharge of sediment from the storm water collection, treatment and control system shall be corrected immediately.[14]

Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity

The Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity was issued on August 4, 2011. The discharges eligible for coverage are:

- Storm water discharges associated with industrial activity for any primary industrial activities and co-located industrial activities;
- Discharges designated by the Secretary as needing a storm water permit;
- Discharges designated by the Secretary as needing a storm water permit to implement an approved TMDL or to address exceedances of water quality standards as outlined in 40 CFR 122.26(a)(9)(i)(C) or (D);
- Discharges that are not otherwise required to obtain NPDES permit authorization but are commingled with discharges that are authorized under the permit;
- Discharges subject to any of the national storm water-specific effluent limitations guidelines; and
- For any facility where the New Source Performance Standards identified in the permit apply.

If the permittee discharges to a water impaired for turbidity, sediment/sedimentation, they must monitor for TSS. There are also requirements for erosion and sediment control in the permit:

> You must stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. Among other actions you must take to meet this limit, you must place flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants. Examples of BMPs that limit and control sediment and erosion include: leaving as much vegetation onsite as possible, minimizing the time that soil is exposed, preventing runoff from flowing across disturbed areas and diverting the flow to vegetated areas, stabilizing the disturbed soils as soon as possible, slowing down the runoff flowing across the site, providing drainage ways for the increased runoff, and removing sediment from storm water runoff before it leaves the site. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to consult with Vermont's Erosion Prevention and Sediment Control manuals: *The Low Risk Site Handbook* and the *Vermont Erosion Prevention and Sediment Control Field* Guide (both found at http://www.vtwaterquality.org/stormwater/htm/sw_cgp.htm)[15].

[14] Vermont General Permit 3-9015 (PDF)
[15] Vermont Multi-Sector General Permits for Stormwater Discharges Associated with Industrial Activity

IV. NONPOINT SOURCE PROGRAM

A. Background

Nonpoint source pollution, unlike pollution from industrial and sewage treatment plants, or discrete storm water conveyances, comes from many diffuse sources. Nonpoint source pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and ground waters.[16]

The 1987 amendments to the CWA established the Section 319 Nonpoint Source Management Program. Section 319 addresses the need for greater federal leadership to help focus state and local nonpoint source efforts. Under Section 319, states, territories, and tribes receive grant money that supports a wide variety of activities including technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and monitoring to assess the success of specific nonpoint source implementation projects.[17]

Under Section 319(h), EPA awards grants for implementation of state Nonpoint Source management programs. State grant recipients are required to report annually in the Grants Reporting Tracking System (GRTS) their progress in meeting milestones, including reductions of nonpoint source pollutant loadings and on improvements to water quality achieved by implementing nonpoint source pollution control practices.[18]

B. New York

New York's Nonpoint Source Management Program has been updated to reflect the recommendations in EPA's 2013 Nonpoint Source Program and Grants Guidelines for States (PDF). The EPA approved this new program on September 22, 2014.

The program is established under the leadership of the NYDEC as the state lead agency for the CWA Section 319 Program and many other closely related programs. Significant state agency partnerships and program roles are shared with the Department of Agriculture and Markets, the Soil and Water Conservation Committee, the NYDOS, the Department of Health, the New York State Environmental Facilities Corporation, and the Department of Transportation. These state agency partnerships are complemented by regional and local partnerships, with special emphasis on county Soil and Water Conservation Districts, county health agencies, county and regional planning agencies, and watershed coalitions. Key federal agency partnerships include the EPA, the Department of Agriculture, and the Department of the Interior.

New York's Nonpoint Source Program goal is to control pollution from nonpoint sources to protect, maintain, and restore all waters for all public beneficial uses, consistent with the New York Environmental Conservation Law. New York's Nonpoint Source Program places

[16] EPA – Polluted Runoff: Nonpoint Source Pollution
[17] EPA – Clean Water Act Section 319
[18] EPA – Grants Reporting Tracking System

highest priority on the management of sources of nutrients in the landscape, with significant priorities also assigned to management of pathogen and sediment sources. Toward this goal, New York has established a series of Nonpoint Source Program objectives:

- Develop Watershed Plans:
  - Develop watershed management plans, and other comprehensive and strategic plans to improve the management of nonpoint pollution sources on a watershed basis.
- Implement Watershed Projects:
  - Implement nonpoint source watershed projects, including BMPs and other actions which serve to control or reduce the impact of nonpoint source pollution or pollutants on waters of the states.
- Monitor Water Quality:
  - Assess the quality of waters of the state related to nonpoint source pollution.
- Protect and Restore Waters:
  - Protect and maintain unimpaired waters of the state from additional nonpoint source pollution, and restore or prevent further degradation of waters of the state impaired by nonpoint source pollution.
- Integrate Nonpoint Source Management into Other Programs:
  - Integrate management of nonpoint pollution sources into applicable state and local agency programs (including both regulatory and non-regulatory programs), and provide overall policy coordination among state, local and federal agencies.
- Provide Guidance and Technical Assistance:
  - Develop and maintain the capacity of state, regional and local agencies and organizations to provide nonpoint source management assistance to communities and landowners through assessment, planning, technical support and education.

New York's comprehensive approach to nonpoint source management, through the contributions of all state and local agency partners, has made significant progress since the initial establishment of the program. A diverse range of watershed management plans have been developed for watershed of priority waters throughout most regions of the state. A major Agricultural Environmental Management Framework has been established to develop strategies and implement field practices to reduce nonpoint source pollution from agriculture. State funding programs have also been established to provide assistance to municipalities for non-agricultural nonpoint source management practice and green innovation projects.

The New York State Coastal Nonpoint Pollution Control Program (NYSCNPCP) was prepared in 1995 in fulfillment of the requirements of Section 6217 of the CZARA of 1990. The goal of the NYSCNPCP was to demonstrate an effective approach to the management of nonpoint pollution that affects or may affect coastal water from agriculture, marinas, forestry, hydro-modification, urban runoff, and other sources. Additionally, the NYSCNPCP provides for the management of critical coastal areas and the protection of wetlands, which serve to reduce the impact of nonpoint pollutants.

The NYSCNPCP addresses nonpoint pollution as follows:

Agriculture

At the time of the plan, extensive voluntary and educational programs were in place and Soil and Water Conservation plans were expected to achieve most agricultural management measures. Since the NYSCNPCP was developed, New York has developed two General Permits for Concentrated Animal Feeding Operations: one that conforms to the requirements of the CWA, which allows for discharges from a certain sized storm; and a State permit which prohibits all discharges. Both of these permits contain key elements that include the development of manure storage areas and nutrient management plans. The CWA General Permit was first established in 1999, and the New York General Permit was first established in 2009.

Forestry

Silviculture is not a significant source of the pollution of New York's coastal waters. New York does have a guidance manual titled "Silviculture Management Practices Catalogue for Nonpoint Source Pollution Prevention and Water Quality Protection in New York State, October 1993 (PDF)" which details BMPs to prevent or reduce the availability, release or transport of substances which can adversely affect surface or ground waters. The silviculture management practices can be categorized as operational, vegetative or structural depending on their purpose, function and design.

Urban Areas

Urban Storm water [Please refer to the MS4 section of this document]

Construction Activities
[Please refer to the Stormwater General Permits section of this document]

Onsite Disposal System
The New York State Department of Health is responsible for regulating OSWT systems for individual residences. Generally, this responsibility is delegated to a local health department or to town code enforcement officials. Prior to 1973, regulations governing OSWTs were limited, at best, and with respect to Long Island, the typical OSWT consisted of a cesspool. Cesspools continue to be a very common form of OSWT for all homes built on Long Island before 1973. This is particularly true for older homes adjacent to water bodies. The only requirement to upgrade from a cesspool is if you rebuild or expand the original house.

The NYDEC has issued a general permit (GP-0-05-001) for Private, Commercial or Industrial Facilities discharging 1,000 to 10,000 gallons per day of sanitary wastewater to groundwater. This general permit authorizes the discharge to groundwater of 1,000 – 10,000 gallons per day of treated sanitary waste, without the admixture of industrial wastes, from on-site treatment works serving private, commercial, and institutional facilities using treatment units or processes referenced in *Design Standards for Wastewater Treatment Works – Intermediate Size Sewerage Facilities* (NYDEC 1988, draft revised design standards in 2013). This general permit is applicable in the NYC and

White Plains regions, but not Long Island. Activities excluded from this General Permit are facilities in special (100 year) flood hazard areas as defined in 42 United States Code 4001; freshwater and tidal wetlands and their adjacent areas as defined in ECL Articles 24 and 25 respectively; coastal erosion hazard areas as defined in ECL Article 34; wild, scenic and recreational river corridors as defined in ECL Article 15, Title 27; or facilities located in the counties of Kings, Nassau, Queens and Suffolk not previously authorized by GP-95-01. The NYDEC has delegated responsibility for issuing these permits to both Nassau and Suffolk Counties, and both of these counties have established their own Standards for Approvals of Plans and Construction for Sewage Disposal Systems for other than Single Family Residences.

The contribution of these types of systems to silt or sediment in Long Island Sound is not considered to be significant; however, these systems do have the potential for contributing to pathogen and nutrient pollution.

Roads, Highways, and Bridges
Since the inception of the Phase II MS4 permit, storm water runoff from these surfaces falls under the requirements of the MS4 general permit. Additionally, many regulations have been put into place to control all types of pollution from bridge maintenance and repair, for example, the 1990 Bridge Scraping and Painting Regulation.

Marinas and Recreational Boating

Marinas are covered under the SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (GP-0-12-001). In addition, most estuarine waters of New York have now been designated a no discharge zone.

Hydromodification

Since advent of the MS4 permit, public education on the value of riparian buffers and the development of watershed plans, many municipalities have recognized areas of erosion in their streams and have focused much effort on mitigating these areas of erosion. Examples in New York include the Nissequogue River Watershed Management Plan, the Northport Harbor Water Quality Protection Committee, and the Long Island Sound Futures Fund Crab Meadow Hydrology Study.

C. Connecticut

Connecticut's Nonpoint Source Management Program is a network of many programs administered by numerous federal, state, and municipal government agencies and organizations. The Connecticut Department of Energy and Environmental Protection (CTDEEP) has been designated by the EPA as the primary state nonpoint source management authority, and its Bureau of Water Protection and Land Reuse, Planning and Standards Division serves in a coordinating role for the various nonpoint source programs and administers the state's Section 319 grant program. Further networking occurs within each of these agencies and organizations among their numerous offices, bureaus, and divisions. Collectively, these agencies and organizations establish long- and short-term

goals, objectives and strategies that effectively implement nonpoint source pollution management.

319 Program

Connecticut's Section 319 nonpoint source program is designed to look at education, outreach, planning, demonstration/implementation projects for resource protection, minimization of impacts, and impairments, focusing on source-reduction rather than "end of pipe" type work. The Section 319 program only supports dredging as a last resort, when all other solutions in the watershed have been implemented. Section 319 may also look at dredging as part of a larger improvement project, but it really is a last option.

Sediment-related Section 319 Projects:

Lower Blackledge River, Colchester: Stream Habitat Restoration (PDF)
Approximately 710 feet of streambank along the lower Blackledge River had experienced channel instability and erosion. Channel instability was traced back to large flood events in 1973 and 1982. Within this stretch, an area approximately 440 feet in length had been severely eroded causing a collapse of the streambank and degradation of in-stream and riparian resources. Channel abandonment and island formation also resulted in a dramatic shift of the stream channel. This shift in concert with the lack of an extensive and stable streambank root system contributed to significant erosion and stream sedimentation. Specific objectives and purposes of the project are as follows: restore and stabilize the streambank and channel to correct local erosion problems; restore in-stream aquatic resource and riparian habitat; decrease downstream sediment loading; incorporate geomorphology principles and soil bioengineering techniques in restoration design; demonstrate new technologies and methods for stream channel restoration.

Center Springs Pond, Manchester: Pond Restoration (PDF)
Center Springs Pond is the central feature of a fifty-five acre urban park located in the center of Manchester, Connecticut in the Hockanum River watershed. Bigelow Brook, which feeds Center Springs Pond, runs through a heavily urbanized area. As a result, the brook receives high volumes of storm water runoff. The primary impacts on the pond were from sediments, which filled in the pond and reduced its depth; nutrients, which fed the growth of algae and aquatic weeds; and, trash, which diminished the pond's aesthetic appeal. The filling of the pond, caused by the sediment loading, contributed to weed growth and increased water temperatures by allowing sunlight to penetrate to the pond bottom. The combined effect of the sediments, increased temperature, and die-off of the algae and weeds consumed oxygen and led to low-dissolved oxygen conditions. These impacts rendered the pond inhospitable to most species of fish, and too shallow for ice skating. The goals of the Center Springs Pond Restoration Project were to improve water quality in the pond and to reestablish the pond and surrounding area as a focal point for recreational activity in the town of Manchester. Restoration efforts include installation of trash rack upstream of the pond, construction of sedimentation forebay at the eastern end of the pond, and dredging approximately 25,000 cubic yards of material from the pond. The Town of Manchester now has a regular maintenance program for the pond which

includes weekly litter pickup and periodic dredging of the sedimentation forebay. In December 1998, 1200 cubic yards of sediment were removed from the forebay.

Farmington River, West River Road, Barkhamsted: Streambank Restoration (PDF)
The town of Barkhamsted and the Farmington River Coordinating Committee received a Section 319 grant of $52,000 for a two phased project. Phase 1 restored an actively eroding 200-foot section area of streambank on the West River. The site chosen for this project had a long history of erosion and destabilization due to sandy soils, road proximity, informal recreational access and the powerful forces of the river (augmented, upon occasion, by upstream dam releases) and was a significant contributor of sediment to the river. In addition to bank stabilization and education signage, the project also included repair of a popular recreational access staircase to reduce sediment created by recreational users' foot traffic.

Jordan Cove Urban Monitoring Project: Urban Monitoring Project (PDF)
A comparison of the quantity and quality of stormwater runoff generated from a traditional subdivision to the quantity and quality of runoff treated with green infrastructure practices. The 18-acre "Glen Brook Green" subdivision, located in Waterford, Connecticut was constructed and monitored to compare runoff quantity and quality. The subdivision is split into two distinct "neighborhoods": one with building lots arranged in a traditional half-acre zoning pattern; the other, cluster housing with a variety of BMPs incorporated into the design. The BMP neighborhood was expected to generate less stormwater runoff and pollution. Monitoring conducted before, during, and after construction confirmed this expectation.

Coastal Nonpoint Source Pollution Control Program

Connecticut's "6217" program, or Coastal Nonpoint Source Pollution Control Program (CNP), was approved by the EPA and the National Oceanic and Atmospheric Administration (NOAA) in November 2003. The purpose of the program is to implement the Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, where they are not already in effect. Management measures are economically achievable measures that reflect the best available technology for reducing pollutants. Sediment reduction throughout the Coastal Nonpoint Source Management Area (Figure E-15) is achieved through implementation of these management measures.

Connecticut's CNP addresses five of the six major categories of nonpoint source pollution identified by EPA and NOAA: agriculture, urban sources, marinas and recreational boating, hydromodifications, and wetlands and riparian areas. Connecticut received an exclusion from the sixth category, forestry, because forestry activities are adequately addressed through the state's Forestry Program and do not, and are not reasonably anticipated to, present significant adverse impacts to coastal waters.

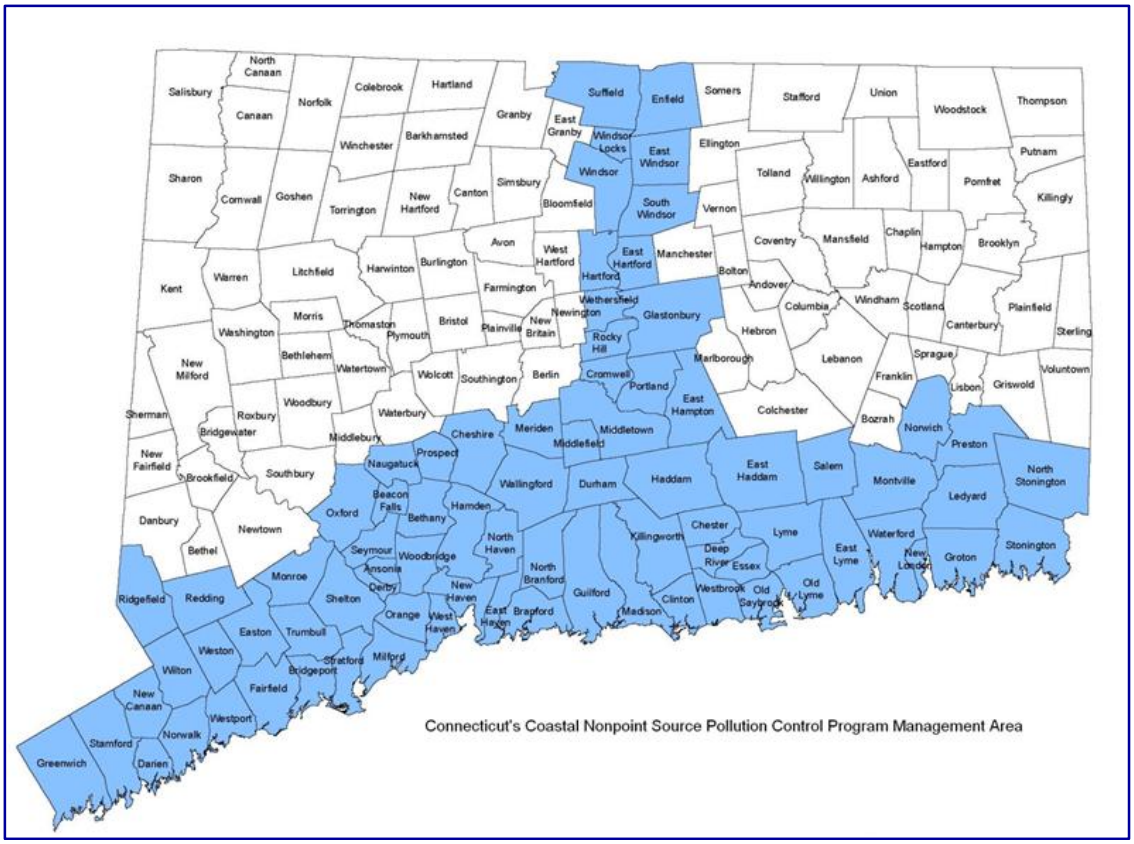


Figure E-15 - Connecticut's Coastal Nonpoint Source Pollution Control Program Management Area

The State of Connecticut has several well-established and effective programs to reduce or eliminate nonpoint source pollution affecting coastal waters, and several of them are administered or overseen by CTDEEP. Connecticut's CNP is a "networked program," which means that the program will be implemented by weaving together established programs that meet, and in many instances exceed, the management measures developed for each of the categories. Connecticut's CNP is based primarily on the Connecticut Coastal Management Act, the Section 319 Nonpoint Source Pollution Control Program, and the state's broad Water Pollution Control Authority.

D. Massachusetts

Massachusetts' nonpoint management program is administered by the Massachusetts Department of Environmental Protection (MADEP), and coordinates its nonpoint activities with several federal, state and local partner agencies.

319 Program

MADEP recently updated its nonpoint source management program plan. The Massachusetts Nonpoint Source Management Program Plan for 2014-2019 describes the state's program activities and identifies the priority goals, objectives and activities that will be pursued over the coming five years. MADEP receives approximately $2 million annually,

and that funding is used to support projects that implement watershed-based plans, and the department's nonpoint control activities. A request for responses for competitive projects is used by MADEP each year. The following project categories are expected to be solicited over the next five years: NPS watershed projects in impaired waters, healthy watersheds and protection of high-quality waters, outreach and education, and TMDL development in priority watersheds. In addition to its 319 funding, the state also uses CWA Section 604(b) funds from EPA for water quality assessment and management planning. A portion of this funding is used to support regional competitive projects. The 604 solicitation routinely includes a request for watershed-based plan development, and watershed projects that identify critical sources of nonpoint pollution and recommend best management practices to address nonpoint pollution.

Below are examples of Section 319 Nonpoint Source projects in Massachusetts addressing sediment[19]:

Storm water Management BMPs for Unpaved Roads: Four Mile Brook Road in Northfield, Massachusetts

Four Mile Brook is a coldwater stream that drains a 4.8 mi^2 watershed, most of which is located in Northfield, Massachusetts. The brook is one of two major tributaries that comprise the HUC 12 sub-watershed Connecticut River-Dry Brook to Deerfield River. Total suspended solids (TSS) is listed as a pollutant needing a TMDL (Category 5 Waters) in Segment MA 34-03_2008, which is within this HUC 12 sub-watershed. Sediment-laden runoff is flowing into the Four Mile Brook from Four Mile Brook Road, which is a gravel road along all of its 2.75 mile length, except for an approximately 1,000 foot section in the lower part of the watershed. Much of the road lies within the Rivers Protection Act 200-foot riparian buffer of the brook. Significant amounts of sediment are delivered to the brook during storm events, and sediments entering Four Mile Brook are being deposited in the lowest reaches of the brook and into the Connecticut River.

The goal of this project is to implement priority projects identified in a previous 604b funded (05-02/604) Watershed Management and Restoration Plan, which contains recommendations for restoration and mitigation projects in the watershed. Six priority locations were identified in the Plan, and conceptual storm water Best Management Practices (BMPs) were developed for these priority sites. The assessment also provided a list of locations along the road where minor to moderate erosion and sedimentation is occurring. Accordingly, improvements will be implemented at numerous other sites along Four Mile Brook Road. BMPs will be employed at 16 culvert crossings, 10 plow pull-offs and 2,000 linear feet of windrow removals to improve the management and quality of storm water runoff.

[19] Massachusetts - Indicative Project Summaries: Section 319 Nonpoint Source Competitive Grants Program FFY 2008-2012 (PDF)

Sawmill River Implementation Project: An Ecosystem Approach to Restoration

The Sawmill River watershed encompasses 32 square miles in the western Massachusetts towns of Montague, Shutesbury, Leverett and Wendell. The river flows westerly for fourteen miles through mostly forested and steep terrain to its confluence with the Connecticut River in Montague. This segment of the Connecticut is Category 5 listed as impaired by flow and habitat alterations. Watershed land uses include cropland, pasture, forest, and residential and commercial areas. Over the past thirty years, towns in the Sawmill River watershed have been plagued by numerous river-related problems including flooding, sediment accumulation, and damage to property and infrastructure. Water quality, fisheries, and wildlife habitat have been adversely impacted by sediment load transport and bank scouring.

For several decades, watershed communities have attempted to apply "quick fixes" to these problems. Numerous stream bank stabilization and dredging projects have been undertaken to address catastrophic damage to roads, bridges and agricultural areas. Bank erosion along the Sawmill River is accelerating, contributing to more substantial sediment loads, which in turn further impacts ecosystem health and public safety. Each time towns and residents have attempted to fix one problem, other problems have emerged.

The goal of this project is to implement a 2005 restoration plan that was developed through the funding of a 604(b) EPA/DEP project entitled “An Ecosystem Approach to the Restoration of the Sawmill River Watershed”. This plan provided a three-phase geomorphic assessment using an innovative ecosystem approach. Findings were used to develop conceptual solutions for flooding, erosion and sedimentation problems using natural stream channel principles.

Engineering plans for the river restoration project, developed pursuant to the Vermont Stream Geomorphic Assessment protocols, will be finalized; related state, federal and local permits will be secured; restoration of 2,500 linear feet of straightened channel, including application of bioengineering techniques, will be accomplished; and outreach and technology transfer regarding the project will be conducted.

Connecticut River Watershed Restoration Project (Phase I, II, III)

Federal and state agencies, in addition to watershed groups, identified bank erosion in the 22-mile reach of the Connecticut River at the Turners Falls Power Pool as a significant source of pollution. Severe bank erosion was releasing sediment and leading to degradation of anadromous and freshwater fisheries habitat, degradation of riparian habitat used by rare species of dragonflies, bald eagles, migratory birds and other wildlife, and the loss of prime agricultural cropland. The three-phased project used bioengineering streambank stabilization using native vegetation and natural materials to stabilize the eroding sites. The project was also used to provide outreach to demonstrate the effectiveness of bioengineering on a large river with steep banks, as an alternative to riprap and conventional shoreline armoring.

E. New Hampshire

In 2014, New Hampshire will be updating its Nonpoint Source Management Plan, which serves as a non-regulatory road map to guide NPS Program activities including outreach, planning, and implementation projects. This will be an update to New Hampshire's 1999 NPS Plan and will outline New Hampshire's approach to addressing Nonpoint Source Pollution during years 2015 through 2019. New Hampshire's Nonpoint Source Plan addresses watershed prioritization, agriculture, chlorides and road maintenance, hydrologic and habitat modification, landscape and turf management, runoff from developed lands, and subsurface systems[20].

Below are examples of Section 319 Nonpoint Source projects in New Hampshire addressing sediment:

Stream Restoration at Lower Mohawk River and Colebrook Industrial Park[21]

The lower Mohawk River was straightened in the 1960s in the hope of reducing ice jams that periodically flooded downtown Colebrook. The straightening resulted in the abandonment of meanders on the Mohawk River, impairing aquatic habitat and increased sediment delivery to the Connecticut River, resulting in the creation of gravel bars downstream. Flow diversion around the gravel bars has led to severe bank erosion at the Colebrook Business Park where two buildings are close to the river's edge.

The Section 319 project objectives were to improve aquatic habitat in the lower Mohawk River and to stabilize the severely eroding riverbank at the Colebrook Business Park by eliminating the source of the erosive pressure and by installing a protective barrier of engineered log jams along the business park riverbank. The restoration project improved aquatic habitat by increasing stream flow complexity, pool depths, and particle size segregation and helped alleviate erosion problems along the Connecticut River by capturing sediment in reactivated meanders. The estimated TSS reduction is 453 tons per year.

Bog Brook Restoration Project (Town of Stratford)

In June of 2003 the Town of Stratford, NH was awarded a Watershed Restoration Grant from the New Hampshire Division of Environmental Stewardship Watershed Assistance Section (appropriated through the USEPA under Section 319 of the Clean Water Act) for the Bog Brook Restoration Project. The project addressed an area of severe bank erosion which threatened an existing barn and septic tank and was a significant sediment source to the brook and the Connecticut River, to which it flows approximately 1½ miles downstream. Based on a comparison of the 2003 channel location to that on a 1999 aerial photo, the channel had eroded laterally up to 35 feet and consumed approximately 4,000 square feet of land. Using a mean channel depth of 2.5 feet over that area, approximately 370 cubic yards, or about 480 tons, of sediment has been introduced into

[20] New Hampshire Nonpoint Source Management Plan
[21] New Hampshire - Nonpoint Source Management 2012 Annual Report

the stream as a result of bank erosion over that four year span. That was on average 120 tons per year.

It appears the instability resulted from the removal of woody riparian shrubs from the stream banks. This likely occurred decades earlier as a means of increasing arable land. The absence of deep-rooted shrubs made the banks vulnerable to erosion, especially the outside bank of the meander bend upstream of the barn. As this bank eroded, the meander bend became sharper, placing even greater stress on the bank and accelerating the on-going erosion. Had this process been allowed to continue, it appeared likely that the brook would have eventually cut a new channel across the field immediately south of the barn (channel avulsion). Several thousand tons of additional sediment would have been transported to downstream reaches and the Connecticut River if this had happened.

The project was constructed over three days between May 20th and May 24th, 2004. Construction followed the following sequence:

1. The location and grades of the new outside bank were staked by the project designer;
2. Approximately 20 willows and 2 alder were transplanted from areas within the new channel alignment to the new stream bank;
3. The new channel was roughed-in working from the downstream tie-in point to the upstream tie-in point so that as much work could be performed before stream flows were turned into the new channel;
4. Once excavation reached the upstream tie-in point, stream flows were directed to the new channel and the upstream end of the former channel was filled;
5. The downstream 'j-hook' rock vane was installed first followed by the upstream vane;
6. A small root wad found on the point bar was installed on the outside bank near the downstream tie-in point;
7. Sod mats were transplanted to the face of the new outside bank;
8. Material excavated from the new channel alignment was used to fill the upstream end of the former channel;
9. Additional fill material was imported to fill the downstream end of the former channel;
10. Loam was spread over the filled portion of the former channel; and
11. All disturbed areas were seeded and mulched.

F. Vermont

Pollution from nonpoint sources is the major source of water use impairment to Vermont surface and ground water resources. Nonpoint source pollution is apparent in each of Vermont's seventeen river basins. The types and extent of water quality problems associated with these sources of pollution, however, exhibit a considerable degree of variation between and within basins. To a large extent, nonpoint source pollution control and nonpoint source pollution prevention centers about the watershed approach, land use and land management.[22]

[22] Vermont – Programs that Protect and Restore Waters of Vermont

In 2011, the program was able to assist a variety of locally-led efforts to improve water quality and/or habitat conditions (e.g. nonpoint source phosphorus and sediment control in the watersheds of Crosby Brook and Englesby Brook). Some management elements include stream stability assessments and floodplain management, construction sediment and erosion control, hazardous and solid waste management, responding to spills and leaks, and the control of storm water from construction sites and developed areas. Programs include Forest Management, Agricultural Programs and Practices, Better Backroads, and Municipal Water Quality Protection Technical Assistance.[23]

V. IMPAIRED WATERS & TOTAL MAZIMUM DAILY LOADS (TMDL)

A. Background

Under section 303(d) of the CWA, states, territories, and authorized tribes are required to develop lists of impaired waters. These are waters that are too polluted or otherwise degraded to meet the water quality standards set by states, territories, or authorized tribes. The law requires that these jurisdictions establish priority rankings for waters on the lists and develop TMDLs for these waters. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards.[24]

B. New York

The New York List of Impaired Waters Requiring a TMDL/Other Strategy (PDF) was revised in February 2013. The water body listings in the List are grouped into a various Parts:

Part 1: Individual Waterbody Segments with Impairments Requiring TMDL Development
- These are waters with verified impairments that are expected to be addressed by a segment/pollutant-specific TMDL

Part 2: Multiple Segment/Categorical Waterbody Impairments Requiring TMDL Development
- These are groups of waters effected by similar causes/sources where a single TMDL may be able to address multiple waters with the same issue

Part 3: Waterbodies Requiring Verification of Impairment or Cause/Pollutant
- These are waters where scheduling of TMDL development may be deferred pending verification of either the suspected impairment or the cause/pollutant related to the impairment

The following is a list of water bodies from Part 1 in the Atlantic Ocean/Long Island Sound Major Drainage Basin that discharge to the Long Island Sound and are listed for silt/sediment:

[23] 2012 Vermont Surface Water Quality Integrated Assessment Report
[24] EPA – Impaired Waters and Total Maximum Daily Loads

Waterbody Name	County	Source
Mamaroneck River, Lower	Westchester	Urb/Stormwater Runoff
Mamaroneck River, Upper and tributaries	Westchester	Urb/Stormwater Runoff
Sheldrake River	Westchester	Urb/Stormwater Runoff
Blind Brook, Lower	Westchester	Urb/Stormwater Runoff
Blind Brook, Upper	Westchester	Urb/Stormwater Runoff
Glen Cove Creek, Lower and tributaries	Westchester	Urb/Storm, Mun/Ind

There are no other water bodies discharging to Long Island Sound on any other list being listed for silt/sediment.

While there have not been any TMDLs developed to address any of the above mentioned waterbodies impaired for silt/sediment, local governments and citizen groups have taken some specific actions to address these water bodies. The following outlines actions taken to mitigate some of the silt/sediment problems associated with these water bodies:

Mamaroneck River: Westchester County has undertaken two projects to address water quality in the Mamaroneck River. One project focused on the removal of invasive species to restore the riparian buffer along a given area of the Mamaroneck River. Another project returned a pond to its former stature and installed a basin where the river meets the pond to trap and collect sediment to lessen the degree for further sedimentation in the pond.

Sheldrake River: Westchester County has undertaken two projects to address water quality in the Sheldrake River. The first project substantially re-vegetated the riverbanks within Mamaroneck Village. It also reinforced bridge pilings with stonework, both to prevent soil erosion during high water. The second project focused on the head waters of the Sheldrake River that ran through the Bonnie Briar Country Club. The country club kept the area around the Sheldrake River a closely cropped and chemically treated fairway grass flanking the river. This river is very "flashy" and the grasses root structure was insufficient to prevent erosion during flooding. The Country Club worked with landscaping contractors to create a more robust riparian area for the river in this area. The project involved re-grading the river banks to make them flatter and more stable, securing the toes of the banks and bridge abutments with stones and man-made logs, stabilizing the banks with mesh blankets, installing stone structures within the stream channel to divert and slow water flow in a controlled manner and seeding and planting the banks and a 10 foot wide buffer along the stream banks with grasses, sedges, wildflowers and shrubs. These activities helped control erosion problems at this area, improved water quality by providing a filter in the riparian areas as well as improved habitat for small fish and other aquatic organisms living in the stream.

Blind Brook: Westchester County has undertaken three projects in the Blind Brook to improve water quality. The first of these projects created a wetland at Rich Manor Park to control stream bank erosion. The second project occurred at the Rye High School where a section of the Blind Brook that had been severely eroded was restored by

installing coconut fiber mats and planting shoreline vegetation and shrubs to control erosion. The third project involved eradicating invasive plants in the Rich Manor Park. Also the stream banks and mud flats in and around the stream channel were planted with native vegetation and a row of cedar posts topped with birdhouses were installed to demarcate the boundary of the riparian buffer zone.

Glen Cove Creek: The Glen Cove Creek is the major fresh water tributary to Hempstead Harbor, discharging near the mouth of Hempstead Harbor. The Hempstead Harbor Protection Committee has undertaken numerous projects to improve water quality in Hempstead Harbor; however, efforts to improve the Glen Cove Creek are not easily identified.

C. Connecticut

There are five segments in Connecticut that have been identified as having sedimentation/siltation as one of the causes for impaired aquatic life: four are ponds (CT4500-00-3-L3_01 Union Pond, CT5111-09-2-L3_01 Branford Supply Pond, CT5200-00-4-L2_01 Hanover Pond, and CT6016-00-1-L3_01 Hatch Pond), and one is a stream segment (CT7300-00_01 Norwalk River-01). These segments are listed as impaired and requiring TMDLs. While there are no TMDLs in Connecticut that have been developed for sediment, sedimentation in these segments is currently being addressed through ongoing watershed management planning and stream stabilization efforts and through stormwater general permit runoff controls.[25]

D. Massachusetts

The following is a list of waters in the Connecticut River Basin in Massachusetts requiring a TMDL for sediment[26]:

[25] 2012 State of Connecticut Integrated Water Quality Report (PDF)
[26] Massachusetts Year 2012 Integrated List of Waters: Final Listing of the Condition of the Massachusetts' Waters Pursuant to Sections 305(b), 314 and 303(d) of the Clean Water Act (PDF)

Name	Segment ID	Description	Size	Units	Impairment Cause
Bloody Brook	MA34-36	From the railroad tracks north of North Main Street, Deerfield to the confluence with Mill River, Whately	3.679	Miles	Turbidity
Connecticut River	MA34-03	Turners Falls Dam, Gill/Montague to confluence with Deerfield River, Greenfield/Montague/Deerfield	3.604	Miles	TSS
Connecticut River	MA34-05	Holyoke Dame, Holyoke/South Hadley to Massachusetts/ Connecticut Border	15.853	Miles	TSS
Noonan Cove	MA34058	Springfield	2.712	Acres	Turbidity
Stony Brook	MA34-19	Headwaters, Granby to confluence with Connecticut River, South Hadley (thru Upper Pond formerly segment MA34095 and Lower Pond formerly MA34049)	13.334	Miles	Turbidity

E. New Hampshire

There is only one listed impaired water for sediment in New Hampshire in the Connecticut River Basin[27]:

- *Assessment Unit ID* – NHRIV801030401-09
- *Water Name* – Ammonoosuc River
- *Primary Town* – Bethlehem
- *Water Size* – 2.261 Miles
- *Use Description* – Aquatic Life
- *Impairment Name* – Total Suspended Solids (TSS)
- *DES Category* – 4B-T
- *Threat* – N
- *TMDL Priority* – [none listed]
- *Source Name* – Source Unknown

F. Vermont

The following is a list of waters in the Connecticut River Basin in Vermont requiring a TMDL for sediment[28]:

[27] New Hampshire - 2012 List of All Impaired or Threatened Waters (PDF)
[28] State of Vermont 2012 303(d) List of Waters Part A – Impaired Surface Waters in Need of TMDL (PDF)

Waterbody ID	ADB Code(s)	Segment Name/Description	Pollutant(s)	Use(s) Impaired	Surface Water Quality Problem(s)	TMDL Priority
VT13-10	01	Commissary Brook Tributary, Mouth to RM 0.2	Sediment	AES, ALS	Bank failure and erosion due to past clay mining	L
VT13-10	01	Crosby Brook, Mouth to RM 0.7	Sediment	ALS	Habitat alterations due to sedimentation, channelization and buffer loss	M
VT13-16	01	Newton Brook, Mouth to RM 2.0	Sediment	ALS	Agricultural activity	H

VI. LITERATURE RELATED TO BEST MANAGEMENT PRACTICES (BMPs)

A. Background

BMP is a term used to describe a type of water pollution control. Stormwater BMPs are techniques, measures or structural controls used to manage the quantity and improve the quality of storm water runoff. The goal is to reduce or eliminate the contaminants collected by storm water as it moves into streams and rivers in order to maintain the water quality, which protects both the environment and the public.

Once pollutants are present in a water body, altering its physical makeup and habitat, it is much more difficult and expensive to restore it. Therefore, the use of BMPs that prevent damage to receiving waters is the target. Storm water pollution has two main components: the increased volume and rate of runoff from water resistant surfaces, such as roads and parking lots, and the amount of pollutants in the runoff. Both components are directly related to urban development. They can cause changes in water quality. This results in a variety of problems, including:

- Environment modification and loss;
- Increased flooding;
- Decreased native wildlife; and
- Increased sedimentation and erosion.

In turn, effective management of storm water runoff offers a multitude of benefits:

- Protection of wetlands and ecosystems;
- Improved water quality of streams, rivers and other water bodies;
- Protection of water resources;
- Protection of public health; and
- Flood control.[29]

[29] EPA – Best Management Practices - Stormwater

B. New York

Stormwater Management Guidance Manual for Local Officials: Construction and Post-Construction Stormwater Runoff Management (PDF) (September 2004)

> This Guidance Manual is designed to help regulated municipalities and publicly-owned institutions develop and implement local control of Construction Site and Post-Construction storm water runoff, as required under state and federal law.

New York State Stormwater Management Design Manual (August 2010)

> The New York State Stormwater Management Design Manual provides designers with a general overview on how to size, design, select, and locate storm water management practices at a development site to comply with State storm water performance standards. This manual is a key component of the Phase II State Pollution Discharge Elimination System (SPDES) general permit for storm water runoff from construction activities from all sizes of disturbance.

Keep Waterways Clean: Tips on How Proper Boating Practices Can Prevent Pollution

New York Sea Grant - Stormwater Runoff Best Management Practices for Marinas: A Guide for Operators

> This guide provides a brief discussion of why storm water runoff management is important at marinas and the types of things facility owners can do to address this potential problem. The emphasis is on providing information that will familiarize readers with the options available and help them begin to screen these options in terms of potential application at a specific site. Although intended primarily for marina owners and operators, this information should also be of interest and use to others involved with boating facilities and environmental management including government and agency officials, planners, consultants and the public.

C. Connecticut

CT Clean Marina Guidebook:

> The Connecticut Clean Marina Program is a voluntary, incentive-based education and outreach campaign to encourage environmental compliance and the use of BMPs at the state's marinas and boatyards. *The Connecticut Clean Marina Guidebook* provides the information necessary for Connecticut's marina and boatyard operators to protect water and air quality by providing a reference for the legal requirements and recommended practices for environmental operation at a marina. The *Guidebook* contains specific BMPs pertaining to mechanical activities, painting and fiberglass repair, hauling and storing boats, fueling, facility management, emergency planning for spills, and boater education. Sediment-related BMPs in the guidebook address pressure washing and catch basin maintenance.

CT Soil Erosion and Sediment Control Guidelines:

The 2002 Connecticut Guidelines for Soil Erosion and Sediment Control are intended to provide information to government agencies and the public on soil erosion and sediment control. These guidelines fulfill the requirements of Connecticut's Soil Erosion and Sediment Control Act (CGS Sections 22a-325 through 22a-329). Additionally, they are required as the technical standard to be complied with in many municipal planning and zoning regulations and in many permits issued by CTDEEP associated with land development.

The Guidelines also include a Low Impact Development Appendix (PDF) that provides design standards for the following LID controls related to soil erosion and sediment control:

- Complying to limits of clearing and grading;
- Preserving natural areas;
- Avoiding disturbance of long, steep slopes; and
- Minimizing siting on porous and erodible soils.

The Appendix provides a general description of each control, its advantages, general use, and standards for its application.

2004 Connecticut Stormwater Quality Manual:

The Connecticut Stormwater Quality Manual provides guidance on the measures necessary to protect the waters of the State of Connecticut from the adverse impacts of post-construction storm water runoff. This manual focuses on site planning, source control, and storm water treatment practices and is intended for use as a planning tool and design guidance document by the regulated and regulatory communities involved in storm water quality management.

A Stormwater Quality Worksheet (PDF) has also been developed to be used in conjunction with the Connecticut Stormwater Quality Manual for any new land development. It is designed to help the regulated community and regulatory agencies work through the recommendations provided in the 2004 Connecticut Stormwater Quality Manual.

The Stormwater Quality Manual also includes a Low Impact Development Appendix (PDF) that contains design standards for LID controls that elaborate on the narrative description of LID best management practices provided in chapter 4 of the *Connecticut Stormwater Quality Manual*. The Appendix provides a general description of each control, its advantages, general use, and standards for its application.

D. Massachusetts

Massachusetts Stormwater Handbook; and Structural BMP Specifications for the Massachusetts Stormwater Handbook (PDF)

The Stormwater Management Standards address water quality (pollutants) and water quantity (flooding, low base flow and recharge) by establishing standards that require the implementation of a wide variety of storm water management strategies. These strategies include environmentally sensitive site design and LID techniques to minimize impervious surface and land disturbance, source control and pollution prevention, structural BMPs, construction period erosion and sedimentation control, and the long-term operation and maintenance of storm water management systems.

Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas

There are numerous excellent references available to the general public covering the fields of erosion and sediment control, pollution control, and storm water management. This guide draws upon many of those documents. It is meant to provide the lay person who is involved in projects which affect the land and water resources in Massachusetts with background information. Further details may be found in other documents, which are referenced as sources of information. This guide deals primarily with conservation measures and conservation practices. These practices are generally referred to as "Best Management Practices" or "BMPs" and is intended to be a companion handbook with the recently prepared "Mega-Manual" prepared by the Massachusetts Department of Environmental Protection. Only limited detail is included about the soils, engineering, hydrology, plant materials and other knowledge that is needed to plan and design a potential project. It is intended only as a guide and should be used as such. A professional planner should be engaged to prepare the proposal and a professional engineer for the detailed erosion and sediment control plan and designs, drawings, and specifications.

Low Impact Development in Massachusetts

E. New Hampshire

New Hampshire Stormwater Manual; Erosion and Sediment Control During Construction – New Hampshire Stormwater Manual (PDF); and Designing Best Management Practices – New Hampshire Stormwater Manual (PDF)

The New Hampshire Stormwater Manual was developed in 2008 as a planning and design tool for the communities, developers, designers and members of regulatory boards, commissions, and agencies involved in stormwater programs in New Hampshire.

Best Management Practices to Control Nonpoint Source Pollution

The purpose of this guide is to describe the causes of NPS pollution and to suggest ways that NPS pollution can be prevented or at least reduced. Best management practices

(BMPs), which are land treatment or operational techniques used to prevent or reduce pollution, are listed along with references for more information. Section 1 provides background information on water resources and how they can be impacted by NPS pollution. Section 2 describes water resource impacts from existing and new development, provides suggested BMPs, references applicable laws and regulations, and lists additional resources. Section 3 describes specific land use activities that could affect water resources, provides suggested BMPs, references applicable laws and regulations, and lists additional resources. Section 4 describes how to get involved in local watershed organizations and volunteer water monitoring activities. Funding opportunities for efforts to reduce NPS pollution are listed in Section 5. Finally, the appendix lists contact information for agencies referenced in this guide.

F. Vermont

The Vermont Stormwater Management Manual Volume I – Stormwater Treatment Standards (PDF); and The Vermont Stormwater Management Manual Volume II – Technical Guidance (PDF)

The Vermont Stormwater Management Manual consists of two volumes, Volume I – Vermont Stormwater Treatment Standards; and Volume II – Vermont Stormwater Management Manual. Volume I contains the regulatory requirements for the management of storm water, and Volume II consists primarily of technical guidance to assist in the design of storm water treatment practices.

The Vermont Standards & Specifications for Erosion Prevention & Sediment Control (PDF)

These standards and specifications have been developed to assist designers in creating Erosion Prevention and Sediment Control Plans that meet the requirements of the 2006 Vermont Construction General Permit. With proper implementation, a well-designed EPSC Plan will protect against water quality impacts due to construction activity by limiting sediment discharge and will reduce costs associated with maintenance of road ditches, storm sewers, streams, lakes, impoundments, and flood control structures. The standards and specifications provide criteria on minimizing erosion and sediment impacts from construction activity involving soil disturbance. They show how to use soil, water, plants, and products to protect the quality of our environment.

The Low Risk Site Handbook for Erosion Prevention and Sediment Control (PDF)

The standards in this handbook serve as the required Erosion Prevention and Sediment Control Plan for construction sites determined to be “Low Risk” under GP-3-9020.

Vermont Watershed Management Division Green Infrastructure

VII. WATERSHED MANAGEMENT PROGRAMS

A. Background

Many watershed organizations, local governments, tribes, and state and federal agencies are now working together to manage water quality at the watershed level using a step-by-step watershed management process developed by the EPA. The process uses a series of cooperative actions to characterize existing conditions, identify and prioritize problems, define management objectives, develop protection or remediation strategies, and implement and adapt selected actions as necessary. The program is voluntary, but developing a plan to address known impaired water bodies that includes the Nine Key Elements will improve the chance of receiving Section 319 Clean Water Act funds.

A watershed plan documents the expected outcomes of this process and serves as the action agenda for managing water quality at the watershed level. Developing a watershed plan helps better manage water resources. A watershed plan is a document that describes the water resource assessments, management strategies, and restoration and protective actions – and expected outcomes of those actions – for a particular drainage basin or watershed. A plan will guide the efforts to protect and restore water quality.[30]

The Nine Elements that must be included in an EPA-approved Watershed Based Plan are[31]:

- Impairment - An identification of the causes and sources of pollution, that will need to be controlled to achieve the load reductions estimated to fix the impairment, and to achieve any other watershed goals identified in the watershed-based plan;
- Load Reduction - An estimate of the load reductions expected for the management measures described. Several models have been developed including AVG-WLF and Sparrow. Modeling can be simple or quite complex depending on the application. Spreadsheets and landcover mapping are typically employed in these models to estimate load reductions;
- Management Measures - A description of the nonpoint source management measures that will need to be implemented to achieve the estimated load reductions (include a map or detailed description);
- Technical & Financial Assistance - An estimate of the amounts of technical and financial assistance needed, and/or the sources and authorities that will be relied on, to implement this plan;
- Public Information & Education - An information/education component that will be used to enhance public understanding of the project and encourage their early and continued participation in selecting, designing, and implementing the nonpoint source management measures that will be implemented;
- Schedule - An expedited schedule for implementing nonpoint source management measures identified;
- Milestones - A description of interim, measurable milestones for determining whether nonpoint source management measures or other controls are being implemented;

[30] EPA – Watershed Management Resources at EPA (PDF)
[31] EPA – Nine Minimum Elements to Be Included in a Watershed Plan for Impaired Waters (PDF)

- Performance - Criteria to determine whether loading reductions are being achieved over time, and if progress is being made towards attaining water quality standards and, if not, the criteria to determine if this plan, or a related TMDL, needs to be revised; and
- Monitoring - A monitoring component to evaluate the effectiveness of the implementation efforts over time.

B. New York

The following is a partial list of Watershed Management Plans that have been developed in the New York portion of the Long Island Sound Watershed:

- Suffolk County North Shore Embayment's Watershed Management Plan (2007)
- Nassau County Stormwater Management Program Plan (2009)
- Bronx River Watershed Management Plan (2007)
- Westchester County Controlling Polluted Stormwater (2001)
  - Sheldrake and Mamaroneck Rivers
  - Mamaroneck Harbor
- Westchester County Controlling Nonpoint Source Pollution in Long Island Sound (1996)
  - Beaver Swamp Brook
  - Blind Brook
  - Mamaroneck Harbor
  - Milton Harbor
  - Port Chester Harbor
- Westchester County Controlling Nonpoint Source Pollution in Long Island Sound (1997)
  - Stephenson Brook
  - Burling Brook
  - Pine Brook
  - Larchmont Harbor
- Manhasset Bay Water Quality Improvement Plan (1999)
- 2001 Nonpoint Water Quality Strategy for Nassau County (2001)

Common themes and goals are evident in all Management Plans in the Long Island Sound watershed:

1. Reduce storm water runoff by detention and treatment, and subsurface containment;
2. Reduce groundwater nitrogen concentrations through planning, implementation and education;
3. Evaluate sites for storm water retrofits and install in priority areas;
4. Improve surface water quality;
5. Preserve open space areas;
6. Establish a public education program to include information on pet waste, waterfowl feeding, lawn fertilization, and other public contributors;
7. Increase the number of pet waste stations; and
8. Apply water quality monitoring and track the progress of Watershed Management Plan implementation.

C. Connecticut

CTDEEP created the Watershed Management Program to more effectively address water resource issues from an integrated watershed perspective. For purposes of water management, the state has been divided into five major watershed basins along natural watershed boundaries. CTDEEP Watershed Managers work within these five major watershed basins to assist communities in forming partnerships, drafting watershed based plans, and implementing environmental projects to restore and protect Connecticut's water quality on a watershed-wide scale (Figure E-16).

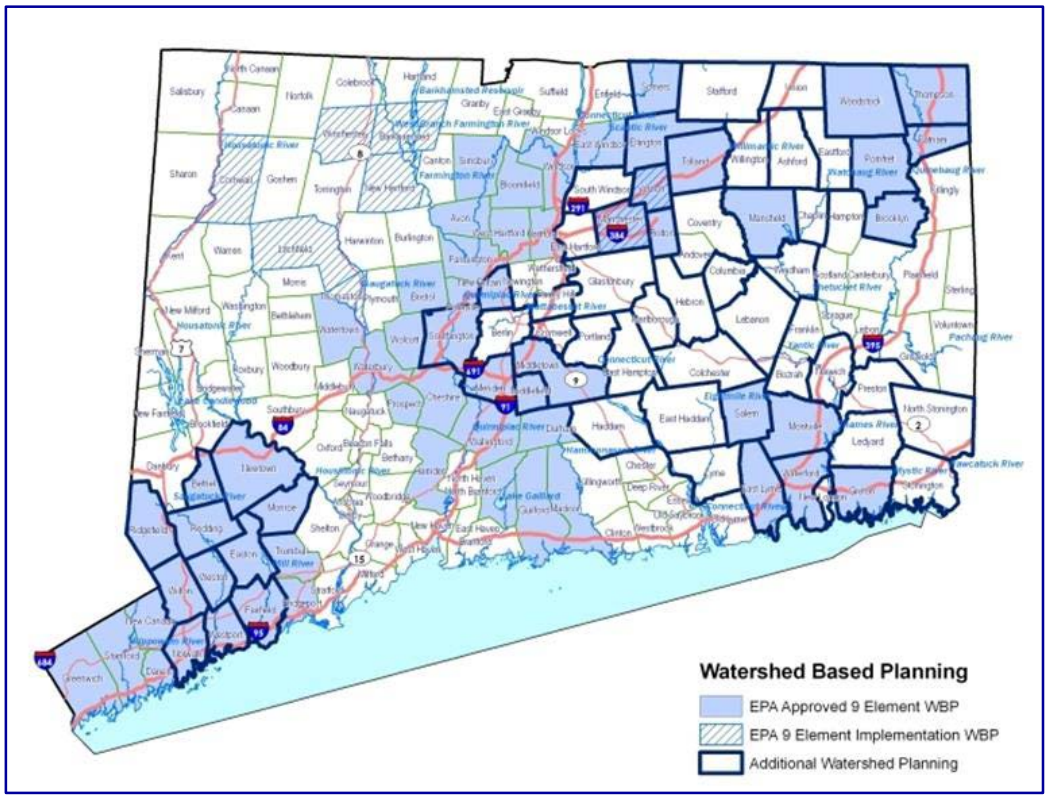


Figure E-16 - Connecticut's Watershed Based Planning

The Watershed based plans look at land use practices to minimize erosion and protect/improve water quality. Watershed based plans do not specifically address dredging. Any watershed based plan (or older watershed management plan before the nine elements) looks at holistic protection top to bottom of the watershed. Therefore, all of our plans look at reducing sediment loading to Long Island Sound.

Examples of Sediment-related Issues Addressed by Watershed Management Plans:

> Baker Cove, Groton: Plan focuses on bacteria loading in the watershed. Plan recommendations include street sweeping, catch basin clean-outs, storm water outfall retrofits with Low Impact Development (LID) and Green Infrastructure practices, and stream bank restoration.

Broad Brook, East Windsor, Ellington, Somers, and Tolland: Plan focuses on bacteria loading in the watershed. Recommendations include vacuum-assisted street sweeping, regular maintenance of catch basins, use of catch basin filters, establishment and restoration of vegetated buffers, and use of erosion and sediment controls at nursery operations.

Coginchaug River, Durham, Guilford, Madison, Meriden, Middlefield, Middletown, North Branford, and Wallingford: Plan focuses on bacteria loading in the watershed. Recommendations include vacuum-assisted street sweeping, regular maintenance of catch basins, use of catch basin filters, and the establishment and restoration of streamside vegetated buffers.

Eagleville Brook, Mansfield: Plan focuses on reducing the amount and impact of effective (connected) impervious cover, replacing it where possible with practices like porous pavement and green roofs, disconnecting it from the drainage network, and treating it where necessary. Recommendations include performing storm water retrofits where appropriate.

Little River, Pomfret, Putnam, Thompson, and Woodstock: Plan focuses on nutrients and bacteria. Recommendations include maintenance and restoration of natural vegetative wetland and watercourse buffers, use of LID practices for new developments to promote treatment and infiltration of storm water, minimization of street widths and installation of sidewalks on only one side of the road to reduce impervious area, use of vegetated swales and shared parking lots where appropriate, retrofitting of impervious to pervious surfaces, storm drain outlet mapping in accordance with MS4 general permit requirements should be completed, storm water outlet retrofits should be prioritized, and the frequency of street sweeping and catch basin maintenance should be increased.

Niantic River, East Lyme, Montville, Salem, and Waterford: Plan focuses on bacteria and nutrients. Recommendations include supporting the development of a municipal storm water partnership to assist in meeting MS4 requirements and implementing SWMPs. Other recommendations include incorporating LID practices for site development; eliminating curb requirements and mandatory sidewalks; reducing road widths and requiring pervious surfaces; encouraging nonstructural, non-piped storm water handling techniques wherever possible; incorporating effective vegetative buffers in site design; encouraging the restoration of vegetated buffers; and, to the extent feasible, adoption of a minimum 50 foot wide vegetated wetland and watercourse buffer within which no alteration or vegetative removal is permitted.

Norwalk River, New Canaan, Norwalk, Redding, Ridgefield, Weston, and Wilton (and Lewisboro, NY): Plan focuses on bacteria impairments and nutrients. The estimated load of TSS within the entire watershed is 13,973 pounds per year, and the following practices are estimated to reduce that total load by approximately 10 percent (1,346 pounds per year): LID Adaptation (2 pounds/year reduction), implement LID retrofits as source control mechanisms to reduce storm water discharge volumes and associated pollutant loads to the Norwalk River and its

tributaries; Riparian Buffers (85 pounds/year reduction), intact riparian buffers are recommended for 100% of river miles along low and high intensity development areas (over a period of 20 years with an interim target of 50% over 10 years); Large-scale BMPs for Urban Stormwater Management (88 pounds/year reduction), structural practices such as bio-retention, constructed wetlands, and wet ponds are recommended in targeted areas; Streambank Stabilization/Restoration (1,155 pounds/year reduction), stabilization to be adopted where there are specific stream segments with bank erosion and sedimentation problems; Transportation Corridors (16 pounds/year reduction), achieve 100% treatment of highway/roadway runoff with practices such as grass swales, wetponds, constructed wetlands, bio-retention cells, and buffer strips (over a period of 20 years, with an interim target of 50% over 10 years).

Rooster River, Bridgeport, Fairfield, and Trumbull: Plan focuses on bacteria. Recommendations include identification of several sites suitable for extensive low impact development and green infrastructure retrofits.

Connecticut's Watershed Based Plans:

Watershed Based Plans	Connecticut Towns	Date
Baker Cove	Groton	Approved 2011
Broad Brook	East Windsor, Ellington, Somers, Tolland	Approved 2010
Byram River	Greenwich	Approved 2011
Coginchaug River	Durham, Guilford, Madison, Meriden, Middlefield, Middletown, North Branford, Wallingford	Approved 2008
Eagleville Brook	Mansfield	Approved 2011
Five Mile River	Darien, New Canaan, Norwalk	Approved 2012
Flat Brook	Ledyard, Groton	Approved 2013
Little River -Muddy Brook - Roseland Lake	Woodstock, Thompson, Putnam, Pomfret	Approved 2009
Mashamoquet Brook	Pomfret, Brooklyn	Approved 2011
Mianus River	Greenwich, Stamford	Approved 2012
Mill Brook	Cornwall	Approved 2008
Mill / Rippowam River	Stamford	Draft 2012 - Final 2013
Morgan Brook	Barkhamsted, Winchester, New Hartford	Approved 2012
Niantic River	East Lyme, Montville, Salem, Waterford	Approved 2006

North Branch Park River	Avon, Bloomfield, Hartford, Simsbury, West Hartford, Windsor,	Approved 2010
Northfield Brook	Thomaston, Litchfield	Approved 2009
Norwalk River	Norwalk, New Canaan, Ridgefield, Redding, Weston, Wilton,	Approved 2011
Pequonnock River	Bridgeport, Monroe, Trumbull,	Approved 2011
Quinnipiac River	Bristol, Cheshire, Farmington, Hamden, Meriden, New Britain, Plainville, Prospect, Southington, Wallingford, Wolcott,	Draft 2012
Rooster River	Bridgeport, Fairfield, Trumbull	Final 2013
Sasco Brook - Westport	Easton, Fairfield, Westport	Approved 2011
Saugatuck-Aspetuck River	Bethel, Easton, Fairfield, Monroe, Newtown, Redding, Ridgefield, Weston, Westport, Wilton, Norwalk	Approved 2012
Spaulding Pond	Norwich	Approved 2010
Steele Brook	Watertown, Waterbury	Approved 2009
Tankerhoosen River	Bolton, Manchester, Tolland, Vernon,	Approved 2009

Additional Watershed Plans:

Watershed Management Plan	**Date**
Eight Mile River Watershed Management Plan	2005
Fenger Brook Watershed Management Study	1996
Groton Utilities Drinking Water Quality Management Plan and Ledyard Source Water Protection Plan	2008
Hockanum State of the Watershed Report	2005
Jordan Brook Watershed Management Plan	2000
Little River Source Water Protection Plan	2005
Mattabesset River Watershed Plan	2000
Natchaug River Basin Conservation Action Plan	2009
Norwalk River Action Plan	1998
Pawcatuck River Estuary and Little Narragansett Bay Interstate Management Plan	1991
Quinnipiac River Watershed Management Plan	2004

Salmon River Watershed Conservation Action Plan Salmon River Watershed Municipal Land Use Evaluation Project-Assessment Report (Phase 1 Implementation)	2007 2010
Saugatuck River Watershed Partnership Plan	2006
Stony Brook Watershed Management Study (Waterford)	2009

Implementation Watershed Based Plans:

Implementation Watershed Based Plan	**Date**
Coles Brook	2007
Hockanum River - Manchester	2009
Hockanum River - Vernon	2010
Hockanum River - sub-basin 4500-14-1_Manchester	2007
Little Brook	2007
Mattabesset River and Chestnut (reach 13&14)	2008
Miner Brook	2009
Morgan Brook	2010

D. Massachusetts

In response to the EPA guidelines, the MADEP retained a consultant to develop a statewide watershed-based plan organized according to the 27 major planning basins and sub-organized by 12-digit HUC code areas. The result was a web-based product that allows stakeholders and grant applicants to identify known and likely causes and sources of nonpoint source pollution in their watersheds. It also helps to prioritize the NPS problems, identify appropriate best management practices and watershed-based strategies for addressing the problems, and develop winning proposals to fund the work using 319 nonpoint source competitive grant funds or similar programs. The Massachusetts Watershed Based Plan is accessed at http://public.dep.state.ma.us/Watershed/Intro.aspx.[32] The Connecticut River basin in the Massachusetts Watershed Based Plan is part of the Long Island Sound watershed.

[32] Massachusetts Year 2012 Integrated List of Waters (PDF)

E. New Hampshire

Ammonoosuc River Geomorphic Assessment, Floodplain Conservation, and River Corridor Planning (PDF) (October 2011)

Fluvial Erosion Hazard (FEH) maps were created for each town along the Ammonoosuc River displaying the location and severity of erosion hazards in each of the 49 Phase 2 reaches assessed. The width of the FEH zones is generally considered to be 6 to 8 times the channel width depending on the reach sensitivity. The FEH zones are often wider upstream of valley constrictions where historical or geomorphic evidence indicates the channel has migrated beyond the standard 6 to 8 times the channel width designation. This is particularly true just upstream of the Woodsville Dam where the short alluvial valley is impacted by both a valley expansion upstream and valley constriction downstream, creating large, currently abandoned, meanders with an amplitude several times the channel width.

The Phase 2 assessment data on erosion, bank composition, riparian corridor condition, physical habitat, channel dimensions, and other features were used to develop a River Corridor Planning Guide. The Planning Guide not only identifies individual restoration projects in each reach that address flooding, erosion, and habitat concerns, but describes how multiple projects can work in concert to reduce hazards and improve habitat beyond the immediate areas restored. A high priority site for restoration was identified in the Salmon Hole area of Lisbon. A Phase 3 Assessment involving detailed topographic surveying of the site resulted in project designs incorporating log and boulder structures in the channel to improve habitat and encourage meander formation along the artificially straightened channel downstream of Salmon Hole. Conservation lands established in the riparian area adjacent to the channel will allow the meander development to occur without impacting agricultural lands or infrastructure. The growth of meanders will, in turn, reduce sediment transport and alleviate sediment build up and bank erosion downstream at the soccer field in Lisbon.

Alleviating erosion and flooding problems at the numerous valley constrictions where these problems are most pronounced will require controlling sediment supply transported through artificially straightened and derived from the upper watershed. Large accumulations of gravels at the mouths of tributaries (e.g., Zealand River) indicate sediment supply from the upper watershed remains high despite years of reforestation. While an assessment of the tributaries was not completed for this study, such an assessment is recommended in order to identify strategies for encouraging sediment storage in the tributary sub-watersheds. Controlling the sediment inputs from tributaries will be essential for limiting the sediment supply to the Ammonoosuc River and for alleviating the flooding, erosion, and habitat degradation linked to excess sediment deposition.

Beaver Brook Restoration Plan: Stream Morphology, Wildlife Habitat, and Land Use Assessment (PDF) (May 2009)

The purpose of this project was to assess Beaver Brook's current state in order to develop recommendations for restoration. The main goal was to develop a plan to improve habitat for cold water fish species and other wildlife that use the brook, as well as to return the brook for riparian zone to a more natural state to the greatest degree feasible. As such, the primary objectives set forth were to:

- Assess the stream morphology and channel stability;
- Assess the wildlife habitat using volunteer data;
- Assess the adjacent land use;
- Prepare recommendations for restoration and conceptual designs; and
- Prepare cost estimates, where applicable.

Bog Brook Restoration Project (PDF) (February 2005)

The project addressed an area of severe bank erosion which threatened an existing barn and septic tank was a significant sediment source to the brook and the Connecticut River, to which it flows approximately 1½ miles downstream. Based on a comparison of the 2003 channel location to that on a 1999 aerial photo, the channel had eroded laterally up to 35 feet and consumed approximately 4,000 square feet of land. Using a mean channel depth of 2.5 feet over that area, approximately 370 cubic yards, or about 480 tons, of sediment has been introduced into the stream as a result of bank erosion over that four year span. That was on average 120 tons, or about 9 ten-wheeler dump truck loads, per year.

It appears the instability resulted from the removal of woody riparian shrubs from the stream banks. This likely occurred decades earlier as a means of increasing arable land. The absence of deep-rooted shrubs made the banks vulnerable to erosion, especially the outside bank of the meander bend upstream of the barn. As this bank eroded, the meander bend became sharper, placing even greater stress on the bank and accelerating the on-going erosion. Had this process been allowed to continue, it appeared likely that the brook would have eventually cut a new channel across the field immediately south of the barn (channel avulsion). Several thousand tons of additional sediment would have been transported to downstream reaches and the Connecticut River if this had happened.

The goals of the project were to:

- Restore a stable, self-maintaining channel without the use of traditional bank-armoring techniques such as rip-rap;
- Reduce erosion and sediment supply to downstream reaches and the Connecticut River;
- Improve water quality by reducing the volume of fine-grained sediment and associated nutrients introduced to the stream;
- Protect the barn and septic tank;

- Improve aquatic habitat by restoring riparian vegetation for shade and food production; and
- Prevent a future channel avulsion.

Restoration Master Plan for the Cold Creek River, Warren Brook, and Bowers Brook (March 2007)

Lower Mohawk River Stream Restoration Planning in Colebrook, NH: Final Report (PDF) (December 2007)

The feasibility of restoring natural flow patterns to the lower Mohawk River alluvial fan without increasing flood risks to the Town of Colebrook, NH were investigated through hydraulic modeling and sediment transport calculations. An earlier fluvial geomorphic assessment of the Mohawk River demonstrated that channel straightening on the lower Mohawk River in the 1960's increased sediment delivery to the Connecticut River. Consequent with this increased sediment loading, large gravel bars formed downstream of the Mohawk River confluence, which have diverted flow into the banks at the Colebrook Business Park, causing severe erosion. Restoring flow to the channels abandoned during straightening of the Mohawk River could improve aquatic habitat while alleviating the erosion problems at the Business Park by reducing sediment delivery to the Connecticut River.

Fluvial Geomorphology Assessment of Northern Connecticut River Tributaries (PDF) (March 2006)

A fluvial geomorphic assessment of the Mohawk and Upper Ammonoosuc Rivers, tributaries to the Connecticut River in New Hampshire, has identified the major natural and human factors controlling sediment delivery to the Connecticut River mainstem where bank erosion threatens the Colebrook Business Park (adjacent to the Mohawk River) and Northumberland Cemetery (adjacent to the Upper Ammonoosuc). The Mohawk River is constrained by bedrock and glacial outwash terraces along much of its length, but several human factors have increased the river's sediment transport capacity above natural levels. Rock riprap is found along 13 percent of the river's banks, particularly through Colebrook, NH where the river is confined between concrete walls. In addition, over 50 percent of the channel's length has been artificially straightened with the lowest 0.5 miles straightened in the 1960's. The excess sediment transported to the mainstem as a result of these natural and artificial constraints has led to the deposition of large gravel bars at and downstream of the Mohawk River confluence; flow deflection around the bars is, in turn, causing severe bank erosion at the Colebrook Business Park. While the straightened channel segments remain relatively unchanged during low to moderate discharges, a dam break flood in 1929 resulted in multiple "break outs" where debris blocked the main channel and flow escaped over the banks with sufficient force to scour new meander bends into the floodplain surface.

Understanding how the channel responds to large flow events has helped prioritize restoration sites that will reduce sediment delivery to the mainstem, improve aquatic habitat, and restore natural flow conditions. The best opportunity for restoration is on the

alluvial fan at the mouth of the Mohawk River where the Town of Colebrook owns land that can be used to return flow to its originally meandering channel. Future studies will determine how much sediment can be stored on the alluvial fan surface before entering the Connecticut River mainstem and what habitat benefits will result from recreating channel sinuosity, returning flow to abandoned side channels, and increasing flow complexity.

Bank Stabilization Implementation and Assessment of the Connecticut River Near Colebrook and Groveton, New Hampshire (PDF) (January 2006)

Continuing efforts to address bank erosion problems along the Connecticut River have led to the permitting of a bioengineering project at the Colebrook Business Park, a detailed assessment of bank instability at the Northumberland Cemetery, and production of erosion hazard maps for each town along the northern Connecticut River. The permitted bioengineering project, to be constructed in Spring 2006, will utilize root wads to protect the bank while trapping additional debris to improve near bank cover habitat. To assist towns in applying this and other erosion control techniques at other sites throughout the watershed, erosion hazard maps showing the cause and location of erosion have been produced with a brochure describing the major causes for erosion and preferred methods of stabilization.

Bank instability at the Northumberland Cemetery is related to several factors including: 1) the breaching of the Old Wyoming Dam 3.0 miles downstream of the cemetery; 2) the breaching of Nash Stream Bog Dam in the Upper Ammonoosuc watershed; and 3) the resulting sand bar development on the Connecticut River at the confluence with the Upper Ammonoosuc River. The banks at the cemetery are naturally susceptible to erosion given the presence of seeps at the base of the bank where an impermeable silt layer underlies permeable sand. With the river still responding to the breaching of the dam downstream and still susceptible to sediment impulses from the Upper Ammonoosuc, erosive pressures at the cemetery will likely continue as elsewhere in the 3.3 mile reach between the Upper Ammonoosuc confluence and the Old Wyoming Dam. After considering a number of restoration options at the cemetery, the construction of an engineered log jam at the base of the cemetery bank was chosen as the most likely option to buttress the bank from further failure, improve physical habitat, and restore natural processes to an area impacted by human land use for over 200 years. To move project implementation forward, an engineering design for securing the logs to the bank will need to be completed.

F. Vermont

Draft Passumpsic and Upper Connecticut River Tactical Basin Plan (PDF) (March 2014)

The Draft Passumpsic and Upper Connecticut River Tactical Basin Plan provides an overall view of the health of the basin and objectives and actions to protect high quality waters and address high-priority stressors which are described on a statewide basis in the Surface Water Management Strategy. The Passumpsic and upper Connecticut River basin has some of the least developed watersheds and excellent water quality in the state

along with some of the state's largest potential floodplain restoration opportunities. However, there are waters with elevated levels of pathogens, flood and erosion hazard risks, sediment and nutrients and the basin is a source of nitrogen pollution to the Long Island Sound among other issues. Below are some examples of the actions related to sediment in the Basin Plan:

- Implement an intensive water quality monitoring program to evaluate phosphorus, nitrogen, sediment and E.coli sources in the Basin. Use sampling results to identify pollution sources in the basin and work with basin partners to address these;
- Complete storm water separation project for the St. Johnsbury WWTP to end Combined Sewer Overflows; and
- Complete a storm water master plan in the Dish Mill Brook Watershed working with the key partners to identify storm water and sediment source areas, treatment options, and required maintenance schedule for proposed as well as existing infrastructure.

The public comment period for this Draft Plan ended May 8, 2014.

White River Tactical Basin Plan (PDF) (July 2013)

The White River Tactical Basin Plan provides an overall view of the health of the basin and defines on-going and future actions to address high-priority stressors. The high priority stressors in the White River Basin include encroachment, channel erosion, nuisance and invasive species spread prevention, land erosion, pathogens, thermal stress, acidity, and flow alteration. The White River is significant for being one of the last free-flowing rivers in Vermont. It is the longest undammed tributary to the Connecticut River at approximately 56 miles. Some of the top priority actions in the Plan include the following:

- Determine sources of E. coli and nutrient loads, especially in the branches, and implement high priority agricultural BMP needs identified through Agricultural Environmental Management assessments;
- Reduce non-point source pollution from gravel roads by preparing road erosion capital budgets and implementing BMPs in the upper watersheds that address significant sediment sources; and
- Identify and remove high priority flood plain encroachments and implement flood plain restoration projects that connect the active river channel to its flood plain.

Basin 14 "Little Rivers" Water Quality Management Plan Covering the Stevens, Wells, Waits, and Ompompanoosuc River Watersheds (PDF) (June 2008)

Basin 14 includes the watersheds of the Stevens, Wells, Waits and Ompompanoosuc rivers. Differences among these four watersheds and recommendations from local residents led to the formation of separate watershed councils and the identification of many issues and strategies for each of the four individual watersheds in the basin. Waters in this basin support many uses including swimming, boating and fishing in the basin's many rivers, streams, lakes and ponds. Threats to these uses across all four watersheds include stream channel instability, sedimentation and nutrient enrichment.

This water quality management plan includes strategies developed for Basin 14 as a whole and for each watershed individually. These strategies address nonpoint source (NPS) pollution, river corridor management issues, transportation- related water quality impacts, lake and dam issues, and a lack of water quality awareness. Strategies were developed for reducing NPS pollution from developed, agricultural and forested lands. River corridor management strategies were developed for each watershed to protect stable reaches and river corridors, increase the participation of local residents in river corridor protection, and complete restoration projects identified through watershed assessments. Strategies to address water quality impacts from transportation infrastructure include reducing conflicts between streams and culverts, and minimizing stormwater and sediment runoff from roads. Lake and dam related strategies were developed to address exotic invasive species, acid precipitation and elevated mercury levels, threats to wetlands, impacts from dams on aquatic habitat, and the effects of shoreline development. Chapters covering the Stevens, Wells and Waits river watersheds include strategies for improving water quality awareness through increased volunteer water quality monitoring and assessment, and by promoting water quality education and outreach.

Basin 10 Water Quality Management Plan: Ottauquechee River & Black River (PDF) (May 2012)

Basin 10 consists of two major watersheds in southeastern Vermont – the Ottauquechee River watershed and the Black River watershed. Both rivers flow from the spine of the Green Mountains down into the Connecticut River. The Basin is currently 93.8% undeveloped land.

Far beyond any other recommendation made during the planning process, none was more strongly emphasized than the need for riparian buffers. It is clearly understood by watershed council members that the lack of buffers is a major cause of water quality and habitat problems in the Basin, and that the simplest, most efficient and most cost effective way to improve and protect surface water quality is to implement coordinated buffer improvements throughout the Basin. The Plan Implementation Table identifies areas where restoration of buffers is in keeping with geomorphic assessments and known adjustment processes.

Of the nine waters known to be in need of further assessment, seven have sediment as the suspected pollutant. Silt and sediment are by far the most visible causes of water quality problems noted in the Basin and impact over thirty miles of river and 132 lake acres.

The completed Black River Corridor Plan identifies locations in Ludlow, Cavendish and Weathersfield where opportunities for river corridor protection exist that, if protected from further development or channelization, can provide room for river channel movement to occur and floodwaters to access floodplains. If protected, these pockets of open space can act as natural pressure relief values for a raging river shielding downstream areas from erosion damage.

Basin 11 Management Plan: West River, Williams River, Saxtons River (PDF) (June 2008)

The greatest concerns in Basin 11 are 1) thermal modification or a change in temperature from the natural condition of the stream; 2) sedimentation; 3) habitat alteration; 4) flow alterations; and 5) pollutants and invasive species are addressed in this plan.

Sedimentation has been identified as the second greatest cause of impacts to the rivers and streams of Basin 11. It is also the largest threat to aquatic habitat, biota, and other uses of these waters. Deposited sediments can smother aquatic insect communities, destroy fish spawning and habitat areas, deplete dissolved oxygen, increase streambank erosion, and diminish recreational and aesthetic uses of waterways. Sedimentation is also associated with nutrient enrichment as nutrients commonly bind to soil particles and result in nutrient loading as soil erosion takes place. The sources of much of the sedimentation and subsequent nutrient enrichment can be traced back to specific land use practices such as gravel back roads, eroding streambanks, construction sites, and runoff from urban and agricultural areas. Recommendations for addressing sedimentation include:

- reducing gravel road erosion;
- replacing the Ball Mountain dam gates to enable "run of river" flows;
- reducing sediment that enters surface waters from urban and residential areas;
- implementing streambank restoration and preservation projects; and
- investigating, educating on and promoting low impact development solutions.

Tactical Basin Plan: Deerfield River and Southern Connecticut River Tributaries of Vermont (Basin 12/13) (PDF) (March 2014)

Tropical Storm Irene occurred in 2011 and hit this region with astonishing intensity. The towns of Wilmington and Brattleboro had their downtowns flooded, businesses and homes destroyed and infrastructure overwhelmed. No town was spared but Dover, Whitingham, Halifax and Guilford also received heavy damage. The flooding and erosive damage will remain visible for decades but the rivers' response has been to re-create lost floodplains, increase sinuosity and re-distribute sediment throughout the valleys. The new river channels and patterns, if allowed to remain, will offer some mitigation of future flood events.

Some of the recommended actions from this Plan are:

- Incorporate Fluvial Erosion Hazard corridors and flood resiliency strategies into regional development plans and municipal zoning;
- Reduce sediment impacts to Crosby Brook; and
- Address agricultural runoff pollution along Newton Brook and the Connecticut River in Vernon.

VIII. HARBOR MANAGEMENT PLANS

A. Background

The Coastal Zone Management Act (CZMA) encourages states/tribes to preserve, protect, develop, and where possible, restore or enhance valuable natural coastal resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats. It includes areas bordering the Atlantic, Pacific, and Arctic Oceans, Gulf of Mexico, Long Island Sound, and Great Lakes. A unique feature of this law is that participation by states/tribes is voluntary. To encourage states/tribes to participate, the act makes federal financial assistance available to any coastal state, tribe, or territory, including those on the Great Lakes, that is willing to develop and implement a comprehensive coastal management program. Most eligible states/tribes are, or will be, participating in the program.

In its reauthorization of the CZMA in 1990, Congress identified nonpoint source pollution as a major factor in the continuing degradation of coastal waters. Congress also recognized that effective solutions to nonpoint source pollution could be implemented at the state/tribe and local levels. Therefore, in the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), Congress added Section 6217, which calls upon states/tribes with federally approved coastal zone management programs to develop and implement coastal nonpoint pollution control programs. The Section 6217 program is administered at the federal level jointly by EPA and NOAA.[33]

Within a state's Coastal Zone Management program, towns may be encouraged to develop a harbor management plan in order to receive financial assistance for their programs. Each state draws up their own requirements for the harbor management plans, so each state may be different.

B. New York

The Oyster Bay/Cold Spring Harbor Complex Management Plan (2002)

Features of the Oyster Bay/Cold Spring Harbor Complex Management Plan included:

- Stormwater runoff addressed through the six MCMs and implementation of the MS4 program;
- The Stormwater Permit and subsequent management is required on construction sites smaller than required under the State Construction Permit;
- Construction on steep slopes (25% or greater) not allowed;
- Promoted the protection and restoration of riparian and wetland buffers, citing that these areas "filter out pollutants, capture sediment, regulate stream water temperature, and process many contaminants through vegetative uptake;"
  - the implementation of priority buffer restoration projects;
  - Adoption of riparian buffer regulations; and
  - Providing outreach about the value and importance of riparian buffers

[33] EPA – Coast Zone Management Act (CZMA)

- Listed the protection of tidal wetlands as important, as they filter sediments and other pollutants; and
- Cited shoreline hardening structures as worsening erosion (and, therefore, sedimentation elsewhere in the system) and recommended that alternatives be used.

Hempstead Harbor Water Quality Improvement Plan (1998)

Features of the Hempstead Harbor Water Quality Improvement Plan included:

- Sediment listed as a contaminant of concern;
- Descriptions were given of watershed soil types and Coastal Erosion Hazard Areas;
- Soil erosion control regulations/ordinances were recommended as a storm water quality management;
- A section on "Minimizing Site Disturbance and Utilizing Alternative Landscaping." This section recommended:
  - Site disturbance protocols;
  - Use of natural vegetation; and
  - Promoting natural ground cover (not exclusively grass) to homeowners
- Recommendations for sediment catch basins; and
- Recommendation to dredge the lower harbor.

Mt. Sinai Harbor Management Plan (2006)

The Mt. Sinai Harbor Management Plan did not discuss reducing sedimentation, but did mention the in-filling of the safe navigation channel by sediment. The Plan mentions keeping the channel open by dredging less, but does not propose a means to accomplish this. However, the Plan does include descriptions of:

- Port Jefferson legislation on sedimentation, specifically relating to trees, grading and land clearing;
- The local natural topography and areas that should have limited to no construction to prevent erosion (including the Critical Erosion Hazard Area);
- Nonpoint source pollution sources;
- Sheet flow from shore roads;
- Tree topping;
- Prioritization of open space acquisitions;
- Drainage improvements; and
- Educating the public on water quality impacts of common activities

The Plan also makes the following recommendations:

- The protection of wetlands through the reduction of wave action and erosion of substrate caused by motor boating and jet ski activities;
- Enforcement of the regulations relating to the clear cutting of wooded areas;
- Requiring "curb out" permits and other nonpoint source mitigation BMPs;
- The protection of shallow area from motor boat scour;
- The minimization of grading; and
- The promotion of environmental stewardship by property owners.

Port Jefferson Harbor Complex Management Plan (1998 Discussion Draft)

While the dredging and navigation sections of the Port Jefferson Harbor Complex Management Plan did not cover sedimentation, it did make the following recommendations:

- The mitigation of nonpoint source contaminant loadings in storm water runoff through the implementation of a watershed-wide sediment erosion control program;
- Reduction of nonpoint source pollutants through timely, routine maintenance of drainage appurtenances; and
- The preparation and implementation of a SWMP specifically for Setauket Mill Pond.

C. Connecticut

Since the passage of the Connecticut Harbor Management Act in 1984, several coastal towns have prepared harbor management plans to provide for the preservation and use of the coastal resources of their harbors (Figure E-17). As of August 2013, there are 21 state-approved and municipally adopted harbor management plans in Connecticut (two of which address dock standards only), and one plan that is state-approved and pending municipal adoption. Six additional plans are in the planning stages:

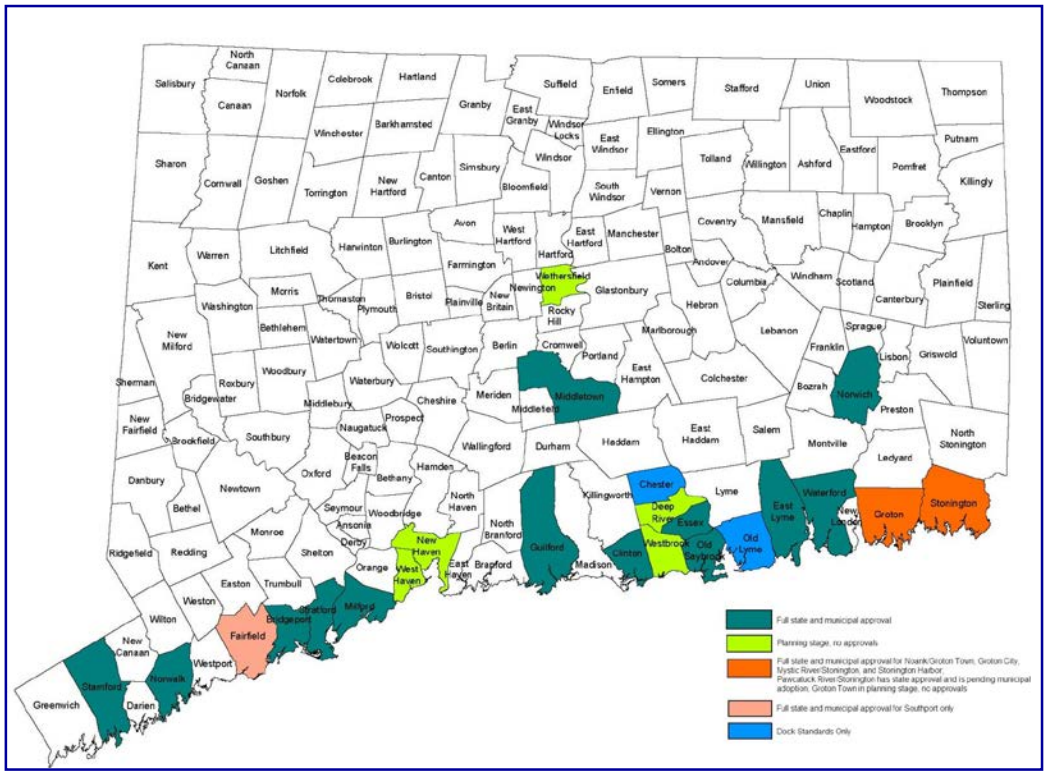


Figure E-17 - Connecticut Harbor Management Plans

CGS Section 22a-113n sets forth the required content for harbor management plans in Connecticut. Plans must identify existing and potential harbor problems, establish goals, and make recommendations for the use, development, and preservation of the harbor.

Accordingly, harbor management plans are primarily focused on the orderly, safe, and efficient allocation of the harbor for boating (and establish the location and distribution of seasonal moorings and anchorages; unobstructed access to and around federal navigation channels, anchorage areas and harbor facilities; and space for moorings and anchorages for transient vessels).

However, in preparing a plan, a Harbor Management Commission must consider several factors in addition to the allocation of mooring areas. These factors include conservation of natural resources, water quality and public health, and tidal wetlands, beaches and dunes, bluffs and escarpments, and intertidal flats. Therefore, water quality and resource impacts from sedimentation can be addressed in the context of harbor management plans. For example, many harbor management plans establish "No Wake" zones to ensure that shorelines and sensitive resources are not eroded by waves generated by boats underway.

Several of Connecticut's 21 state-approved and locally adopted harbor management plans identify sediment from erosion and storm water runoff as a harbor management issue:

- The City of Bridgeport Harbor Management Plan (PDF) identifies several harbor conditions that warrant action including incomplete control of nonpoint source pollution, insufficient stormwater management practices, and the need for installation of additional, and maintenance of existing, sediment traps and catch basins. The plan recommends the City conduct an outfall study in accordance with its general permit requirements.
- The City of Groton's Harbor Management Plan (PDF) identifies nonpoint source pollution as an area of concern and states that the City is an MS4 municipality.
- The Guilford Harbor Management Plan (PDF) states that the wave action at the mouth of the West River and boat wakes on the East River cause erosion of coastal tidal marsh that results in sedimentation of the rivers to the point of restricting navigation. The plan states that sedimentation has required Brown's Boatyard to dredge 2,000 to 3,000 cubic yards of material every few years in order to maintain adequate depth in the berthing areas.
- The Milford Harbor Management Plan (PDF) contains a section titled "Sedimentation/Shoaling." This section identifies the major source of sediment loading in Milford Harbor as upstream and surface runoff discharges to the harbor as well as tidal flow from Long Island Sound which carries with it some sediment material. The plan also identifies a series of upstream ponds which act as "sediment traps" that are in need of clearing and digging out. The plan recommends the minimization of sedimentation when possible.
- The Norwalk Harbor Management Plan recommends that all appropriate efforts to avoid or reduce siltation and resulting need for dredging in Norwalk Harbor should be encouraged and supported. Those efforts should include regular maintenance of storm drainage catch basins, construction of additional catch basins as necessary, control of runoff from construction sites, avoidance of disposal of leaves, branches or other debris in the harbor, Norwalk River and Norwalk River tributaries, and reduction or elimination of all other human activities that introduce sediment into the harbor. Efforts to avoid or reduce runoff of sand and other materials into the harbor from roadways and bridges throughout the Norwalk River watershed should be encouraged and supported.

- A basic goal of the Waterfront Vision for the City of Norwich document is attaining the highest water quality possible through substantial reduction of nonpoint source pollution. The document supports effective watershed-based planning and personal actions by City residents to help avoid or reduce runoff pollution; BMPs for storm water management will be designed and implemented to reduce pollution generated by storm water runoff from all land surfaces, recognizing the distinct risk of runoff pollution from impervious surfaces.
- The Stamford Harbor Management Plan (PDF) also identifies the cumulative impacts of point and nonpoint sources of pollution as a harbor management issue and states that it is necessary to continue to advance the City's understanding of pollution sources and possible pollution abatement measures (Stamford is covered by the Phase I storm water general permit).
- The Stonington Harbor Management Plan (PDF) identifies storm sewer runoff as an issue for concern and states that the Harbor Management Commission actively collaborates with several local nonprofit and municipal entities to help reduce water pollution in Stonington Harbor and restore habitat.

IX. LOW IMPACT DEVELOPMENT (LID) EXAMPLES

A. Background

LID is an approach to land development (or re-development) that works with nature to manage storm water as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat storm water as a resource rather than a waste product. There are many practices that have been used to adhere to these principles such as bio-retention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed. Applied on a broad scale, LID can maintain or restore a watershed's hydrologic and ecological functions.[34] New York and Connecticut have each provided one recent example of LID in their respective states.

B. New York

New York is a home rule state, as such, each municipality has the authority to adopt building codes, as long as they are in compliance with the building codes of New York State, which do not currently address LID.

In 2008, the Bronx River Watershed Initiative (administered by National Fish and Wildlife Foundation) funded a storm water retrofit project at the New York Botanical Gardens on the banks of the Bronx River, which incorporated multiple Green Infrastructure and LID practices. Now complete, this system detains and treats an estimated 3 million gallons of storm water per year.

[34] EPA – Low Impact Development (LID)

This project was comprehensively designed to treat several site conditions that were identified as directly impacting river water quality, like the large amounts of impermeable surfaces in the area causing erosion and increased first flush volumes.

As part of the project, they installed Hydrodynamic Separators that catch sediment (among other things), but they've found that the cascade step pools are able to capture fine sediments that the Hydrodynamic Separators cannot. In the future, the Garden has learned that such projects should also include geosynthetic reinforcement of planted slopes to protect against erosion. In addition, there should be easier access to cascade step pools to allow for sediment removal.

C. Connecticut

On October 1, 2008, CTDEEP announced a Request for Proposals inviting Farmington River Watershed towns to apply for funds to conduct a Municipal Land Use Evaluation. Funds came from penalties generated by an enforcement order, as a supplemental environmental project. $50,000 was the recommended upper funding limit.

Aid to municipalities has allowed each town to identify potential revisions to current land use regulations and ordinances, to better encourage incorporation LID techniques in future development. Towns employed planning and engineering firms to assist with their technical and legal reviews and formed Local Land Use Committees to oversee their Evaluations. The Committees ensured thorough review of all changes to regulations and ordinances proposed to eliminate barriers and encourage the use of LID techniques in future development projects.

Each municipality's approach to revising regulations was unique. The results will better allow concurrent development and protection of water quality, and other natural resources, while providing incentives for land preservation in the Farmington River Watershed.

The diverse lessons learned from this pilot project should assist other communities in Connecticut, as they perform their own Municipal Land Use Evaluations, and consider modifying regulations and ordinances to improve the quality of life in their communities.

X. BENEFICIAL USE OF DREDGED MATERIAL

Much of the sediment dredged from ports, harbors and waterways is disposed of in open water, confined disposal facilities, upland disposal facilities, and beach nourishment or nearshore disposal. Other beneficial uses for dredged material include habitat restoration and creation, additional beach nourishment, and applied uses resulting from biotechnology. These uses require amendment of the dredged material but include the following applications: aquaculture, agriculture, mine reclamation, and industrial and commercial development. There are several hurdles to planning and using dredged material beneficially. The primary issue in the Long Island Sound region is that the harbors consist of predominantly silt and clay material that is too fine to be used as beach nourishment. Additional hurdles include increased costs and the need

for earlier planning and more widespread coordination.[35] Currently, upcoming dredging projects in the Long Island Sound region are reviewed at both the Long Island Sound Regional Dredging Team and New England Regional Dredging Team meetings and potential beneficial uses are discussed.

XI. SOURCE REDUCTION IN DREDGING PERMITS

A. Background

Some states require additional review of dredging applications for sediment source reduction. In addition, increased storm events due to climate change may increase shoaling and movement of sediment resulting in possible safety issues and the need for dredging.

B. New York

New York dredging permits do not address source reduction, but do address the contamination of sediments during dredging operations as much as possible. New York reviews dredging permits from Connecticut and exercises their role through the Coastal Zone Management Act.

C. Connecticut

CGS Section 22a-98 requires the Commissioner of CTDEEP to coordinate the activities of all regulatory programs under his jurisdiction with permitting authority in the coastal area to ensure that permits issued by those programs are consistent with the goals and policies contained in the CCMA. Therefore, all permits issued pursuant to the Tidal Wetlands and the Structures, Dredging, and Fill coastal regulatory programs must ensure that adverse impacts to coastal resources are avoided or minimized.

If an application for a coastal permit (including a dredging permit) includes an activity that has the potential to degrade water quality through the significant introduction into either coastal waters or groundwater supplies of suspended solids, nutrients, toxics, heavy metals, or pathogens, or through the significant alteration of temperature, pH, dissolved oxygen, or salinity, then coastal permit analysts must ensure that appropriate BMPs are incorporated into the project to protect against potential adverse impacts to water quality. Accordingly, CTDEEP coastal permits can require upland storm water retrofits for sediment reduction, if appropriate.

Further, a guideline of the Office of Long Island Sound Policy (OLISP) is to require applicants to identify sediment sources for those maintenance dredging projects that are proposed on a frequent basis. Also, maintenance dredging permits contain conditions requiring all sediment source reductions that are within the applicant's control. Applicants are encouraged to coordinate with municipal public works agencies if necessary to address sediment source reduction. The implementation of MS4 permits will also help in this regard.

[35] EPA – The Role of the Federal Standard in the Beneficial Use of Dredged Material (PDF), EPA – Beneficial Use of Dredged Material

XII. ROAD SAND

A. Background

Salts, gravel, sand, and other materials are applied to highways and roads to reduce the amount of ice during winter storm events. Salts lower the melting point of ice, allowing roadways to stay free of ice buildup during cold winters. Sand and gravel increase traction on the road, making it safer to travel.[36] Both salt and sand/gravel have the potential to enter the watershed through runoff from the roadway and improper storage. Some states have enacted policies to prevent road sand/gravel from entering the watershed and becoming a potential source of sediment.

B. New York

MCM 6 of the MS4 General Permit indicates that at minimum, good housekeeping must address operations that contribute or potentially contribute to POCs. This includes winter road maintenance, right of way maintenance, and street sweeping. More information can be found at the New York State Department of Transportation Snow and Ice Control website.

C. Connecticut

Connecticut Department of Transportation (CTDOT) switched from road sand to chlorides/salts in the winter of 2005/2006. The average amount of sand went from 200,000 cubic yards to 2,000 cubic yards per year. Some sand is still used for some ramps and extremely steep slopes.

[36] EPA – Stormwater Menu of BMPs – Road Salt Application and Storage

List of Acronyms

BID	Business improvement district
BMP	Best management practice
BWSO	New York Bureau of Water and Sewer Operations
CCMA	Connecticut Coastal Management Act
CGP	Construction General Permit
CGS	Connecticut General Statutes
CNP	Connecticut Coastal Nonpoint Source Pollution Control Program
CSO	Combined sewer overflows
CSS	Combined sewer systems
CTDEEP	Connecticut Department of Energy and Environmental Protection
CTDOT	Connecticut Department of Transportation
CWA	Clean Water Act
CZARA	Coastal Zone Act Reauthorization Amendments of 1990
CZMA	Coastal Zone Management Act
DMMP	Dredged Material Management Plan
EPA	Environmental Protection Agency
LID	Low Impact Development
LTCP	Long Term Control Plan
MADEP	Massachusetts Department of Environmental Protection
MCM	Minimum control measure
MS4	Municipal separate storm sewer
MSGP	Multi-Sector General Permit
NPDES	National Pollutant Discharge Elimination System
NOAA	National Oceanographic and Atmospheric Administration
NOV	Notice of Violation
NURP	Nationwide Urban Runoff Program
NYC	New York City
NYCDEP	New York City Department of Environmental Protection
NYDEC	New York Department of Environmental Conservation
NYDOS	New York Department of State
NYSCNPCP	New York State Coastal Nonpoint Pollution Control Program
OLISP	Office of Long Island Sound Programs
OSHA	Occupational Safety and Health Administration
OSWT	On-Site Wastewater Treatment
POC	Pollutant of Concern
POTW	Publically owned treatment works
SPDES	State Pollutant Discharge Elimination Systems
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
TSS	Total suspended solids
USACE	United States Army Corps of Engineers
WPCP	Water pollution control plant
WWTP	Wastewater treatment plant

This Page Intentionally Left Blank

LONG ISLAND SOUND

FINAL
DREDGED MATERIAL MANAGEMENT PLAN AND FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

APPENDIX F

U.S. EPA 3 JUNE 2005 FINAL RULE DESIGNATION OF CLDS AND WLDS

in accordance with § 3001.193(e) over the duration of the agreement utilizing the methodology employed by the Commission in its recommendation of the existing agreement; and

(6) If applicable, the identification of circumstances unique to the request.

(b) When the Postal Service submits a request to modify a negotiated service agreement, it shall provide written notice of its request, either by hand delivery or by First-Class Mail, to all participants in the Commission docket established to consider the original agreement.

(c) The Commission will schedule a prehearing conference for each request. Participants shall be prepared to address at that time whether or not it is appropriate to proceed under § 3001.198, and whether or not any material issues of fact exist that require discovery or evidentiary hearings. After consideration of the material presented in support of the request, and the argument presented by the participants, if any, the Commission shall promptly issue a decision on whether or not to proceed under § 3001.198. If the Commission's decision is to not proceed under § 3001.198, the docket will proceed under § 3001.195 or § 3001.196, as appears appropriate.

(d) The Commission will treat requests to modify negotiated service agreements as subject to accelerated review consistent with procedural fairness. If the Commission determines that it is appropriate to proceed under § 3001.198, a schedule will be established which allows a recommended decision to be issued not more than:

(1) Forty-five (45) days after the determination is made to proceed under § 3001.198, if no hearing is held; or

(2) Ninety (90) days after the determination is made to proceed under § 3001.198, if a hearing is scheduled.

[FR Doc. 05–10913 Filed 6–2–05; 8:45 am]

BILLING CODE 7710–FW–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 228

[FRL–7919–9]

Ocean Disposal; Designation of Dredged Material Disposal Sites in Central and Western Long Island Sound, CT

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: With the publication of this final rule, EPA is designating two open-water dredged material disposal sites, Central Long Island Sound (CLIS) and Western Long Island Sound (WLIS), for the disposal of dredged material from harbors and navigation channels in the Long Island Sound vicinity in the states of Connecticut and New York. This action is necessary to provide long-term, open-water, dredged material disposal sites as an alternative for the possible future disposal of such material. The basis for this action is described in a Final Environmental Impact Statement (FEIS) published by EPA in March 2004. The FEIS identifies designation of the CLIS and WLIS dredged material disposal sites as the preferred alternatives from the range of options considered. On September 12, 2003, EPA published in the **Federal Register** a proposed rule and a notice of availability of a Draft EIS (DEIS) for this action. These disposal site designations are subject to various restrictions designed to support the goal of terminating or reducing the disposal of dredged material into Long Island Sound, as explained below in subsection E. 3 of the Supplementary Information section.

EPA has conducted the disposal site designation process consistent with the requirements of the Marine Protection, Research, and Sanctuaries Act (MPRSA), the Clean Water Act (CWA), the National Environmental Policy Act (NEPA), the Coastal Zone Management Act (CZMA), and other relevant statutes and regulations. Under NEPA, federal agencies prepare a public record of decision (ROD) at the time of their decision on any action for which an FEIS has been prepared. This **Federal Register** notice for the final rule will also serve as EPA's ROD for the site designations.

The site designations are intended to be effective for an indefinite period of time. EPA has agreed, however, that use of the sites pursuant to these designations may be suspended or terminated in accordance with the Restrictions included in the final rule.

The designation of these two disposal sites does not by itself authorize the disposal of dredged material from any particular dredging project at either site. The designation of the CLIS and WLIS disposal sites simply makes those sites available for use for the dredged material from a specific project if no environmentally preferable, practicable alternative for managing that dredged material exists, and if analysis of the dredged material indicates that it is suitable for open-water disposal.

Thus, each proposed dredging project will be evaluated to determine whether there are practicable, environmentally preferable alternatives to open-water disposal. In addition, the dredged material from each proposed disposal project will be subjected to MPRSA and/or CWA sediment testing requirements to determine its suitability for possible open-water disposal at an approved site. Alternatives to open-water disposal that will be considered include upland disposal and beneficial uses such as beach nourishment. If environmentally preferable, practicable disposal alternatives exist, open-water disposal will not be allowed. In addition, the dredged material will undergo physical, chemical, and biological analysis to determine its suitability for open-water disposal. EPA will not approve dredged material for open-water disposal if it determines that the material has the potential to cause unacceptable adverse effects to the marine environment or human health. The review process for proposed disposal projects is discussed in more detail below and in the FEIS.

As dredged material disposal sites designated by EPA under the MPRSA, CLIS and WLIS also will be subject to newly developed, detailed management and monitoring protocols to track site conditions and prevent the occurrence of unacceptable adverse effects. These management and monitoring protocols are described in the CLIS and WLIS Site Management and Monitoring Plans (SMMPs), which are incorporated in the FEIS as Appendix J. EPA is authorized to close or limit the use of these sites to further disposal activity if their use causes unacceptable adverse impacts to the marine environment or human health.

DATES: This final regulation is effective on July 5, 2005.

ADDRESSES: EPA has established a file supporting this action that includes the **Federal Register** notice for this final rule, the FEIS and its appendices, including the SMMPs and responses to public comments, and other supporting documents.

1. *In person.* The file is available for inspection at the following location: EPA New England Library, One Congress St., Suite 1100, Boston, MA 02114–2023. For access to the documents, call Peg Nelson at (617) 918–1991 between 10 a.m. and 3 p.m. Monday through Thursday, excluding legal holidays, for an appointment.

2. *Electronically.* You also may review and/or obtain electronic copies of the rule, FEIS, and various support documents from the EPA home page at *http://www.epa.gov/fedrgstr/,* or on the

EPA Region 1 homepage at *http://www.epa.gov/region1/eco/lisdreg/.*

The **Federal Register** notice for this final rule and the responses to public comments on the FEIS also are available for review by the public at the following locations. The DEIS and FEIS and its appendices, including the SMMPs and responses to public comments on the DEIS, also were provided to most of these sources at the time of their publication, and may still be available for review there.

1. *In person.* A. Cold Spring Harbor Library, Goose Hill Rd., Cold Spring Harbor, NY. B. East Hampton Library, 159 Main St., East Hampton, NY. C. Mamaroneck Public Library Inc., 136 Prospect Ave., Mamaroneck, NY. D. Montauk Library, 871 Montauk Highway, Montauk, NY. E. New York State Library, Cultural Education Center 6th Floor, Empire State Center, Albany, NY. F. Northport Library, 151 Laurel Ave., Northport, NY. G. Port Jefferson Free Library, 100 Thompson St., Port Jefferson, NY. H. Port Washington Public Library, 1 Library Dr., Port Washington, NY. I. Riverhead Free Library, 330 Court St., Riverhead, NY. J. Bridgeport Public Library, 925 Broad St., Bridgeport, CT. K. Connecticut State Library, Information Service Division, 231 Capital Ave., Hartford, CT. L. Milford City Library, 57 New Haven Ave., Milford, CT. M. New Haven Free Public Library, 133 Elm St., New Haven, CT. N. New London Public Library, 63 Huntington St., New London, CT. O. Norwalk Public Library, 1 Belden Ave., Norwalk, CT. P. Acton Public Library, 60 Old Boston Post Rd., Old Saybrook, CT. Q. Ferguson Library, 752 High Ridge Road, Stamford, CT. R. Boston Public Library, 700 Boylston St., Copley Square, Boston, MA.

FOR FURTHER INFORMATION CONTACT: Ms. Jean Brochi, U.S. Environmental Protection Agency, One Congress St., Suite 1100 (COP), Boston, MA 02114–2023; telephone number: (617) 918–1070; fax number: (617) 918–1505; e-mail address: *Brochi_Jeanlis@epa.gov.*

SUPPLEMENTARY INFORMATION:

Table of Contents

A. Purpose
B. Potentially Affected Entities
C. Disposal Site Descriptions
D. Statutory and Regulatory Authorities
E. Compliance with Statutory and Regulatory Requirements
F. Public Comments
G. Action
H. Supporting Documents

A. Purpose

The two dredged material disposal sites in Long Island Sound designated by this action are necessary to provide long-term, environmentally acceptable disposal options for potential use by the U.S. Army Corps of Engineers (USACE, or Corps) and other federal, state, municipal and private entities who must dredge channels, harbors, marinas and other aquatic areas in the Long Island Sound vicinity in order to maintain conditions for safe navigation for the purposes of marine commerce and recreation.

B. Potentially Affected Entities

Entities potentially affected by this action are persons, organizations, or government bodies seeking to dispose of dredged material in waters of Long Island Sound, subject to the requirements of the MPRSA and/or the CWA and their implementing regulations. This final rule is expected to be primarily of relevance to: (a) Parties seeking permits from the USACE to transport more than 25,000 cubic yards of dredged material for the purpose of disposal into the waters of the central and western regions of Long Island Sound; (b) to the Corps itself for its own dredged material disposal projects; and (c) to other federal agencies seeking to dispose of dredged material in the central and western regions of Long Island Sound. Potentially affected categories and entities that may seek to use the dredged material disposal sites and would be subject to this final rule may include:

Category	Examples of potentially affected entities
Federal Government.	U.S. Army Corps of Engineers Civil Works Projects, and other federal agencies.
Industry and General Public.	Port authorities, harbors, shipyards, marine repair facilities, marinas, yacht clubs, and berth owners.
State, local and tribal governments.	Governments owning and/or responsible for ports, harbors, and/or berths, government agencies requiring disposal of dredged material associated with public works projects.

This table lists the types of entities that could potentially be affected by this final rule. EPA notes that nothing in this final rule alters the jurisdiction or authority of EPA or the types of entities regulated under the MPRSA and/or CWA. Questions regarding the applicability of this final rule to a particular entity should be directed to the contact person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

C. Disposal Site Descriptions

The following site descriptions are based on information in section 3.4.3 of the FEIS and supporting documents.

1. Central Long Island Sound (CLIS)

The CLIS site has been used for the disposal of dredged material from central and western Long Island Sound since the early 1940s and possibly earlier. An actively used site, CLIS has received close to 14 million cubic yards since 1941. Predecessors to the CLIS site in the same general vicinity received dredged material since the late 1800s. Between 1982 and 2001, CLIS received approximately seven million cubic yards, with an average annual volume of 350,000 cubic yards.

In recent years, dredged material disposal at CLIS has been conducted pursuant to either the Corps' short-term site selection authority under section 103(b) of the MPRSA or, for small (25,000 cubic yards or less), non-federal dredging projects, the Corps' CWA section 404 permitting authority. Prior disposal activity dating back to 1941 and possibly earlier was conducted under other applicable federal and state legal requirements. The availability of CLIS for use by the USACE under its most recent short-term site selection expired on February 18, 2004. Under MPRSA section 103(b), the term of the Corps site selection may not be extended. Therefore, the CLIS site is currently available only for disposal from non-federal projects generating 25,000 cubic yards or less of dredged material that satisfy CWA section 404 requirements.

The CLIS disposal site is a 1.1 by 2.2 nautical mile (nmi) rectangular area, about 2.4 square nautical miles (nmi^2) in size. It is located 5.6 nmi south of South End Point near East Haven, Connecticut, and over 10 nmi north of Shoreham Beach, New York, in water depths ranging from 56 to 77 feet (17 to 23.5 meters). The site is entirely within Connecticut state waters, approximately 2.5 nmi north of the New York state border.

This final rule designates the CLIS site with boundaries slightly reconfigured from those of the current site. The northern boundary was extended 700 feet (213 meters) to the north, and the eastern boundary was extended 1,230 feet (375 meters) to the east, to encompass two historic disposal mounds, the FVP and CS2 mounds, that lie outside the current site boundaries. This reconfiguration will allow for management and monitoring of these two mounds. The coordinates (North

American Datum 1983: NAD 83) for the CLIS site are as follows:

41° 9.5′ N 72° 54.4′ W
41° 9.5′ N 72° 51.5′ W
41° 8.4′ N 72° 54.4′ W
41° 8.4′ N 72° 51.5′ W

The sediments at the site are predominantly clayey silt, with areas of mixed sand, clay, and silt. These sediments are typical of those found in central Long Island Sound, which is generally a fine-grained depositional environment. In addition to the ambient silts from this region, the site also contains deposits of material of mixed grain sizes dredged from harbors and navigation channels throughout the central and western Long Island Sound region.

2. Western Long Island Sound (WLIS)

The WLIS site has been used for dredged material disposal since 1982 when it was identified by the Corps in an EIS as the preferred alternative for a regional dredged material disposal site to serve the dredging needs of western Long Island Sound. Between 1982 and 2001, WLIS received 1.7 million cubic yards, with an average annual volume of 85,000 cubic yards. Prior to 1982, sites in the immediate vicinity of WLIS, including the Eaton's Neck, Stamford, and Norwalk historical disposal sites, served the dredging needs of the western Sound. In recent years, the WLIS site has been used pursuant to the Corps' short-term site selection authority under MPRSA section 103(b). Under that authority, the site could potentially be used for an additional five years starting with its next use for a project regulated under the MPRSA.

The WLIS disposal site is a 1.2 by 1.3 nmi rectangular area, about 1.56 nmi^2 in size. It is located 2.5 nmi south of Long Neck Point near Noroton, Connecticut, and two nmi north of Lloyd Point, New York, in water depths of 79 to 118 feet (24 to 36 meters). The site is entirely within Connecticut state waters, approximately 200 yards north of the New York state border.

This final rule designates the WLIS site with boundaries that have been slightly reconfigured from its existing location. The entire site has been shifted to the west by approximately 1,106 feet (337 meters) and to the north by 607 feet (185 meters). This shift will move the WLIS site out of a rapidly shoaling area in the southeast portion of the existing site. The coordinates (North American Datum 1983: NAD 83) for the reconfigured WLIS site are as follows:

41° 00.1′ N 73° 29.8′ W
41° 00.1′ N 73° 28.1′ W
40° 58.9′ N 73° 29.8′ W
40° 58.9′ N 73° 28.1′ W

The sediments at the site are heterogeneous, with clayey silt in the northeast corner and a mixture of sand-silt-clay in the center and southeast corner. These sediments are typical of those found in the western basin of Long Island Sound, which is generally a fine-grained depositional environment. In addition to the ambient silts from this region, the site also contains deposits of material of mixed grain sizes dredged from harbors and navigation channels throughout the western Long Island Sound region.

D. Statutory and Regulatory Authorities

The dredged material disposal site designation process has been conducted consistent with the requirements of the Marine Protection, Research, and Sanctuaries Act (MPRSA), the Clean Water Act (CWA), the National Environmental Policy Act (NEPA), the Coastal Zone Management Act (CZMA), the Endangered Species Act (ESA), the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), and any other applicable legal requirements.

1. Marine Protection, Research, and Sanctuaries Act (MPRSA); Clean Water Act (CWA)

The primary statutes governing the aquatic disposal of dredged material in the United States are the MPRSA, 33 U.S.C. 1401, *et seq.*, and the CWA, 33 U.S.C. 1251, *et seq.* The waters of Long Island Sound are landward of the baseline from which the territorial sea of the United States is measured. As with other waters lying landward of the baseline, all dredged material disposal activities in Long Island Sound, whether from federal or non-federal projects of any size, are subject to the requirements of section 404 of the CWA, 33 U.S.C. 1344. The MPRSA generally only applies to dredged material disposal in waters seaward of the baseline and would not apply to Long Island Sound but for the 1980 amendment that added section 106(f) to the statute, 33 U.S.C. 1416(f). This provision—commonly referred to as the ''Ambro Amendment'' after former New York Congressman Jerome Ambro—requires that the disposal of dredged material in Long Island Sound from federal projects (projects carried out under the USACE civil works program or by other federal agencies) and non-federal projects involving more than 25,000 cubic yards of material, must be carried out to comply with the requirements of both CWA section 404 and the MPRSA. This applies to both the authorization of specific disposal sites and the assessment of the suitability of specific dredged material for disposal. Disposal from non-federal projects involving 25,000 cubic yards or less of dredged material, however, is subject only to CWA section 404.

Section 102(c) of the MPRSA, as amended, 33 U.S.C. 1412(c), *et seq.*, gives the Administrator of EPA authority to designate sites where ocean disposal of dredged material, among other things, may be permitted. *See also* 33 U.S.C. 1413(b) and 40 CFR 228.4(e). The statute places no specific time limit on the term for use of an EPA-designated disposal site. Thus, an EPA site designation can be for an indefinite term, and are generally thought of as long-term designations, but EPA may place restrictions or limits on the use of the site based on the site's capacity to receive dredged material or other environmental concerns. *See* 33 U.S.C. 1412(c). On October 1, 1986, the Administrator delegated authority to designate dredged material disposal sites to the Regional Administrator of the EPA Region in which the sites are located. The CLIS and WLIS sites are located in Connecticut waters in Long Island Sound and, therefore, are subject to the site designation authority of the Regional Administrator of the EPA New England Regional Office.

Section 103(b) of the MPRSA, 33 U.S.C. 1413(b), provides that any ocean disposal of dredged material should occur at EPA-designated sites when feasible. In the absence of an available EPA-designated site, however, the Corps is authorized to ''select'' appropriate disposal sites. In 1992, Congress amended MPRSA section 103(b) to place maximum time limits on the use of Corps-selected disposal sites. Specifically, the statute restricted the use of such sites to two separate five-year terms. Thus, open-water disposal in Long Island Sound of dredged material from projects subject to MPRSA requirements under section 106(f) of the statute (*i.e.*, federal projects or private projects involving more than 25,000 cubic yards of material) has been conducted at sites used pursuant to the Corps' site selection authority. The CLIS disposal site can no longer be used under this authority, however, because the second five-year term for the site under the Corps' most recent site selection expired on February 18, 2004. (The site can still be used if approved under CWA section 404 for non-federal projects involving less than 25,000 cubic yards of dredged material.) Meanwhile, the first five-year Corps site selection for the WLIS site has expired and use of the site under a Corps site

selection will be limited to five years from the date of the next such selection.

The Ocean Dumping Regulations prescribe general and specific criteria at 40 CFR 228.5 and 228.6, respectively, to guide the selection of disposal sites for final designation. EPA regulations at 40 CFR 228.4(e)(1) provide, among other things, that EPA will designate any disposal sites by promulgation in 40 CFR part 228. Ocean dumping sites designated on a final basis are promulgated at 40 CFR 228.15. Section 102(c) of the MPRSA and 40 CFR 228.3 also establish requirements for EPA's ongoing management and monitoring, in conjunction with the USACE, of the disposal sites designated by EPA to ensure that unacceptable, adverse environmental impacts do not occur. Examples of such management and monitoring include the following: regulating the times, rates, and methods of disposal, as well as the quantities and types of material that may be disposed; conducting pre- and post-disposal monitoring of sites; conducting disposal site evaluation and designation studies; and recommending modification of site use and/or designation conditions and restrictions. *See also* 40 CFR 228.7, 228.8, 228.9.

Finally, a disposal site designation by EPA does not actually authorize any dredged material to be disposed of at that site. It only makes use of that site available as a possible management option if various other conditions are met first. Authorization to use the site for dredged material disposal must be provided by the Corps under MPRSA section 103(b), subject to EPA review, and such disposal at the site can only be authorized if: (1) It is determined that there is a need for open-water disposal for that project (*i.e.*, that there are no practicable alternatives to such disposal that would cause less harm to the environment); and (2) the dredged material satisfies the applicable environmental impact criteria specified in EPA's regulations at 40 CFR part 227. Furthermore, the authorization for disposal is also subject to review for compliance with other applicable legal requirements, including the ESA, the MSFCMA, the CWA (including any applicable state water quality standards), NEPA, and the CZMA.

EPA's evaluation of CLIS and WLIS pursuant to the applicable site evaluation criteria, and its compliance with site management and monitoring requirements, are described below in the Compliance with Statutory and Regulatory Requirements section.

2. National Environmental Policy Act (NEPA)

NEPA, 42 U.S.C. 4321, *et seq.*, requires the public analysis of the potential environmental effects of proposed federal agency actions and reasonable alternative courses of action to ensure that these effects, and the differences in effects among the different alternatives, are understood in order to ensure high quality, informed decision-making and to facilitate avoiding or minimizing any adverse effects of proposed actions, and to help restore and enhance environmental quality. *See* 40 CFR 6.100(a) and 1500.1(c) and 1500.2(d)–(f). NEPA requires substantial public involvement throughout the decision-making process. *See* 40 CFR 6.400(a) and 40 CFR part 1503 and 1501.7, 1506.6.

Section 102(c) of NEPA, 42 U.S.C. 4321, *et seq.*, requires federal agencies to prepare an EIS for major federal actions significantly affecting the quality of the human environment. An EIS should assess: (1) The environmental impact of the proposed action; (2) any adverse environmental effects that cannot be avoided should the proposal be implemented; (3) alternatives to the proposed action; (4) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and (5) any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented. The required content of an EIS is further described in regulations promulgated by the President's Council on Environmental Quality (CEQ). *See* 40 CFR part 1502.

EPA disposal site designation evaluations conducted by EPA under the MPRSA have been determined to be ''functionally equivalent'' to NEPA reviews, so that they are not subject to NEPA analysis requirements as a matter of law. Nevertheless, as a matter of policy, EPA voluntarily uses NEPA procedures when evaluating the potential designation of ocean dumping sites. *See* 63 FR 58045 (Notice of Policy and Procedures for Voluntary Preparation of National Environmental Policy Act Documents, October 29, 1998). While EPA voluntarily uses NEPA review procedures in conducting MPRSA disposal site designation evaluations, EPA also has explained that ''[t]he voluntary preparation of these documents in no way legally subjects the Agency to NEPA's requirements'' (63 FR 58046).

In this case, EPA prepared an EIS to evaluate the possibility of designating open-water disposal sites in the central and western regions of Long Island Sound. As part of the NEPA EIS process, federal agencies prepare a public record of decision (ROD) at the time of their decision on any action for which an FEIS has been prepared. In this case, this final rule will serve as EPA's ROD for the site designations. *See* 40 CFR 1505.2 and 1506.4 (the ROD may be integrated into any other agency document prepared in carrying out its action). EPA's use of NEPA procedures to evaluate this action is further described in the following section, Compliance with Statutory and Regulatory Requirements.

3. Coastal Zone Management Act (CZMA)

The CZMA, 16 U.S.C. 1451, *et seq.*, authorizes states to establish coastal zone management programs to develop and enforce policies to protect their coastal resources and promote uses of those resources that are desired by the state. Sections 307(c)(1)(A) and (C) of the CZMA require federal agencies to provide relevant states with a determination that each federal agency activity, whether taking place within or outside the coastal zone, that affects any land or water use or natural resource of the state's coastal zone, will be carried out in a manner consistent to the maximum extent practicable with the enforceable policies of the state's approved coastal zone management program. EPA's compliance with the CZMA is described in the following section, Compliance with Statutory and Regulatory Requirements.

4. Endangered Species Act (ESA)

Under section 7(a)(2) of the Endangered Species Act, 16 U.S.C. 1536(a)(2), federal agencies are required to ensure that their actions are ''not likely to jeopardize the continued existence of any endangered species or result in the destruction or adverse modification of habitat of such species which is determined * * * to be critical * * *.'' Depending on the species involved, a federal agency is required to consult with either the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) if the agency's action ''may affect'' an endangered or threatened species or its critical habitat (50 CFR 402.14(a)). EPA's compliance with the ESA is described in the following section, Compliance with Statutory and Regulatory Requirements.

5. Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA)

The 1996 Sustainable Fisheries Act amendments to the MSFCMA, 16 U.S.C. 1801, *et seq.*, require the designation of essential fish habitat (EFH) for federally managed species of fish and shellfish. Pursuant to section 305(b)(2) of the MSFCMA, federal agencies are required to consult with the NMFS regarding any action they authorize, fund, or undertake that may adversely affect EFH. An adverse effect has been defined by the Act as, ''[a]ny impact which reduces the quality and/or quantity of EFH [and] may include direct (*e.g.*, contamination or physical disruption), indirect (*e.g.*, loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions'' (50 CFR 600.810(a)). EPA's compliance with the MSFCMA is described in the following section, Compliance with Statutory and Regulatory Requirements.

E. Compliance With Statutory and Regulatory Requirements

1. Marine Protection, Research, and Sanctuaries Act (MPRSA)

EPA undertook its evaluation of whether to designate any dredged material disposal sites in the central and western portions of Long Island Sound pursuant to its authority under MPRSA section 102(c) in response to several factors. These factors include the following:

- The prohibition on further use of the CLIS disposal site pursuant to the Corps' site selection authority under MPRSA section 103(b);
- The five-year cap on any future use of the WLIS disposal site pursuant to the Corps' site selection authority under MPRSA section 103(b);
- The understanding that in the absence of an EPA-designated disposal site or sites, any necessary open-water disposal would either be stymied or the USACE would have to undertake additional short-term site selections, perhaps many of them, in the future;
- The clear Congressional preference expressed in MPRSA section 103(b) that any open-water disposal of dredged material take place at EPA-designated sites, if feasible; and
- EPA's policy view that it is generally environmentally preferable to concentrate any open-water disposal at sites that have been used historically and at fewer sites, *see* 40 CFR 228.5(e).

EPA's evaluation considered whether there was a need for any disposal site designations for long-term dredged material disposal, including an assessment of whether other dredged material management methods could reasonably be judged to obviate the need for such designations. Having concluded that there was a need for open-water disposal sites, EPA then assessed whether there were sites that would satisfy the applicable environmental criteria to support a site designation under MPRSA section 102(c).

The MPRSA and EPA regulations promulgated thereunder impose a number of requirements related to the designation of dredged material disposal sites. These include procedural requirements, specification of criteria for use in site evaluations, and the requirement that a Site Management and Monitoring Plan (SMMP) must be developed for all designated sites. As discussed below, EPA complied with each of these requirements in designating the CLIS and WLIS disposal sites.

a. Procedural Requirements

MPRSA sections 102(c) and 103(b) indicate that EPA may designate ocean disposal sites, including for dredged material. EPA regulations at 40 CFR 228.4(e) specify that dredged material disposal sites will be ''designated by EPA promulgation in this [40 CFR] part 228 * * *.'' EPA regulations at 40 CFR 228.6(b) direct that when an EIS is prepared under EPA policy in order to assess the proposed designation of one or more disposal sites, that EIS should include the results of an environmental evaluation of the proposed disposal site(s) and the Draft EIS (DEIS) should be presented to the public along with a proposed rule concerning the disposal site designations. According to 40 CFR 228.6(b), a Final EIS (FEIS) should be provided at the time of final rulemaking for the site designation.

EPA complied with all of these procedural requirements. The Agency prepared a thorough environmental evaluation of both the sites proposed for designation and other alternative sites and courses of action (other than designating open-water disposal sites). This evaluation was presented in a DEIS (and related documents) and a proposed rule for promulgation of the disposal sites. EPA published the proposed rule (68 FR 53687) and a notice of availability of the DEIS (68 FR 53730) for public review and comment in September 2003. In addition, EPA went beyond the requirements of 40 CFR 228.6(b) by publishing a FEIS for public review in April 2004, more than a year before issuance of this final rule, thus giving the public an additional opportunity to comment on the proposed site designations, and giving EPA further opportunity to consider public input, before the final rulemaking for the site designations. By this final rule, EPA is now completing the designation of these disposal sites by promulgation in 40 CFR part 228.

Finally, MPRSA sections 102(c)(3) and (4) dictate that EPA must, in conjunction with the USACE, develop a site management plan for each dredged material disposal site it proposes to designate. MPRSA section 102(c)(3) also states that in the course of developing such management plans, EPA and the Corps must provide an opportunity for public comment. EPA and the Corps also met this obligation by publishing for public review and comment Draft SMMPs for both the CLIS and WLIS sites. The Draft SMMPs were published together with the Draft EIS (as Appendices J–1 and J–2, respectively) and the proposed rule in September 2003. After considering public comments regarding the SMMPs, EPA and the Corps published the Final SMMPs for the two disposal sites in April 2004 as Appendices J–1 and J–2 of the FEIS.

b. Disposal Site Selection Criteria

EPA regulations under the MPRSA identify five general criteria and 11 specific criteria for use in evaluating locations for the potential designation of dredged material disposal sites. *See* 40 CFR 228.4(e), 228.5 and 228.6. The evaluation of the CLIS and WLIS disposal sites with respect to the five general and 11 specific criteria is discussed in detail in the FEIS and supporting documents and is summarized below.

General Criteria (40 CFR 228.5)

As described in the FEIS, and summarized below, EPA has determined that the CLIS and WLIS disposal sites satisfy the five general criteria specified in 40 CFR 228.5. This is discussed in Chapter 5 and summarized in Table 5–13, ''Summary of Impacts at the Alternative Sites,'' of the FEIS.

1. Sites must be selected to minimize interference with other activities in the marine environment, particularly avoiding areas of existing fisheries or shellfisheries, and regions of heavy commercial or recreational navigation (40 CFR 228.5(a)).

EPA's evaluation demonstrated that both the CLIS and WLIS disposal sites would cause minimal interference with the aquatic activities identified in the criterion. The sites were selected because they are not located in shipping

lanes or other major navigation areas and are expected to cause minimal interference with fisheries, shellfisheries, and regions of commercial or recreational navigation. EPA used Geographic Information System (GIS) software to overlay the locations of various uses and natural resources of the marine environment on the disposal site locations and surrounding areas (including their bathymetry). Analysis of this data indicated that use of each site would have minimal potential for interfering with other existing or ongoing uses of the marine environment in and around the site locations, including lobstering or fishing activities. Furthermore, the locations of the two sites should minimize any interference with navigation since they lie outside areas of heavy commercial or recreational navigation. In addition, both the CLIS and WLIS sites have been used for dredged material disposal for many years and their use has not significantly interfered with the uses identified in the criterion, and mariners in the area are accustomed to use of the sites. Finally, time-of-year restrictions (also known as ''environmental windows'') imposed in order to protect fishery resources will typically limit dredged material disposal activities to the months of October through April, thus further minimizing any possibility of interference with the various activities specified in the criterion.

2. Sites must be situated such that temporary perturbations to water quality or other environmental conditions during initial mixing caused by disposal operations would be reduced to normal ambient levels or to undetectable contaminant concentrations or effects before reaching any beach, shoreline, marine sanctuary, or known geographically limited fishery or shellfishery (40 CFR 228.5(b)).

EPA's analysis concluded that both the CLIS and WLIS sites satisfy this criterion. First, both sites are significant distances from any beach, shoreline, marine sanctuary (in fact, there are no federally-designated marine sanctuaries designated in Long Island Sound), or known geographically limited fishery or shellfishery. Second, the sites will be used only for the disposal of dredged material determined to be suitable for open-water disposal by application of the MPRSA ocean dumping criteria. *See* 40 CFR part 227. These criteria include provisions related to water quality and accounting for initial mixing. *See* 40 CFR 227.4, 227.5(d), 227.6(b) and (c), 227.13(c), 227.27, and 227.29. Data evaluated during development of the EIS, including data from monitoring conducted during and after past disposal activities, indicates that any temporary perturbations in water quality or other environmental conditions at the site during initial mixing from disposal operations will be limited to the immediate area of the site and will neither cause any significant environmental degradation nor reach any beach, shoreline, marine sanctuary, or other important natural resource area.

3. If site designation studies show that any interim disposal sites do not meet the site selection criteria, use of such sites shall be terminated as soon as an alternate site can be designated (40 CFR 228.5(c)).

There are no interim sites in central and western Long Island Sound as defined under the Ocean Dumping Regulations (40 CFR 228.14). Neither the CLIS nor WLIS sites have ever been subject to an interim site designation by EPA. Therefore, this criterion is not applicable to the present disposal site designations. While the CLIS site has been used for dredged material disposal for many decades, it has never been an interim designated site. Prior to the 1980 Ambro Amendment, the MPRSA did not apply to Long Island Sound, and disposal was regulated under the Clean Water Act and/or other applicable authorities. Since the Ambro Amendment, both the CLIS and WLIS disposal sites have been used pursuant to the Corps' site selection authority under MPRSA section 103(b) for federal projects and large private projects (*i.e.*, those involving more than 25,000 cubic yards of material). Both sites also have been used for smaller private projects under CWA section 404 authority. Furthermore, EPA's evaluation concludes that both the CLIS and WLIS sites satisfy the applicable site selection criteria. Therefore, even if this criterion applied, the CLIS and WLIS sites would satisfy it.

4. The sizes of disposal sites will be limited in order to localize for identification and control any immediate adverse impacts, and to permit the implementation of effective monitoring and surveillance to prevent adverse long-range impacts. Size, configuration, and location are to be determined as part of the disposal site evaluation (40 CFR 228.5(d)).

EPA has determined, based on the information presented in the FEIS, that the CLIS and WLIS sites are limited in size to localize for identification and control any immediate adverse impacts, and to permit the implementation of effective monitoring and surveillance to prevent adverse long-range impacts. The combined size of the two sites is approximately 3.96 nmi^2, which is just half of one-percent of the 675 square miles that comprise the entire central and western Long Island Sound regions that comprised the study area for the EIS. As discussed in the FEIS, both sites are located in depositional areas, meaning the material placed in them will tend to stay there. As a result, any short-term impacts will be localized and this, together with other regulatory requirements (*e.g.*, application of sediment testing and MPRSA criteria), will facilitate control of any such impacts. The information presented in the FEIS indicates that historical disposal at these sites over many years has neither resulted in significant long-term adverse environmental effects nor had any significant effect outside the sites themselves.

Furthermore, due to their past use for dredged material disposal, these sites have been monitored for many years under the Corps' Disposal Area Monitoring System (DAMOS). Thus, experience indicates that the site configurations will enable effective short-term and long-term monitoring. In addition, as described above in the Disposal Site Descriptions section, the existing site boundaries of the CLIS site have been reconfigured to include two historical disposal mounds outside of the existing boundary so that they could be managed and monitored along with the rest of the site. As previously described, the WLIS site also has been reconfigured from its historical boundaries by shifting the entire site to the northwest to exclude a rapidly shoaling area within those prior site boundaries. Thus, EPA developed the site configurations in conjunction with, and in response to, the substance of the site evaluations. The sites are identified by specific coordinates spelled out in the regulations promulgated by this rulemaking, and the use of precision navigation equipment in both dredged material disposal operations and monitoring efforts will enable accurate disposal operations and contribute to effective management and monitoring of the sites. Detailed plans for the management and monitoring of the two sites are described in the SMMPs (Appendix J of the FEIS).

5. EPA will, wherever feasible, designate ocean dumping sites beyond the edge of the continental shelf and other such sites where historical disposal has occurred (40 CFR 228.5(e)).

EPA evaluated sites beyond the edge of the continental shelf as well as historical disposal sites in Long Island Sound as part of the alternatives analysis conducted for the EIS. This evaluation determined that the long distances and travel times between the

dredging locations in central and western Long Island Sound and the continental shelf (*e.g.*, 140 miles from Mamaroneck Harbor in Westchester County, NY) posed significant environmental, operational, safety, and financial concerns, rendering such options unreasonable. Environmental concerns include increased risk of encountering endangered species during transit, increased fuel consumption and air emissions, and greater potential for accidents in transit that could lead to dredged material being spilled in unintended areas. As described in the Disposal Site Descriptions section, the CLIS and WLIS disposal sites both encompass the footprint of historically used sites. Long-term monitoring of these sites has shown minimal adverse impacts to the adjacent marine environment and rapid recovery of the benthic community in the disposal mounds. While there are also other historically used disposal sites in the Sound, the analysis in the FEIS concluded that the CLIS and WLIS sites were the preferable locations. Thus, the designation of the CLIS and WLIS disposal sites is consistent with this criterion.

Specific Criteria (40 CFR 228.6)

In addition to the five general criteria discussed above, 40 CFR 228.6(a) lists eleven specific factors to be used in evaluating the impact of the use of the site(s) for disposal under the MPRSA. Compliance with the criteria is described in detail in Chapter 5 and summarized in Table 5–13, ''Summary of Impacts at the Alternative Sites,'' of the FEIS, and is summarized below.

1. Geographical Position, Depth of Water, Bottom Topography and Distance From Coast (40 CFR 228.6(a)(1))

Based on analyses described in the FEIS, EPA has concluded that the geographical position (*i.e.*, location), water depth, bottom topography (*i.e.*, bathymetry), and distance from coastlines of the two sites will facilitate containment of dredged material within site boundaries, and reduce the likelihood of material being transported to the adjacent sea floor or any areas of special environmental concern. As described in the preceding Disposal Sites Description section and above regarding compliance with general criteria 3 and 4 (40 CFR 2285(c) and (d)), both sites are located far enough from shore, are deep enough, and have appropriate bathymetry to prevent adverse effects to the marine environment and coastlines. The CLIS site is located 5.6 nmi south of South End Point near East Haven, Connecticut, and more than ten nmi north of Shoreham Beach, New York, in water depths ranging from 56 to 77 feet (17 to 23.5 meters). The WLIS site is located 2.5 nmi south of Long Neck Point near Noroton, Connecticut, and two nmi north of Lloyd Point, New York, in water depths of 79 to 118 feet (24 to 36 meters). As discussed in the FEIS, long-term monitoring of disposal sites in Long Island Sound found that creating mounds above a depth of 46 feet (14 meters) can result in material being removed from the mounds by currents (FEIS, p. 3–17). Both sites are of a sufficient depth to allow the disposal of the amount of material that is projected over the 20-year planning horizon without exceeding this depth threshold. As was also discussed in the FEIS, both sites are located in depositional areas, meaning the material placed in them will tend to stay there. As a result, any short-term impacts will be localized and this, together with other regulatory requirements described elsewhere in this document, will facilitate control of any such impacts.

2. Location in Relation To Breeding, Spawning, Nursery, Feeding, or Passage Areas of Living Resources in Adult or Juvenile Phases (40 CFR 228.6(a)(2))

EPA considered the proposed CLIS and WLIS disposal sites in relation to breeding, spawning, nursery, feeding, or passage areas for adult and juvenile phases (*i.e.*, life stages) of living resources in Long Island Sound. From this analysis, EPA concluded that, while disposal of suitable dredged material at the CLIS and WLIS sites would cause some short-term, localized adverse effects, overall it would not cause unacceptable or unreasonable adverse effects to the habitat functions and living resources specified in the above criterion. The combined size of the two sites is approximately 3.96 nmi2, which is just half of one-percent of the 675 square miles that comprise the entire central and western Long Island Sound regions that comprised the study area for the EIS.

Generally, there are three primary ways that dredged material disposal can adversely affect marine resources. First, disposal can cause physical impacts by injuring or burying less mobile fish, shellfish, and benthic organisms, as well as their eggs and larvae. Second, tug and barge traffic transporting the dredged material to a disposal site may collide or otherwise interfere with marine mammals and reptiles. Third, contaminants in the dredged material may bioaccumulate through the food chain. However, EPA and the other federal and state agencies involved with regulating dredging and dredged material disposal have adopted management techniques that greatly reduce the potential for these impacts to occur.

One such technique is the use of environmental windows, or time-of-year restrictions, for both dredging and dredged material disposal. This type of restriction has been a standard practice for more than a decade in Long Island Sound, and New England generally, and is incorporated in Corps permits or authorizations in response to consultation with federal and state natural resource agencies (*e.g.*, NMFS). Dredged material disposal in Long Island Sound is generally limited to the period between October 1 and April 30, but dredging windows are often shorter depending on the location of specific dredging projects in relation to certain fish and shellfish species. For example, dredging in nearshore areas where winter flounder spawning occurs is generally prohibited between February 1–April 1, dredging that may interfere with anadromous fish runs is generally prohibited between April 1–May 15, and dredging that may adversely affect shellfish is prohibited between June 1–September 30. These dredging windows, in effect, serve to further restrict periods during which dredged material would be disposed.

Another benefit of using environmental windows is that they reduce the likelihood of dredged material disposal activities interfering with marine mammals and reptiles. While there are several species, such as harbor porpoises, long-finned pilot whales, seals, and sea turtles, that either inhabit or migrate through Long Island Sound, most of them either leave the Sound during the winter months for warmer waters to the south or are less active and remain near the shore. There also are many other mobile species of fish (*e.g.*, striped bass, bluefish, scup) and invertebrates (*e.g.*, squid) that leave the Sound during the winter for either deeper water or warmer waters to the south, thus avoiding the time of year when most dredging and dredged material disposal occurs. The use of environmental windows has been refined over time and is now considered an effective management tool to minimize impacts to marine resources.

There will be some localized impacts to fish, shellfish, and benthic organisms, such as clams and worms, that are present at a disposal site (or in the water column directly above the site) during a disposal event. The sediment plume may entrain and smother some fish in the water column, and may bury some fish, shellfish, and other marine

organisms on the sea floor. There usually is a short-term loss of forage habitat in the immediate disposal area, but the DAMOS program has documented the recolonization of disposal mounds by benthic infauna within 1–3 years after disposal.

To further reduce potential environmental impacts associated with dredged material disposal, the dredged material from each proposed dredging project will be subjected to the MPRSA sediment testing requirements set forth at 40 CFR part 227 to determine its suitability for open-water disposal. Suitability for open-water disposal is determined by testing the proposed dredged material for toxicity and bioaccumulation and by quantifying the risk to human health from consuming marine organisms that are exposed to dredged material and its associated contaminants using a risk assessment model. If it is determined that the sediment is unsuitable for open-water disposal—that is it may unreasonably degrade or endanger human health or the marine environment—it cannot be disposed at disposal sites designated under the MPRSA. *See* 40 CFR 227.6.

EPA complied with the ESA by consulting with and receiving concurrence from the NMFS and USFWS that the designation of WLIS and CLIS was not likely to adversely affect federally listed species under its jurisdiction. Additionally, EPA consulted with NMFS under the MSFCMA on potential impacts to essential fish habitat (EFH). NMFS determined that the use of environmental windows and the stringent testing requirements were sufficient steps to minimize impacts to EFH and did not offer any additional conservation recommendations. Further details on these consultations are provided in the FEIS and the section below describing compliance with the ESA and MSFCMA.

EPA recognizes that dredged material disposal causes some short-term, localized adverse effects to marine organisms in the immediate vicinity of each disposal event. But because disposal is restricted to two small sites (see above regarding compliance with general criteria 5 (40 CFR 2285(e)) and to only several months of the year, EPA concludes that designating WLIS and CLIS will not cause unacceptable or unreasonable adverse impacts to breeding, spawning, nursery, feeding, or passage areas of living resources in adult or juvenile phases.

3. Location in Relation to Beaches and Other Amenity Areas (40 CFR 228.6(a)(3))

EPA's analysis concluded that both the CLIS and WLIS sites satisfy this criterion. Both sites are far enough away from beaches, parks, wildlife refuges, and other areas of special concern to prevent adverse impacts to these amenities and, as previously noted, there are no marine sanctuaries in Long Island Sound. As previously described, the CLIS and WLIS disposal sites are 5.6 nmi and two nmi from the nearest shore, respectively. Therefore, the closest beaches, parks, wildlife refuges, or other areas of special concern are at least two nmi from either of the two disposal sites. Based on modeling results that are presented in section 5.5.3 of the FEIS, and past monitoring of actual disposal activities, this distance is beyond any expected transport of dredged material due to tidal motion or currents. As noted above, any temporary perturbations in water quality or other environmental conditions at the site during initial mixing from disposal operations will be limited to the immediate area of the site and will not reach any beach, parks, wildlife refuges, or other areas of special concern.

Thus, EPA does not anticipate that the continued use of the CLIS and WLIS disposal sites will cause any adverse impacts to beaches or other amenity areas.

4. Types and Quantities of Wastes Proposed To Be Disposed of, and Proposed Methods of Release, Including Methods of Packing the Waste, if Any (40 CFR 228.6(a)(4))

The typical composition of dredged material to be disposed at the sites is expected to range from predominantly ''clay-silt'' to ''mostly sand.'' This expectation is based on data from historical dredging projects from the central and western regions of Long Island Sound. For federal dredging projects and private projects generating more 25,000 cubic yards of dredged material, EPA and the USACE will conduct suitability determinations following applicable criteria for testing and evaluating dredged material under 40 CFR part 227 and further guidance in the ''Regional Implementation Manual for the Evaluation of Dredged Material Proposed for Disposal in New England Waters' (EPA, 2004), before authorizing disposal under the MPRSA. Private dredging projects generating up to 25,000 cubic yards will continue to be regulated under CWA section 404. The requirements under the MPRSA and the CWA are discussed in detail in the EIS. The CLIS and WLIS sites would receive dredged material that is transported by either government or private contractor hopper dredges or oceangoing bottom-dump barges towed by tugboat. Both types of equipment release the material at or very near the surface, which is the standard operating procedure for this activity. The disposal of this material will occur at specific coordinates marked by buoys and will be placed so as to concentrate material from each disposal project. This concentrated placement is expected to help minimize bottom impacts to benthic organisms. In addition, there are no plans to pack or package dredged material prior to disposal.

Furthermore, it should be emphasized that the CLIS and WLIS sites are only being designated for the disposal of dredged material; disposal of other types of material will not be allowed at these sites. It also should be noted that the disposal of certain other types of material is expressly prohibited by the MPRSA and EPA regulations (*e.g.*, industrial waste, sewage sludge, chemical warfare agents, inadequately characterized materials) (33 U.S.C. 1414b; 40 CFR 227.5). For all of these reasons, no significant adverse impacts are expected to be associated with the types and quantities of dredged material that may be disposed at the sites.

5. Feasibility of Surveillance and Monitoring (40 CFR 228.6(a)(5))

Monitoring and surveillance are expected to be feasible at both sites. Both sites are readily accessible for bathymetric and side-scan sonar surveys and have been successfully monitored by the Corps over the past 20 years under the DAMOS program. Upon designation of the sites, monitoring will continue under the DAMOS program in accordance with the most current approved Site Management and Monitoring Plan (SMMP) for each site. A Draft SMMP for each site was issued for public comment in conjunction with the DEIS and was incorporated as Appendix J to the DEIS, while Final SMMPs were then completed and incorporated as Appendix J to the FEIS. The SMMPs may be subject to periodic revisions based on the results of site monitoring and other new information. Any such revisions will be closely coordinated with other federal and state resource management agencies and other stakeholders during the review and approval process, and will become final only when approved by EPA in conjunction with the USACE. *See* 33 U.S.C. 1413 (c)(3).

6. Dispersal, Horizontal Transport and Vertical Mixing Characteristics of the Area, Including Prevailing Current Direction and Velocity, if Any (40 CFR 228.6(a)(6))

Although the interactions of bathymetry, wind-generated waves, and river and ocean currents in Long Island Sound are complex, the CLIS and WLIS sites are located in areas that are generally calm except during storms, when dredging and dredged material disposal would not be occurring anyway. Past monitoring of disposal activity at these two sites has revealed minimal drift of sediment out of the disposal site as it passed through the water column, and disposal site monitoring has confirmed that peak wave-induced bottom current velocities are not sufficient to cause significant erosion of dredged material placed at either of the two sites. Monitoring has indicated that the CLIS and WLIS sites are depositional locations that collect, rather than disperse, sediment. For these reasons, EPA has determined that the dispersal, horizontal transport, and vertical mixing characteristics, as well as the current velocities and directions at the CLIS and WLIS sites are appropriate to support their designation as dredged material disposal sites.

7. Existence and Effects of Current and Previous Discharges and Dumping in the Area (Including Cumulative Effects) (40 CFR 228.6(a)(7))

As previously described in the Disposal Sites Descriptions section, the CLIS site has received close to 14 million cubic yards of dredged material since 1941, and predecessors to the CLIS site in the same general vicinity received dredged material since the late 1800s (with no reliable records of volumes disposed). The WLIS site has been used for dredged material disposal since 1982, receiving 1.7 million cubic yards since then. Prior to 1982, sites in the immediate vicinity of WLIS, including the Eaton's Neck, Stamford, and Norwalk historical disposal sites, served the dredging needs of the western Sound.

Until the passage of the CWA in 1972, dredged material disposal was not a heavily regulated activity. Since 1972, open-water disposal in Long Island Sound has been subject to the sediment testing and alternatives analysis provisions of section 404 of the CWA. With passage of the first Ambro Amendment in 1980, dredged material disposal from all federal projects and non-federal projects generating more than 25,000 cubic yards of material became subject to the requirements of both CWA section 404 and the MPRSA. The result of these increasingly stringent regulatory requirements for dredged material disposal is that there has been a steady, measurable improvement in the quality of material that has been placed at the CLIS and WLIS disposal site over the past 33 years.

The CLIS and WLIS disposal sites have both been used on a consistent basis since the early 1980s pursuant to the Corps' short-term site selection authority under section 103(b) of the MPRSA (33 U.S.C. 1413(b)). Since then, disposal operations at these sites have been carefully managed and the material disposed there has been monitored. Past use of these sites generally makes them preferable to more pristine sites that have either not been used or have been used in the more distant past. *See* 40 CFR 228.5(e). Beyond this, however, EPA's evaluation of data and modeling results indicates that these past disposal operations have not resulted in unacceptable or unreasonable environmental degradation, and that there should be no such adverse effects in the future from the projected use of the CLIS and WLIS disposal sites. As part of this conclusion, discussed in detail in the FEIS, EPA found that there should be no significant adverse cumulative environmental effects from continuing to use these sites on a long-term basis for dredged material disposal in compliance with all applicable regulatory requirements regarding sediment quality and site usage.

8. Interference With Shipping, Fishing, Recreation, Mineral Extraction, Desalination, Fish and Shellfish Culture, Areas of Special Scientific Importance and Other Legitimate Uses of the Ocean (40 CFR 228.6(a)(8))

In evaluating whether disposal activity at the sites could interfere with shipping, fishing, recreation, mineral extraction, desalination, fish or shellfish culture, areas of scientific importance and other legitimate uses of the ocean, EPA considered both the effects of placing dredged material on the bottom of the Sound at the CLIS and WLIS sites and any effects from vessel traffic associated with transporting the dredged material to the disposal sites. From this evaluation, EPA concluded there would be no unacceptable or unreasonable adverse effects on the considerations noted in this criterion. Some of the factors listed in this criterion have already been discussed above due to its overlap with aspects of certain other criteria. Nevertheless, EPA will address each point below.

The disposal sites are not located in shipping lanes, and the vessel traffic generated by disposal activity is expected to be similar to that which has occurred over the past 20 years without interfering with other shipping activity. Moreover, research by EPA and the USACE concluded that after disposal at the sites, resulting water depths will be sufficient to permit navigation in the area without interference. (And by providing an open-water disposal alternative for use in the absence of environmentally preferable practicable alternatives, the sites are likely to facilitate navigation in many of the harbors, bays, rivers and channels around the Sound.) A U.S. Coast Guard (USCG) lightering area currently overlaps the northeast corner of the CLIS site, which could have resulted in anchors disturbing disposal mounds and causing sediment resuspension, but the USCG has agreed to shift the designated lightering area boundary to ensure that existing mounds and future disposed dredged material will not be disturbed. This shift is also not expected to have any adverse effect on local navigation. Moreover, as discussed above, dredged material disposal at the site will only occur in a limited number of months during each year to due to environmental windows that restrict when dredging and related disposal may occur.

EPA carefully evaluated the potential effects on commercial and recreational fishing for both finfish and shellfish (including lobster) of designating the CLIS and WLIS sites for dredged material disposal and concluded that there would be no unreasonable or unacceptable adverse effects. As discussed above in relation to other site evaluation criteria, dredged material disposal will only have incidental, insignificant effects on organisms in the disposal sites and no appreciable effects beyond the sites. Indeed, since past dredged material disposal has been determined to have no significant adverse effects on fishing, the similar projected levels of future disposal activities at the designated sites also are not expected to have any significant adverse effects. The following are the four main reasons why EPA came to the conclusion of no unacceptable adverse effects.

First, as discussed above, EPA has concluded that any contaminants in material permitted for disposal—having satisfied the dredged material criteria in the regulations that restrict any toxicity and bioaccumulation—will not cause any significant adverse effects on fish, shellfish, or other aquatic organisms. Furthermore, because both the CLIS and

WLIS sites are depositional, dredged material disposed at the sites is expected to remain there. Second, as also discussed above, the disposal sites do not encompass any especially important, sensitive, or limited habitat for the Sound's fish and shellfish, such as key spawning or nursery habitat for species of finfish. Furthermore, while some commenters in the EIS process expressed the concern that dredged material disposal has caused or contributed to the recent ''die-off'' of lobster in the western region of the Sound, or recent increases in the incidence of shell disease in the eastern portion of the Sound, EPA explained in detail in the EIS and Responses to Comments why dredged material disposal is not regarded to have caused or contributed significantly to either problem.

Third, while EPA found that a small number of demersal fish (*e.g.*, winter flounder), shellfish (*e.g.*, clams and lobsters), benthic organisms (*e.g.*, worms), and zooplankton and phytoplankton could be lost due to the physical effects of disposal (*e.g.*, burial of organisms on the bottom by dredged material and entrainment of plankton in the water column by dredged material upon its release from a disposal barge), EPA also determined that these minor adverse effects would be neither unreasonable nor unacceptable. This determination was based on EPA's conclusion that the numbers of organisms potentially affected represent only a minuscule percentage of those in the central and western regions of the Sound, and the Corps' disposal site monitoring showing the rapid recovery of the benthic community in an area covered with dredged material. In addition, any physical effects will be limited by the relatively few months in which disposal is permitted by the ''environmental window'' restrictions.

Fourth, EPA has determined that vessel traffic associated with dredged material disposal will not have any unreasonable or unacceptable adverse effects on fishing. As explained above, environmental window restrictions will limit any disposal to the period between October 1 and April 30, and often fewer months depending on species-specific dredging windows for each dredging project, each year. Moreover, there is generally far less vessel traffic in the months when disposal would occur due to the seasonal nature of recreational and commercial boating.

There currently are no mineral extraction activities or desalinization facilities in the central and western Long Island Sound region with which disposal activity could potentially interfere. Energy transmission pipelines and cables are located near the sites, but none are within their boundaries. While at the time of this evaluation only three pipelines were in place, development of several new pipelines is anticipated in the future and will be prohibited from traversing the sites.

No fish farming currently takes place in Long Island Sound, and the only form of shellfish culture in the area, oyster production, occurs in nearshore locations far enough away from the two designated disposal sites that it should not be impacted in any manner by this action. Finally, neither site is in an area of special scientific importance; in fact, areas with such characteristics were screened out very early in the alternatives screening process.

Accordingly, depositing dredged material at the sites will not interfere with any of the activities described in this criterion or other legitimate uses of Long Island Sound.

9. The Existing Water Quality and Ecology of the Sites as Determined by Available Data or by Trend Assessment or Baseline Surveys (40 CFR 228.6(a)(9))

EPA's analysis of existing water quality and ecological conditions at the site in light of available data, trend assessments and baseline surveys indicates that use of the designated disposal sites will cause no unacceptable or unreasonable adverse environmental effects. Considerations related to water quality and various ecological factors (*e.g.*, sediment quality, benthic organisms, fish and shellfish) have already been discussed above in relation to other site selection criteria, and are discussed in detail in the FEIS and supporting documents. In considering this criterion, EPA took into account existing water quality and sediment quality data collected at the disposal sites, including from the Corps' DAMOS site monitoring program. Furthermore, EPA and the Corps have, following solicitation of public comments, prepared Final SMMPs for both the CLIS and WLIS sites to guide future monitoring of site conditions.

10. Potentiality for the Development or Recruitment of Nuisance Species in the Disposal Sites (40 CFR 228.6(a)(10))

Monitoring at disposal sites in Long Island Sound over the past 20 years has shown no recruitment of nuisance species capable of harming human health or the marine ecosystem and no such adverse effects are expected to occur at the CLIS and WLIS sites in the future. EPA and the USACE will continue to monitor the sites under the SMMPs, which include a ''management focus'' on ''changes in composition in numbers of pelagic, demersal, or benthic biota at or near the disposal sites'' (see section 6.1.5 of the SMMPs, Appendix J of the FEIS).

11. Existence at or in Close Proximity to the Sites of Any Significant Natural or Cultural Feature of Historical Importance (40 CFR 228.6(a)(11))

Due to the location of the two sites in the waters of central and western Long Island Sound, the cultural resources that have the greatest potential for being impacted are shipwrecks. A review of the current NOAA and Warren C. Reiss Marine Shipwrecks databases revealed a total of 39 shipwrecks throughout the Sound, but none are located within the disposal site boundaries, a fact confirmed by the Connecticut State Historic Preservation Office. While none of the known shipwrecks of historic significance are located within the sites, the central and western regions of Long Island Sound are known to have at least 12 and four shipwrecks, respectively. It is possible that there are other as yet undiscovered shipwrecks in the area. As additional side-scan sonar surveys are conducted at the disposal sites in the future under the SMMPs, and if potential shipwrecks are identified, EPA will take appropriate action in cooperation with federal and state historic preservation officials in response to any significant cultural resources.

The Connecticut State Historic Preservation Office also determined that there are no known aboriginal artifacts at the CLIS and WLIS disposal sites. Two of the region's Indian tribes (the Eastern Pequot Indians of Connecticut and Narragansett Indian Tribe) participated as cooperating agencies during the development of the EIS, and neither of them identified any natural nor cultural features of historical significance at either site.

c. Disposal Site Management (40 CFR 228.3, 228.7, 228.8 and 228.9)

The CLIS and WLIS disposal sites will be subject to specific management requirements to ensure that unacceptable adverse environmental impacts do not occur. Examples of these requirements include: Restricting the use of the sites to the disposal of dredged material that has been determined to be suitable for ocean disposal following MPRSA and/or CWA requirements in accordance with the provisions of MPRSA section 106(f); monitoring the disposal sites and their associated reference sites, which are not used for dredged material disposal, to assess potential impacts to the marine

environment by providing a point of comparison to an area unaffected by dredged material disposal; and retaining the right to limit or close these sites to further disposal activity if monitoring or other information reveals evidence of unacceptable adverse impacts to the marine environment. In addition, although not technically a site management requirement, disposal activity at the sites will generally be limited to the period between October 1 and April 30, but often less depending on dredging windows to protect certain species, as described above. EPA and the Corps have managed and monitored dredged material disposal activities at the CLIS and WLIS sites since the early 1980s. Site monitoring has been conducted under the Corps' DAMOS disposal site monitoring program.

In accordance with the requirements of MPRSA section 102(c) and 40 CFR 228.3, EPA and the Corps developed Site Management and Monitoring Plans (SMMPs) for both the CLIS and WLIS sites. Draft SMMPs for both sites were issued for public review and comment in conjunction with the DEIS and incorporated in the DEIS as Appendix J. After considering public comment, the agencies issued the Final SMMPs in conjunction with the FEIS and incorporated them in the FEIS as Appendix J. The SMMPs describe in detail the specific management and monitoring requirements for both sites. With respect to site monitoring, the SMMPs build on the Corps' existing DAMOS monitoring program, which will continue to provide the backbone of the site monitoring effort.

2. National Environmental Policy Act (NEPA)

Public Involvement

Consistent with its voluntary NEPA policy, as described and referenced above, EPA has followed the NEPA process and undertaken NEPA analyses as part of its decision-making process for the disposal site designations. EPA published a Notice of Intent to prepare an EIS, held public meetings regarding the scope of issues to be addressed by the EIS, published a Draft EIS for public review and comment in September 2003, and published a Final EIS in March 2004, including responses to public comments on the Draft EIS. The FEIS, entitled, ''Final Environmental Impact Statement for the Designation of Dredged Material Disposal Sites in Central and Western Long Island Sound, Connecticut and New York,'' assesses and compares the effects, including the environmental effects, of designating dredged material disposal sites in central and western Long Island Sound, and of various alternative approaches to managing dredging needs, including the ''no action'' alternative (*i.e.*, the alternative of not designating any open-water disposal sites). *See* 40 CFR 1502.14.

EPA is the agency authorized by the MPRSA to designate dredged material disposal sites and was responsible for the EIS. The U.S. Army Corps of Engineers (USACE, or Corps) was a cooperating agency in the development of the EIS, *see* 40 CFR. 1508.5, because of its knowledge concerning the region's dredging needs, its technical expertise in monitoring and assessing the environmental effects of dredging and dredged material disposal, its history in the regulation of dredged material disposal in Long Island Sound and elsewhere, and its legal role in regulating dredged material disposal and managing and monitoring disposal sites. *See* MPRSA sections 102(c) and 103 and 40 CFR part 225 and 40 CFR 228.4(e). The Corps also brought significant financial and human resources to bear on this large and complex project. To take advantage of expertise held by other entities, and to ensure compliance with all applicable legal requirements, EPA also worked in close coordination with other federal agencies, including NMFS and USFWS, state environmental and coastal zone management agencies, local governments, and Indian Tribal governments. The NMFS, Connecticut Department of Environmental Protection (CT DEP), New York Department of Environmental Conservation (NY DEC), Eastern Pequot Indians of Connecticut, and Narragansett Indian Tribe participated as ''cooperating agencies'' in preparation of the EIS.

Consistent with the public participation provisions of the NEPA regulations, EPA and the Corps conducted an extensive public involvement program throughout the development of the FEIS. The agencies formed a ''working group'' comprising stakeholders from the Long Island Sound region and held numerous public meetings and workshops to provide the public with information on the EIS process and the results of studies conducted in support of the EIS, and to give the public ample opportunity to provide input to the NEPA review effort. The following discussion summarizes the extensive public participation program conducted by EPA and the Corps; detailed descriptions are provided in Chapter 7 and Appendix A of the FEIS.

On June 3, 1999, EPA published a Notice of Intent in the **Federal Register** (64 FR 29865) and mailed the notice to approximately 7000 interested individuals and organizations registered in the Long Island Sound EIS mailing list. The notice stated EPA's intent to prepare an EIS to, ''consider the potential designation of one or more dredged material disposal sites in Long Island Sound,'' pursuant to MPRSA and CWA requirements. It further stated that the EIS would evaluate the four existing dredged material disposal sites that were active at the time (CLIS, WLIS, Cornfield Shoals, and New London), ''as well as additional alternatives including other open-water disposal sites, other types of dredged material disposal and management, and the no-action alternative.'' It also announced three public scoping meetings to be held later that month to explain the EIS process and solicit public input.

Accordingly, in June 1999, EPA and the USACE held three public scoping meetings in Connecticut and New York to: (1) To inform the public about the project; (2) explain the respective roles of EPA and the Corps and the other cooperating or coordinating federal, state and tribal agencies, and the public, and (3) request comments on the draft scope of work for the EIS and related studies (detailed in Appendix A of the FEIS). The scoping meetings also served to identify and record public views regarding issues and environmental considerations for potential examination and analysis in the EIS. A total of approximately 130 people attended the three public scoping meetings.

EPA and the Corps also conducted two series of public workshops in October 1999 and April 2000 in Connecticut and New York to discuss, and seek public input concerning, the development of the EIS. Topics covered at the workshops included: Identification of dredged material management alternatives; the process for screening and evaluating all the alternatives; and a review of existing data and data collection needs. A total of approximately 200 people attended the four public workshops.

In 2000, EPA and the Corps established a volunteer public ''working group'' comprising individuals representing marine industries, boaters, environmental groups, fishing interests, and local governments to provide guidance in the development of the EIS. Five working group meetings were held between July 2000 and November 2002; attendance at these meetings ranged from 27 to 44 individuals, including agency staff and contractors. Topics addressed by the working group sessions included: Potential environmental impacts to be assessed in

the EIS; the results of field studies for lobster, fish, and benthic resources; fishing activities; upland disposal alternatives; dredging needs; economic analyses; and Geographic Information System (GIS) meta-databases.

Throughout the EIS development process, EPA and the Corps also met with other federal and state agencies to keep them apprized of progress on the project and to solicit input. Other agencies that participated regularly throughout the process include the NMFS, USFWS, CT DEP, NY DEC, and the New York Department of State (NY DOS). Ten interagency meetings and teleconferences were held between March 1999 and January 2003 to review progress and get feedback, and EPA and the Corps were in regular contact with representatives of these agencies throughout the EIS process.

As one of the first steps in the EIS process, EPA and the Corps, in cooperation with other federal and state agencies delineated a ''Zone of Siting Feasibility'' (ZSF). The ZSF is the geographic area from which reasonable and practicable open-water dredged material disposal site alternatives should be selected for evaluation. EPA's 1986 site designation guidance manual describes the factors that should be considered in delineating the ZSF, and recommends locating open-water disposal sites within an economically and operationally feasible radius from areas where dredging occurs. Other factors to be considered include navigational restrictions, political or other jurisdictional boundaries, distance to the edge of the continental shelf, the feasibility of surveillance and monitoring, and operation and transportation costs. Consistent with the guidance, in 1999, EPA, in cooperation with the other agencies, established the ZSF to include the entire Long Island Sound, from Throgs Neck at the western end to a line from Montauk Point to Block Island and a line from Block Island due north to the Rhode Island shoreline on the eastern end.

In March 2002, however, EPA published an Environmental News Notice announcing its intent to modify the ZSF and the scope of the EIS in order to assess the need for open-water disposal sites in Long Island Sound in two phases, with the first EIS to address the central and western regions of the Sound and a later Supplemental EIS to address the eastern region of the Sound. The ZSF boundaries were then modified to address only the central and western regions of Long Island Sound, with boundaries on the western end that extend from the confluence of the East and Harlem rivers at Hell's Gate and boundaries on the eastern end that extend from Mulberry Point in Guilford, CT, to Mattituck Point in Mattituck, NY.

The primary reasons for this modification in the scope of the EIS were: (1) The need to assess in a timely manner the appropriateness of maintaining continued use of a site in the central Long Island Sound region, given the February 2004 termination date for use of the CLIS disposal site pursuant to the Corps' site selection authority; (2) the geographical and environmental independence of the dredging and disposal needs, and alternatives for meeting those needs, of the central and western regions of Long Island Sound from those of eastern Long Island Sound; and (3) the fact that the change in scope would not preclude consideration of a comprehensive range of disposal alternatives, or otherwise predetermine the conclusions, for either the current EIS or for a future supplemental EIS to address eastern Long Island Sound.

EPA completed the ''Draft Environmental Impact Statement for the Designation of Dredged Material Disposal Sites in Central and Western Long Island Sound, Connecticut and New York'' (DEIS) in early September 2003. The DEIS identified the designation of CLIS and WLIS as long-term dredged material disposal sites under the MPRSA as EPA's preferred alternative. On September 12, 2003, EPA published in the **Federal Register** the proposed rule to designate the CLIS and WLIS disposal sites (68 FR 53687), together with a notice of availability of the DEIS and Draft SMMPs (68 FR 53730).

EPA provided for a 45-day public review and comment period, until October 27, 2003. EPA also posted these documents on the EPA New England web site, and mailed notices and copies of the DEIS and supporting material to a large mailing list of agencies, tribes, organizations, members of Congress, and individual members of the public. The **Federal Register** notice also announced that EPA would hold four public hearings—afternoon and evening sessions on September 30, 2003 in Stony Brook, NY, and on October 1, 2003 in Stamford, CT—to present information on the DEIS and solicit oral and written comments.

On October 9, 2003, in response to several requests from the public to extend the comment period and hold another public hearing, EPA published a notice extending the public comment period by 21 days, to November 17, 2003 (68 FR 58296), and held another public hearing on November 13, 2003 in Stamford, CT. On November 28, 2003 in response to requests from two members of Congress to extend the comment period and hold additional public hearings, EPA published a notice extending the public comment period by another 28 days, to December 15, 2003 (68 FR 66825). EPA also held another public hearing on December 10, 2003 in Stony Brook, NY.

The comment period closed on December 15, 2003. In addition to the oral testimony transcribed at the public hearings, EPA received written comments concerning the DEIS from approximately 350 individuals and organizations. EPA carefully considered the comments concerning the DEIS and responded to them in Appendix L of the FEIS. EPA also made certain revisions to its NEPA analysis, including improvements to the explanations of the purpose and need for the site designations and the alternatives analysis, based on the comments and information provided during the public comment period.

On April 9, 2004, EPA published a notice of availability of the FEIS in the **Federal Register** for a 30-day public review and comment period, ending on May 10, 2004 (69 FR 18898). EPA then published an amended notice extending the comment period to May 17, 2004 (69 FR 26818). EPA also issued a press release announcing the availability of the FEIS for public comment, posted the FEIS on the EPA New England web site, and mailed notices and/or copies of the FEIS and supporting material to a large mailing list of agencies, tribes, organizations, elected officials, and individual members of the public. EPA and the Corps also held two public information meetings, on May 4, 2004, in Islandia, NY, and May 5, 2004, in Stamford, CT, to explain how comments on the DEIS were addressed in the FEIS, and to answer questions about the decision. Although federal agencies are not required to solicit comment on a FEIS, EPA nonetheless did so to provide the public with further opportunity to comment on the decision and to ensure that the agency had every opportunity to consider the views of the public.

In response to requests from the public, EPA announced at the two public information meetings, and through a press release issued on May 4, 2004, that it was extending the comment period by 15 days, to June 1, 2004. EPA also sent letters to members of the New York and Connecticut congressional delegations informing them of the extension because of the interest in the timing of the comment period expressed by certain members of those delegations.

The comment period for the FEIS closed on June 1, 2004. EPA received written comments from approximately 2900 individuals and organizations. EPA has given careful consideration to these comments, as well as to concerns raised by the NY DOS and other agencies, in reaching a final decision to designate the proposed CLIS and WLIS dredged material disposal sites. EPA responded to comments it received concerning the FEIS in a publicly available ''Response to Comments'' document, as described below in the Public Comments section.

Environmental Impact Statement

The FEIS evaluates whether—and, if so, which—open-water dredged material disposal sites should be designated in the central and western regions of Long Island Sound. The FEIS describes the purpose and need for any such designations, evaluates several alternatives to this action, including the option of ''no action'' (*i.e.*, no designation), and concludes that EPA designation of the CLIS and WLIS disposal sites under the MPRSA is the preferred alternative. The purpose of these designations is to provide long-term, open-water dredged material disposal sites as potential options for the future disposal of such material. The action is necessary because periodic dredging and dredged material disposal is unavoidably necessary to maintain safe navigation and marine commerce in Long Island Sound.

As previously noted, dredging in the central and western regions of Long Island Sound is projected to generate approximately 20 million cubic yards of dredged material over the next 20 years. EPA evaluated potential alternatives to open-water disposal in Long Island Sound but determined that they were insufficient to meet the regional dredging needs. In accordance with EPA regulations, *see* 40 CFR 227.16, use of alternatives to open-water disposal will be required when they provide a practicable, environmentally preferable option for the dredged material from any particular disposal project. EPA's designation of the CLIS and WLIS disposal sites, however, will provide open-water disposal sites as potential options for dredged material regulated under the MPRSA that has been tested and determined to be environmentally suitable for open-water disposal. Sediments found to be unsuitable for open-water disposal will be required to seek alternatives other than the CLIS and WLIS disposal sites.

EPA's initial screening of alternatives, which involved input from other federal and state agencies, local governments, and the public, led to the determination that the open-water disposal sites were the most environmentally sound, cost-effective, and operationally feasible options for the large amount of dredged material expected to be found suitable for open-water disposal over the 20-year planning horizon. EPA's analysis of alternatives for disposing of dredged material from navigation channels and harbors in central and western Long Island Sound evaluated several different potential alternatives, including open-water disposal sites, upland disposal, beneficial uses, sediment treatment, and the no-action alternative. From this analysis, EPA determined that open-water disposal sites, such as CLIS and WLIS, were the only alternatives that would provide sufficient practicable disposal capacity to meet long-term regional dredged material disposal needs. Again, this analysis also acknowledged that options for dredged material management other than open-water disposal might be identified and required for specific dredged material disposal projects in the future.

EPA also evaluated several open-water disposal site alternatives other than the CLIS and WLIS sites. This evaluation considered multiple factors, such as reasonable distances to transport dredged material, the potential for adverse effects on important natural resources, and other measures indicating incompatibility for use as a disposal site. Specific factors evaluated included the sensitivity and value of natural resources, geographically limited habitats, fisheries and shellfisheries, shipping and navigation lanes, physical and environmental parameters, and economic and operational feasibility. The analysis was carried out in a tiered process. The final tier involved a detailed analysis of the no-action alternative and the following four open-water alternative sites: CLIS, Milford, Bridgeport, and WLIS. Based on this analysis, the CLIS and WLIS sites were identified as the preferred alternatives for designation as open-water dredged material disposal sites. Management and monitoring strategies were developed for each site and are described in the SMMPs.

As stated above, for this action, this final rule and preamble also serve as EPA's record of decision under NEPA.

3. Coastal Zone Management Act (CZMA)

Based on the evaluations presented in the FEIS and supporting documents, and a review of the federally approved Connecticut and New York coastal zone programs and policies, EPA has determined that designation of the CLIS and WLIS sites for open-water dredged material disposal under the MPRSA is consistent with the enforceable policies of the coastal zone management programs of Connecticut and New York. EPA provided a written determination to this effect to each state. Thus, EPA has satisfied the CZMA's requirement that federal agencies provide relevant state(s) with a determination that each federal agency activity affecting the uses or natural resources of a state's coastal zone is consistent to the maximum extent practicable with the enforceable policies of the state's coastal zone management program.

In the EPA's view, there are several broad reasons why the disposal site designations are consistent with the applicable, enforceable policies of both states' coastal zone programs. First, the designations are not expected to cause any significant adverse impacts to the marine environment, coastal resources, or uses of the coastal zone. Indeed, EPA expects the designations to benefit uses involving navigation and berthing of vessels by facilitating needed dredging, and to benefit the environment by concentrating any open-water dredged material disposal at a small number of environmentally appropriate sites designated by EPA and subject to the previously described SMMPs. Second, designation of the sites does not actually authorize the disposal of any dredged material at the sites, since any proposal to dispose dredged material from a particular project at a designated site will only be allowed if: (a) The material satisfies the sediment quality requirements of the MPRSA and the CWA; (b) no practicable alternative method of management with less adverse environmental impact can be identified; and (c) the disposal complies with the site restrictions set forth in today's final rule. Third, the designated disposal sites will be managed and monitored pursuant to an SMMP and, if adverse impacts are identified, use of the sites will be modified to reduce or eliminate those impacts. Such modification could further restrict, or even terminate, use of the sites, if appropriate. *See* 40 CFR 228.3, 228.11.

On January 22, 2004, EPA submitted its coastal zone consistency determination to the CT DEP Office of Long Island Sound Programs, which administers the state's coastal zone management program. CT DEP concurred with EPA's determination in a letter dated April 5, 2004.

On March 8, 2004, EPA submitted a coastal zone consistency determination to the Division of Coastal Resources in the New York Department of State (NY DOS). On June 3, 2004, EPA received a

letter from the NY DOS objecting to EPA's designation of the CLIS and WLIS disposal sites on the basis of its view that either EPA had provided insufficient information to support a CZMA consistency determination or, based on the information provided, the action was inconsistent with the enforceable policies of New York's Coastal Management Program (CMP).

EPA gave careful consideration to the issues raised by NY DOS and, after consultation with NY DOS and CT DEP, agreed to include certain additional Restrictions on the use of the sites that respond to the NY DOS's objections under the CZMA. These additional restrictions have enabled NY DOS to withdraw its CZMA objection to the disposal site designations, by letter dated May 13, 2005. EPA continues to hold the view that the site designations without the additional restrictions would still be consistent with the enforceable policies of New York's CMP. Nevertheless, EPA agrees that the additional site Restrictions place reasonable conditions on when the disposal sites may be used that provide enhanced assurance that the requirements of the CZMA, the MPRSA, and NEPA are met.

Moreover, adding these site use Restrictions represents a reasonable course of action lying between the alternatives of not designating any disposal sites at all, and designating sites for an indefinite term without the Restrictions. Both these alternatives, and others, were evaluated in the EIS supporting this action. Furthermore, the added site use Restrictions arise out of comments submitted by NY DOS and other parties and are consistent with EPA's environmental analysis and proposed action.

Summary of Restrictions

There is a total of fourteen paragraphs of Restrictions in the final rule. These Restrictions apply to all disposal subject to the MPRSA at the designated sites pursuant to this final rule. Thus, the Restrictions apply to all federal projects, and non-federal projects generating more than 25,000 cubic yards of dredged material. They do not apply to smaller non-federal projects since, as a matter of law, such projects are not subject to MPRSA requirements. Rather, any such disposal will be subject to whatever restrictions are imposed on a case by case basis through permits issued under Clean Water Act section 404.

The Restrictions apply both to all MPRSA permittees (*i.e.*, private parties and governmental agencies other than the USACE), and to the USACE itself which disposes of dredged material pursuant to authorizations rather than permits. The USACE is ''deemed'' to be a permittee by today's rule so as to make it subject to the site Restrictions. The intention of the final rule is to apply the Restrictions to all persons who may seek to dispose of dredged material at the sites under MPRSA.

The Restrictions in paragraph 1 are the same as in the proposed rule. They limit disposal to dredged material from Long Island Sound and vicinity. Dredged material will be considered to have come from Long Island Sound and vicinity so long as it come from harbors and navigation channels either on or near Long Island Sound.

The Restrictions in paragraph 2 require compliance with the Site Management and Monitoring Plans (SMMPs) that have been developed for the two sites. These SMMPs are set out as Appendix J to the FEIS—they have not changed since the time that the FEIS was published. These SMMPs may be changed in the future, as provided in MPRSA section 102(c)(3). Proposed changes will be subject to public comment consistent with MPRSA section 102(c)(3). The EPA will utilize the section 102(c)(3) procedures, rather than proposing changes to this designation rule every time there is a change to an SMMP.

The Restrictions in paragraphs 3–14 were added by the EPA (in response to comments) in order to enhance compliance with the MPRSA, and to address the issues raised by New York under the CZMA. The EPA consulted with both affected states, and the conditions have been agreed to by both the NY DOS and the CT DEP. They are designed to support the common goal of New York and Connecticut to reduce or eliminate the disposal of dredged material in Long Island Sound. To support this goal, the Restrictions contemplate that there will be a regional dredged material management plan (DMMP) for Long Island Sound that will guide the use of dredged material for projects which occur after the DMMP is completed. DMMPs are comprehensive studies carried out by the USACE, in consultation with the EPA and the affected states, to help manage dredged material in a cost-effective and environmentally acceptable manner. The Governors of New York and Connecticut have jointly requested the USACE to develop a DMMP for Long Island Sound. Consistent with the two states' requests, today's rule contemplates that the DMMP for Long Island Sound will include the identification of alternatives to open-water disposal and the development of procedures and standards for the use of practicable alternatives to open-water disposal, so as to reduce wherever practicable the open-water disposal of dredged material. The DMMP also may contain recommendations regarding the use of the sites themselves. In addition, the final rule contemplates that a Regional Dredging Team will be established to identify practicable alternatives to open-water disposal and recommend their use to the extent practicable, for projects proposed while the DMMP is being prepared (other than three already permitted and authorized projects).

In order to ensure that long-term disposal does not occur at the sites pursuant to today's designation absent restrictions to be developed by the DMMP, the final rule specifies that the use of the sites must be suspended or terminated under certain circumstances. First, paragraph 3 provides that, except as provided in paragraphs 4 and 5, the disposal of dredged material may not occur at the sites beginning eight years after the effective date of today's designations, unless a DMMP has been completed by the USACE. This eight-year deadline is subject to extension under paragraph 4 by agreement of various parties expected to participate in the development of the DMMP, namely the USACE, the EPA, the state of Connecticut and the state of New York. This deadline also is subject to extension by the EPA under paragraph 5, without agreement from other parties, if the EPA determines that the parties participating in the development of the DMMP have attempted in good faith to meet the deadline, but that the deadline has not been met due to factors beyond the parties' control (including funding). Such an extension may occur in addition to any extensions granted under paragraph 4, but may be only for one additional year. For example, if all parties agree to a one year extension, and the EPA later grants a one year extension, then the DMMP process could take a total of ten years (without the use of the sites being suspended or terminated).

If the final deadline set pursuant to paragraphs 3, 4 and 5 is missed, use of the sites will be prohibited for a year. If at the end of that year, a DMMP still has not been completed, use of the sites pursuant to today's designation will terminate.

Paragraph 3 of the final rule also specifies that use of the sites will be suspended or terminated if following the completion of the DMMP within the eight-year (plus extensions) time frame, the EPA does not thereafter amend today's rule to incorporate procedures

and standards that are consistent with those recommended in the DMMP. Paragraph 7 gives the EPA 120 days from the completion of the DMMP to adopt such procedures and standards. If the EPA misses the deadline specified in paragraph 7, use of the sites will be suspended until the EPA issues a final amended rule. If the EPA makes a final determination and adopts procedures and standards consistent with the DMMP's recommendations, then use of the sites will continue (but will be restricted in accordance with the adopted DMMP recommendations). If the EPA makes a final determination not to adopt procedures and standards consistent with the DMMP recommendations, then use of the sites pursuant to today's rule will be terminated. The EPA notes that it hopes to be able to support the DMMP recommendations. However, the EPA cannot commit in advance to do so, but rather must preserve its discretion, in response to public comments, not to adopt the DMMP recommendations.

The amended EPA rule need not be identical to the DMMP recommendations. If the amended EPA rule is not identical to the DMMP recommendations, but the EPA has adopted substantially all of the procedures and standards for the use of the sites and the use of practicable alternatives to open-water disposal recommended in the DMMP, the use of the sites will not terminate. In addition, the amended EPA rule will be considered ''consistent'' even if the EPA has not adopted a recommendation (or recommendations) of the DMMP that are not consistent with applicable law. Of course, the amended EPA rule will be considered ''consistent'' even if the EPA goes beyond the recommendations of the DMMP and adopts stricter standards.

In addition, it is not the intention of today's final rule to have use of the sites terminate simply because of a good faith error by the EPA. Thus, if a party believes that EPA's final amended rule does not contain substantially all procedures and standards recommended in the DMMP, that party will have the obligation to first petition the EPA prior to filing any court action, so as to give the EPA the opportunity to correct any inadvertent omission or to reaffirm its determination that it has adopted substantially all procedures and standards in the DMMP. A party will be able to go directly to court to seek termination of the use of the sites only if it can show that the EPA, in amending the rule, did not make a good faith attempt to adopt procedures and standards that were consistent with those recommended in the DMMP.

The final rule contemplates that the USACE will develop through the DMMP process procedures and standards to reduce or eliminate disposal of dredged material in Long Island Sound to the greatest extent practicable. If any party is not satisfied that the final DMMP recommends such procedures and standards, then paragraph 7 of the Restrictions in today's rule specifies that any person may petition the EPA to do a rulemaking to amend these designations to establish different or additional standards.[1] The EPA also may initiate such a rulemaking on its own initiative. While the use of the sites will not automatically terminate if it is the view of NY DOS or others that the DMMP does not recommend sufficient measures, the EPA recognizes that such a conclusion by the NY DOS or others could lead to a revival of the past objections by the NY DOS and others to the continued use of these sites. At minimum, any failure to recommend sufficient measures could have the unfortunate effect of creating the need to revisit issues in a petition process. Thus, the EPA will work with the USACE, and the states of New York and Connecticut, to try to ensure that this does not occur.

While any DMMP will be carried out by the USACE, active support and cooperation will be needed from other parties, including the states of Connecticut and New York. EPA believes that there has been such support and cooperation and fully expects that this will continue. However, to help ensure that any DMMP process moves forward expeditiously, paragraph 6 of the Restrictions specifies that the EPA will conduct an annual review of progress in developing the DMMP. If the EPA finds that the DMMP is being unreasonably delayed by one or more parties, paragraph 6 specifies that the EPA may as appropriate: (i) Suspend use of the sites (through a rulemaking amending today's site designations) even prior to the deadlines established in paragraphs 3–5 of the Restrictions, or (ii) exercise (again through rulemaking) its statutory and regulatory authorities regarding designation of ocean disposal sites (which could include new site designations without including the requirement that there be a DMMP). Of course, EPA expects all parties to continue to cooperate in fostering a DMMP, so that use of the above measures by the EPA may never be necessary.

The final rule contemplates that there will be a three staged process for supporting the goal of reducing or eliminating the disposal of dredged material in Long Island Sound. At all times, site use will be limited by the need to comply with all applicable statutory and regulatory requirements, including the prohibition on open-water disposal if there is a ''practicable alternative'' under 40 CFR 227.16. However, over time, compliance with 40 CFR 227.16 and today's final rule will be achieved in three different ways. First, pursuant to paragraph 8 of the Restrictions, disposal from three enumerated projects that already have been authorized or permitted will be allowed without having to follow any additional particular procedures or standards. Such disposal must meet all applicable statutory and regulatory requirements.[2] Second, for projects initiated other than those projects but before completion of the DMMP, the requirements of paragraph 9 will apply. In particular, each project will be subject to review by a Regional Dredging Team, which will work to identify practicable land-based alternatives and to ensure their use to the maximum extent practicable. Third, for projects initiated after completion of the DMMP, the requirements of paragraph 7 will apply. As discussed above, the final rule contemplates that the DMMP will develop and the EPA will adopt (subject to consideration of public comments) procedures and standards for the use of practicable alternatives to open-water disposal. The EPA hopes that the combined efforts of the Regional Dredging Team and the parties participating in the DMMP will lead to a continual reduction in the use of the sites over time.

It should be noted that even after the EPA adopts procedures and standards consistent with the DMMP recommendations, the decision regarding whether there is a ''practicable alternative'' will continue to be made on a case by case basis, in connection with the permitting process. However, any case-by-case determinations will at a minimum need

[1] The EPA must act on any petition within 120 days, by either granting the petition (and proposing a rule change) or denying the petition. Disposal may continue while a petition is pending, but any disposal occurring after a rule change adopted in response to a petition will be subject to any additional requirements imposed pursuant to the granting of the petition and any resulting rule change.

[2] All phases of these projects are to be initiated within four years of today's designations. For the Norwalk project, dredged material management measures required by the Connecticut state certification are not considered to be a separate phase but rather will be part of the second phase.

to comply with any procedures and standards included in the site designations restrictions.

Paragraph 9 also emphasizes two points, consistently with the way in which the EPA interprets 40 CFR 227.16. First, ''practicable alternatives'' (as defined in 40 CFR 227.16) must be used for the maximum volume of dredged material practicable. That is, even if a practicable alternative is not available for all of the dredged material from a project, if a practicable alternative is available for a portion of the dredged material, it must be used for disposal of that portion of the material in order to at least reduce the use of the sites being designated today.

Second, the final rule recognizes that use of practicable alternatives may mean that there will be additional costs (in comparison to open-water disposal). Paragraph 9 incorporates by reference 40 CFR 227.16(b) of the EPA's ocean disposal regulations, which defines ''practicable alternative'' as an alternative which is, ''available at reasonable incremental cost and energy expenditures, which need not be competitive with the costs of ocean dumping, taking into account the environmental benefits derived from such activity, including the relative adverse environmental impacts associated with the use of alternatives to ocean dumping.'' Thus the final rule emphasizes that the designated sites may not be used whenever a ''practicable alternative'' is available even when this means added reasonable incremental costs. Under paragraph 9 and the general ocean dumping regulations, the USACE (the permitting agency) must make the initial determination of whether this test has been met, but the USACE decision is subject to review and possible objection by the EPA. Also, paragraph 9 is a restriction in an EPA site designation. Therefore, if the EPA objects to any USACE determination, use of the designated sites will be prohibited unless and until the EPA objection is resolved. This EPA oversight established by today's rule is in addition to the EPA's statutory and regulatory authority to review and object to USACE permits.

By definition, the requirement that projects use ''practicable alternatives'' will not impose unreasonably higher costs. Also, if an alternative does not have less adverse environmental impact or potential risk to other parts of the environment than use of the Sound, today's rule will not require that it be used. However, the EPA recognizes that even where use of Long Island Sound has been determined to be environmentally acceptable, there may be alternatives (*e.g.*, those involving beneficial use) that are environmentally preferable to use of the Sound. When such preferable alternatives are identified, they will need to be used if they are available at ''reasonable incremental cost.''

Today's final rule does not attempt to specify in advance how the ''reasonable incremental cost'' standard will be applied in any particular case. The regulation contemplates a balancing test, and the EPA believes that the determination is best made on a case-by-case basis. The final rule also does not attempt to specify who will need to pay for any reasonable incremental costs. Rather, the share of such costs (if any) to be borne by private parties, state government, local government, or the federal government also will need to be worked out in response to actual situations. It should be understood, however, that if the use of a practicable alternative is required in the future pursuant to today's rule (and 40 CFR 227.16), and no entity is willing to pay the reasonable incremental costs, then use of the sites will be prohibited for such projects even when this means that planned projects must be stopped.

Paragraph 10 of the Restrictions simply repeats the statutory and regulatory requirement that disposal at these sites will be limited to dredged sediments that comply with the Ocean Dumping Regulations. Under 33 U.S.C. 1413(d), the USACE may request and the EPA may grant a waiver allowing otherwise unsuitable materials to be disposed at open-water disposal sites. The EPA notes that no dredged material has ever been disposed under such a waiver at any open-water disposal site. However, paragraph 11 of the Restrictions provides for advance notice to the Governors of Connecticut and New York, in the unlikely event that there is a future request for such a waiver at these sites.

Paragraph 12 restricts use of the sites during severe weather conditions, in order to reduce the risk of spillage.

Paragraphs 13 and 14 of the Restrictions list various legal restrictions on what the EPA may agree to in a rule. These legal restrictions would apply even if they were not stated in today's final rule. First, as noted in paragraph 13, the parties participating in the DMMP will need to seek additional federal and state funding in order to develop the DMMP. The EPA cannot guarantee that federal funds will be made available to the USACE. Paragraph 13 also specifies that the sole remedy for any failure to meet the conditions specified in today's final rule shall be restriction of the authority to dispose of dredged material at these sites pursuant to today's designations. Thus, for example, if funding is not provided, neither the EPA nor the USACE nor any other party may be sued for failing to carry out the DMMP. Rather, the remedy if a DMMP is not developed is that the use of the sites pursuant to today's final rule will be terminated.

Paragraph 14 specifies that nothing in today's final rule precludes the EPA from designating other ocean disposal sites, not subject to the restrictions in this final rule, or taking any subsequent action to modify today's site designations, provided that the EPA makes any such designations or takes such subsequent action through a separate rulemaking in accordance with all applicable legal requirements. Under the MPRSA, the EPA cannot agree in advance that it will never (under any circumstances) designate other ocean disposal sites or that it will never change today's final rule. Notwithstanding this statement of legal rights, the EPA emphasizes that it is fully committed to development of a DMMP for Long Island Sound, and believes that the best environmental result will be to have the DMMP develop recommendations for the management of dredged material subject to the MPRSA throughout Long Island Sound. The EPA also recognizes that if it takes a subsequent action to designate an ocean disposal site in Long Island Sound not subject to the Restrictions set forth in today's final rule, the NY DOS (or others) could renew their past objections and challenge such an action.

Paragraph 14 also provides that this final rule shall not be interpreted to restrict the EPA's authorities under the MPRSA or the implementing regulations, or to amend the implementing regulations. The statute and regulations establish minimum requirements with which the EPA and others must comply. While this final rule contains additional provisions designed to address issues raised under the CZMA, and enhance compliance with the MPRSA, these provisions do not excuse any non-compliance with the general ongoing requirements of the MPRSA. In addition, while the final rule contains provisions designed to better implement regulatory requirements (such as the ''practicable alternatives'' requirement), it does not amend any existing regulatory requirement.

4. Endangered Species Act (ESA)

During the EIS development process, EPA consulted under the federal Endangered Species Act (ESA) with the

NMFS and the USFWS regarding the potential for the designation and use of any of the alternative open-water disposal sites to jeopardize the continued existence of any federally listed threatened or endangered species, or result in the adverse modification of any critical habitat of such species. EPA initiated consultations regarding the proposed CLIS and WLIS disposal sites with both the NMFS and the USFWS on February 13, 2003. This consultation process is fully documented in the FEIS. EPA provided the NMFS and the USFWS with EPA's conclusion that the proposed disposal site designations for the CLIS and WLIS sites were not likely to adversely affect any federally listed endangered or threatened species or designated critical habitat of any such species.

On February 5, 2004, NMFS sent a letter concurring with EPA's proposed action, stating that the designation of CLIS and WLIS, ''is not likely to adversely affect listed species under the jurisdiction of NOAA Fisheries.'' NMFS also noted that, ''no further consultation pursuant to section 7 of the ESA is required.''

On February 12, 2004, USFWS also concurred with the findings of the EIS that designation of the disposal sites was not likely to adversely affect any federally listed species under its jurisdiction. The letter further stated that ''no habitat in the project impact areas is currently designated or proposed critical habitat under provisions of the [ESA]'' (87 Stat. 884 as amended; 16 U.S.C. 1531 *et seq.*). Copies of these letters are provided in Appendices K and L of the FEIS.

5. Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA)

On February 13, 2003, EPA initiated consultation with the NMFS under the Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act. This consultation addressed the potential for the designation of any of the alternative ocean disposal sites being evaluated to adversely affect EFH. In a letter dated January 28, 2004, NMFS concurred with EPA's determination that the designation of the CLIS and WLIS disposal sites would not adversely affect EFH. This consultation process is fully documented in the FEIS.

F. Public Comments

Dredging and dredged material disposal in Long Island Sound has long presented controversial and complex issues. Considering that fact, it is not surprising that EPA received many comments both supporting and opposing the designation of long-term, open-water dredged material disposal sites in the Sound.

As discussed above, EPA issued a Draft EIS and a Proposed Rule for the disposal site designations in September 2003. *See* 68 FR 53687 (Sept. 12, 2003) (Proposed Rule); 68 FR 53730 (Sept. 12, 2003) (Notice of Availability of the Draft EIS and Draft SMMPs for Public Review). EPA received numerous comments addressing the DEIS, but none specifically directed at the proposed rule. These public comments were submitted both in writing and in oral testimony at the six public hearings held by EPA and the Corps concerning the DEIS and the proposed disposal site designations. EPA considered all these comments, as required by NEPA, responded to them in Appendix L to the Final EIS issued by the Agency in April 2004. *See* 69 FR 18898 (April 9, 2004) (Notice of Availability of the FEIS for public review). EPA will not repeat those comments and responses here and, instead, urge interested readers to review Appendix L of the FEIS.

Although not required to do so by NEPA, *see* 40 CFR 1503.1(b), EPA opened a comment period on the FEIS and requested any comments from the public. Numerous public comments were submitted regarding the FEIS. In reaching its final decisions regarding the present action, as presented in this final rule, which also constitutes the record of decision (ROD) for NEPA purposes, EPA reviewed and considered all the written comments as well as the oral comments received at various public meetings held concerning the FEIS. Although NEPA does not require that federal agencies provide responses to public comments concerning a Final EIS, EPA has in this instance produced a separate Response to Comments document addressing the public comments on the FEIS. These responses to comments will not be repeated here, but the Response to Comments document is available on EPA's Web site at *http://www.epa.gov/region1/eco/lisdreg/* and EPA mailed copies of the document to elected officials, federal and state agencies, libraries, and other repositories in Connecticut and New York. EPA also mailed a ''letter of availability'' with instructions on how to access the Response to Comments document to a mailing list of approximately 2800 addresses. As explained in the Responses to Comments, EPA believes that its final action, as presented in this final rule, properly addresses the issues raised in the public comments.

G. Action

EPA is publishing this final rule designating the Central Long Island Sound (CLIS) and Western Long Island Sound (WLIS) open-water dredged material disposal sites for the purpose of providing environmentally sound open-water disposal options for possible use in managing dredged material from harbors and navigation channels in Long Island Sound and its vicinity in the states of Connecticut and New York. Without these dredged material disposal site designations, there is presently no open-water disposal site available in the central region of Long Island Sound, while the existing disposal site in the western region of the Sound would only be available for five more years of use pursuant to the Corps' site selection authority under MPRSA section 103(b).

The site designation process has been conducted consistent with the requirements of the MPRSA, CWA, NEPA, CZMA, and other applicable federal and state statutes and regulations. The basis for this federal action is further described in an FEIS published by EPA in April 2004 that identifies EPA designation of the CLIS and WLIS disposal sites as the preferred alternatives. This rule also serves as EPA's ROD in the NEPA review supporting the designation of these sites. The sites are subject to management and monitoring protocols to prevent the occurrence of unacceptable adverse environmental impacts. These protocols are spelled out in Site Management and Monitoring Plans (SMMPs) for each site. The two SMMPs are included as Appendix J to the FEIS. Under 40 CFR 228.3(b), the Regional Administrator of EPA Region 1 is responsible for the overall management of these sites.

As previously explained, the designation of these disposal sites does not constitute or imply EPA's approval of open-water disposal at either site of dredged material from any specific project. Any proposal to dispose of dredged material at one of the sites must first receive proper authorization from the USACE under MPRSA section 103. In addition, any such authorization by the Corps is subject to EPA review under MPRSA section 103(c), and EPA may condition or ''veto'' the authorization as a result of such review in accordance with MPRSA section 103(c). In order to properly obtain authorization to dispose of dredged material at either the CLIS or WLIS disposal sites under the MPRSA, the dredged material proposed for disposal must first satisfy the applicable criteria for testing and evaluating dredged

material specified in EPA regulations at 40 CFR part 227, and it must be determined in accordance with EPA regulations at 40 CFR part 227, subpart C, that there is no practicable alternative to open-water disposal with less adverse environmental impact. In addition, any proposal to dispose of dredged material under the MPRSA at the designated sites will need to satisfy all the site Restrictions included in this final rule as part of the site designations. *See* 40 CFR 228.8 and 228.15(b)(3) and (4).

H. Supporting Documents

1. CT DEP. 1998. Long Island Sound Dredged Material Management Approach. A study report prepared by SAIC for the State of Connecticut, Department of Environmental Protection, Office of Long Island Sound Programs, Hartford, CT. August 1998.

2. EPA Region 1/USACE NAE. 2005. Response to Comments on the Final Environmental Impact Statement for the Designation of Dredged Material Disposal Sites in Central and Western Long Island Sound, Connecticut and New York. U.S. Environmental Protection Agency, Region 1, Boston, MA. and U.S. Army Corps of Engineers, New England District, Concord, MA. April 2005.

3. EPA Region 1. 2005. Memorandum to the File Responding to the Letter from the New York Department of State Objecting to EPA's Federal Consistency Determination for the Dredged Material Disposal Site Designations. U.S. Environmental Protection Agency, Region 1, Boston, MA. May 2005.

4. EPA Region 1/USACE NAE. 2004. Final Environmental Impact Statement for the Designation of Dredged Material Disposal Sites in Central and Western Long Island Sound, Connecticut and New York. U.S. Environmental Protection Agency, Region 1, Boston, MA and U.S. Army Corps of Engineers, New England District, Concord, MA. March 2004.

5. EPA Region 1/USACE NAE. 2004. Regional Implementation Manual for the Evaluation of Dredged Material Proposed for Disposal in New England Waters. U.S. Environmental Protection Agency, Region 1, Boston, MA. and U.S. Army Corps of Engineers, New England District, Concord, MA. April 2004.

6. EPA Region 2/USACE NAN. 1992. Guidance for Performing Tests on Dredged Material Proposed for Ocean Disposal. U.S. Environmental Protection Agency, Region 2, New York, NY and U.S. Army Corps of Engineers, New York District, New York, NY. Draft Release. December 1992.

7. EPA/USACE. 1991. Evaluation of Dredged Material Proposed for Ocean Disposal-Testing Manual. U.S. Environmental Protection Agency, Washington, DC, and U.S. Army Corps of Engineers, Washington, DC. EPA–503/8–91/001. February 1991.

8. EPA Region 1/USACE NAE. 1991. Guidance for Performing Tests on Dredged Material Proposed for Ocean Disposal. U.S. Army Corps of Engineers, New England District and U.S. Environmental Protection Agency, Region 1, Boston, MA. Draft Release. December 1991.

9. Long Island Sound Study. 1994. Comprehensive Conservation and Management Plan for Long Island Sound. Long Island Sound Management Conference. September 1994.

10. NY DEC and CT DEP. 2000. A total maximum daily load analysis to achieve water quality standards for dissolved oxygen in Long Island Sound. Prepared in conformance with section 303(d) of the Clean Water Act and the Long Island Sound Study. New York State Department of Environmental Conservation, Albany, NY and Connecticut Department of Environmental Protection, Hartford, CT. December 2000.

J. Statutory and Executive Order Reviews

1. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866, 58 FR 51735 (October 4, 1993), the Agency must determine whether its regulatory action is ''significant'' and therefore subject to OMB review and the requirements of the Executive Order. The Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(A) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local or tribal governments or communities;

(B) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(C) Materially alter the budgetary impact of entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(D) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that this proposed action is not a ''significant regulatory action'' under the terms of Executive Order 12866 and is therefore not subject to OMB review.

2. Paperwork Reduction Act (PRA)

Revised in 1995, the PRA is managed by the Office of Management and Budget through its approval of Information Collection Requests (ICRs) submitted by federal agencies. The statute was written and revised to reduce the information collection burden on the public.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a request for the collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to a request for the collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9.

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501, *et seq.*) because it would not require persons to obtain, maintain, retain, report, or publicly disclose information to or for a federal agency.

3. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996, (SBREFA), 5 U.S.C. 601 et seq.

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act, or any other statute, unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. For the purposes of assessing the impacts of today's rule on small entities, a small entity is defined as: (1) A small business based on the Small Business Administration's (SBA) size standards; (2) a small governmental jurisdiction that is the government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any

not-for-profit enterprise which is independently owned and operated and is not dominant in its field. Examples of the types of small entities that could be subject to today's rule include small marinas and small municipal governments that might be responsible for conducting dredging and dredged material disposal (*see* section B, Potentially Affected Entities, above).

EPA has determined that this action will not have a significant impact on a substantial number of small entities. These dredged material disposal site designations under the MPRSA are only relevant for dredged material disposal projects subject to the MPRSA. Non-federal projects involving 25,000 cubic yards or less of material are not subject to the MPRSA and, instead, are regulated under CWA section 404. This action will, therefore, have no effect on such projects, other than perhaps to reduce expenses for such entities by providing a wealth of environmental data for use in determining whether disposing of dredged material from particular small, non-federal projects would be appropriate at the CLIS or WLIS disposal sites. ''Small entities'' under the RFA, as amended by SBREFA, are most likely to be involved with smaller projects not covered by the MPRSA. Therefore, EPA does not believe a substantial number of small entities will be affected by today's rule.

EPA also does not expect this action to have a significant effect on any small entities that are affected by the rule (*i.e.*, small, non-federal entities that propose to dispose of more than 25,000 cubic yards of material). These disposal site designations have the effect of providing long-term, environmentally acceptable open-water disposal options for dredged material subject to the MPRSA. These disposal options can only be utilized, however, by projects whose material meets the MPRSA sediment testing criteria and for which there is no practicable alternative means of management with less adverse environmental effects. *See* 40 CFR part 227, subparts A, B and C.

While dredged material disposal has been carried out under these requirements in the past in Long Island Sound, it has occurred at sites selected for short-term use by the Corps under its MPRSA section 103(b) site selection authority, rather than at sites designated for long-term use by EPA. Use of the Corps-selected site in the central region of the Sound has presently expired, and use of the site in western region of the Sound may only continue for five more years. In other words, without these designations, there would be no presently authorized open-water disposal site in the central region of the Sound and the sole site in the western region would only be available for five more years of use. Thus, if anything, designating these sites is likely to reduce expenses for small entities by providing cost-effective dredged material disposal options for appropriate projects, as well as by reducing expenses by providing current environmental information that can contribute to the environmental evaluation of future projects.

EPA recognizes that the Corps, the states, and EPA have agreed to try to develop a dredged material management plan (DMMP) for Long Island Sound and that EPA has placed restrictions on the use of the disposal sites for MPRSA projects, including termination of site use, if the DMMP is not completed in a timely way. EPA also recognizes that a goal of the DMMP will be to try to identify practicable alternatives to open-water disposal that may have less adverse environmental impacts, provided that they do not add an unreasonable amount of cost. EPA also recognizes that there will be interim procedures for identifying and utilizing practicable alternatives to ocean disposal, which will apply while the DMMP is being developed. Taking the site restrictions into account, EPA still does not believe this action will have a significant effect on a substantial number of small entities for four reasons. First, as explained above, EPA has concluded that this rule will not have a significant impact on a substantial number of small entities. Second, without these site designations there are no open-water sites at all authorized for long-term use under the MPRSA. Therefore, the designations do not impose adverse impact to the situation without the designation, but rather provide additional dredged material management options. Third, EPA expects that the DMMP will take into account reasonable incremental costs for small entities in developing any procedures and standards related to the assessment and use of alternative management methods and will not, therefore, result in significant economic effects to them. In this regard, it must also be remembered that the existing MPRSA regulations already require that alternatives to open-water disposal be utilized if there are practicable alternatives with less adverse environmental effects. Alternatives are defined to be practicable when they involve ''reasonable incremental cost and energy expenditures, which need not be competitive with the costs of ocean dumping, taking into account the environmental benefits derived from such activity * * * (40 CFR 227.16(b)). Fourth, before amending the site restrictions to reflect the DMMP, EPA will consider any public comments, including on whether there is continuing compliance with the RFA at that time.

Therefore, EPA certifies that this action will not have a significant economic impact on a substantial number of small entities.

4. The Unfunded Mandates Reform Act and Executive Order 12875

Title II of the Unfunded Mandates Reform Act (UMRA), Public Law 104–4, establishes requirements for federal agencies to assess the financial burden of complying with their regulatory actions on state, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal Mandates'' that may result in expenditures to state, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation of why that alternative was not adopted.

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that this action contains no federal mandates (under the regulatory provisions of Title II of the UMRA) for state, local and tribal governments or the private sector. It imposes no new enforceable duty on

any state, local or tribal governments or the private sector. Moreover, it will not result in expenditures by state, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Rather, this action makes presently unavailable long-term disposal sites available as potential options for future use if certain conditions are met. Similarly, EPA also has determined that this action contains no regulatory requirements that might significantly or uniquely affect small government entities. Thus, the requirements of sections 203 and 205 of the UMRA do not apply to this rule.

5. Executive Order 13132: Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by state and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' are defined in the Executive Order to include regulations that have ''substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.''

The final rule does not have federalism implications within the meaning of the Executive Order. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This final rule designates open-water sites in Long Island Sound for the potential disposal of dredged material and sets certain conditions on such use. This proposed action neither creates new obligations for, nor alters existing authorizations of, any state, local, or other governmental entities. Thus, Executive Order 13132 does not apply to this rule.

Although section 6 of the Executive Order 13132 does not apply to this final rule, EPA did extensively consult with representatives of state and local governments in developing this rule. In addition, and consistent with Executive Order 13132 and EPA policy to promote communications between EPA and state and local governments, EPA specifically solicited comments on the proposed rule from state and local officials and met with such officials on many occasions. The nature of these communications is discussed elsewhere in this preamble and in EPA's FEIS and supporting administrative record.

6. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by Tribal officials in the development of regulatory policies that have Tribal implications.'' ''Policies that have Tribal implications'' are defined in the Executive Order to include regulations that have ''substantial direct effects on one or more Indian Tribes, on the relationship between the federal government and the Indian Tribes, or on the distribution of power and responsibilities between the federal government and Indian Tribes.''

The final rule does not have Tribal implications, as specified in Executive Order 13175. The designation of these disposal sites will not have substantial direct effects on Indian Tribes, on the relationship between the federal government and Indian Tribes, or on the distribution of power and responsibilities between the federal government and Indian Tribes, as specified in Executive Order 13175. This final rule designates open-water dredged material disposal sites and does not establish any regulatory policy with tribal implications. Thus, Executive Order 13175 does not apply to this rule.

Although Executive Order 13175 does not apply to this rule, EPA consulted with tribal officials in developing this rule, particularly as it relates to potential impacts to historic or cultural resources. EPA specifically solicited additional comment on the proposed rule from tribal officials and invited tribes in the area around Long Island Sound to consider participating as ''cooperating agencies'' in development of the EIS. The Eastern Pequots and Narragansetts decided to participate in that role.

7. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe might have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health and safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This final rule is not subject to this Executive Order because it is not economically significant as defined in Executive Order 12866, and because EPA does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate effect on children. The designation of open-water, dredged material disposal sites in Long Island Sound does not authorize the disposal of any such material. Such authorizations are granted on a project-specific basis, and material that is determined to be unsuitable for ocean disposal—that is, it may cause unacceptable, adverse environmental impacts—would not be allowed to be disposed at these sites. Long-term monitoring of these sites, which have been used under short-term site selections since the early 1980s, has documented minimal adverse impacts to the marine environment, and by extension, public health. Therefore, it is not subject to Executive Order 13045.

8. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This final rule is not subject to Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866. Although Executive Order 13211 does not apply to this rule, the designation of dredged material disposal sites will facilitate shipping of energy-related products by providing an environmentally acceptable, cost-effective option for the disposal of material dredged from navigation channels and harbors in the central and western regions of Long Island Sound. Furthermore, by providing a potential dredged material management option in the central and western regions of the Sound, energy expenditures for hauling dredged material for disposal or reuse over water or land will be minimized.

9. National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer Advancement Act of 1995 (NTTAA), Public Law 104–113, section 12(d) (15 U.S.C. 272 note), directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*,

materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards. This final rule does not involve the development of technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards and the Executive Order does not apply to this action.

10. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 requires that, to the greatest extent practicable and permitted by law, each federal agency must make achieving environmental justice part of its mission. Executive Order 12898 provides that each federal agency must conduct its programs, policies, and activities that substantially affect human health or the environment in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under such programs, policies, and activities because of their race, color, or national origin.

No action from this final rule will have a disproportionately high and adverse human health and environmental effect on any particular segment of the population. In addition, this rule does not impose substantial direct compliance costs on those communities. Accordingly, the requirements of Executive Order 12898 do not apply.

11. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A ''major rule'' cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a major rule as defined by 5 U.S.C. 804(2). This rule will be effective July 5, 2005.

12. Plain Language Directive

Executive Order 12866 requires each agency to write all rules in plain language. EPA has written this final rule in plain language to make this final rule easier to understand.

13. Executive Order 13158: Marine Protected Areas

Executive Order 13158 (65 FR 34909, May 31, 2000) requires EPA to ''expeditiously propose new science-based regulations, as necessary, to ensure appropriate levels of protection for the marine environment.'' EPA may take action to enhance or expand protection of existing marine protected areas and to establish or recommend, as appropriate, new marine protected areas. The purpose of the Executive Order is to protect the significant natural and cultural resources within the marine environment, which means, ''those areas of coastal and ocean waters, the Great Lakes and their connecting waters, and submerged lands thereunder, over which the United States exercises jurisdiction, consistent with international law.''

EPA expects that this final rule will afford additional protection of aquatic organisms at individual, population, community, or ecosystem levels of ecological structures. Only suitable material under MPRSA requirements, and for which there is no other practicable alternative with less adverse environmental effects, will be allowed to be disposed at the designated sites. Also, these sites will be monitored and managed according to the SMMPs (Appendix J of the FEIS) and, as discussed in the FEIS, use of the sites should not impact any marine protected areas. In addition, EPA, the Corps, and other relevant federal and state resource management agencies will meet annually to discuss the management of these sites. Therefore, EPA expects today's final rule will advance the objective of the Executive Order to protect marine areas.

List of Subjects in 40 CFR Part 228

Environmental protection, Water pollution control.

Dated: May 19, 2005.

Robert W. Varney,

Regional Administrator, EPA New England.

■ In consideration of the foregoing, EPA is amending part 228, chapter I of title 40 of the Code of Federal Regulations as follows:

PART 228—CRITERIA FOR THE MANAGEMENT OF DISPOSAL SITES FOR OCEAN DUMPING

■ 1. The authority citation for part 228 continues to read as follows:

Authority: 33 U.S.C. 1412 and 1418.

■ 2. Section 228.15 is amended by adding paragraphs (b)(4) and (b)(5) to read as follows:

§ 228.15 Dumping sites designated on a final basis.

* * * * *

(b) * * *

(4) Central Long Island Sound Dredged Material Disposal Site (CLIS).

(i) *Location:* Corner Coordinates (NAD 1983) 41°9.5′ N., 72°54.4′ W.; 41°9.5′ N., 72°51.5′ W.; 41°08.4′ N., 72°54.4′ W.; 41°08.4′ N., 72°51.5′ W.

(ii) *Size:* A 1.1 by 2.2 nautical mile rectangular area, about 2.42 square nautical miles in size.

(iii) *Depth:* Ranges from 56 to 77 feet (17 to 23.5 meters).

(iv) *Primary use:* Dredged material disposal.

(v) *Period of use:* Continuing use, except as provided in paragraph (b)(4)(vi) of this section.

(vi) *Restrictions:* The designation in this paragraph (b)(4) sets forth conditions for the use of Central Long Island Sound (CLIS) and Western Long Island Sound (WLIS) Dredged Material Disposal Sites. These conditions apply to all disposal subject to the MPRSA, namely all federal projects and non-federal projects greater than 25,000 cubic yards. All references to ''permittees'' shall be deemed to include the Army Corps of Engineers (USACE) when it is authorizing its own dredged material disposal from a USACE dredging project. The conditions for this designation are as follows:

(A) Disposal shall be limited to dredged material from Long Island Sound and vicinity.

(B) Disposal shall comply with conditions set forth in the most recent approved Site Management and Monitoring Plan.

(C) Except as provided in paragraphs (b)(4)(vi)(D) and (E) of this section, the disposal of dredged material at the CLIS and WLIS sites pursuant to this designation shall not be allowed beginning eight (8) years after July 5, 2005 unless a regional dredged material management plan (DMMP) for Long Island Sound has been completed by the North Atlantic Division of the USACE, in consultation with the State of New York, State of Connecticut and EPA, with a goal of reducing or eliminating the disposal of dredged material in Long

Island Sound, and the EPA thereafter amends this site designation to incorporate procedures and standards that are consistent with those recommended in the DMMP.[1] Completion of the DMMP means finishing the items listed in the work plan (except for any ongoing long-term studies), including the identification of alternatives to open-water disposal, and the development of procedures and standards for the use of practicable alternatives to open-water disposal. If the completion of the DMMP does not occur within eight years of July 5, 2005 (plus any extensions under paragraphs (b)(4)(vi)(D) and (E) of this section), use of the sites shall be prohibited. However, if the DMMP is thereafter completed within one year, disposal of dredged material at the sites may resume.

(D) The EPA may extend the eight-year deadline in paragraph (b)(4)(vi)(C) of this section for any reasonable period (on one or more occasions) if it obtains the written agreement of the USACE, the State of Connecticut (Department of Environmental Protection) and the State of New York (Department of State).

(E) The EPA may extend the eight-year deadline in paragraph (b)(4)(vi)(C) of this section by up to one year (on one occasion only) if it determines in writing that the parties participating in the development of the DMMP have attempted in good faith to meet the deadline, but that the deadline has not been met due to factors beyond the parties' control (including funding). Such an extension may be in addition to any extension(s) granted under paragraph (b)(4)(vi)(D) of this section.

(F) The EPA will conduct an annual review of progress in developing the DMMP. If the EPA finds that the DMMP is being unreasonably delayed by one or more parties, the EPA reserves the right to take the following actions as appropriate: (*1*) Suspend use of the sites even prior to the deadlines established in paragraphs (b)(4)(vi)(C) through (E) of this section through an amended rulemaking or (*2*) Exercise through rulemaking its statutory and regulatory authorities regarding designation of ocean disposal sites.

(G) Upon completion of the DMMP, disposal of dredged material at the designated sites pursuant to the designation in this paragraph (b)(4) shall be allowed only from permittees that comply with procedures and standards consistent with the recommendations of the DMMP, and consistent with applicable law, for the use of the sites and for the use of practicable alternatives to open-water disposal, so as to reduce or eliminate the disposal of dredged material in Long Island Sound. Upon the completion of the DMMP, the EPA will within 60 days propose and within 120 days (subject to consideration of public comments) issue a legally binding amendment to the designation in this paragraph (b)(4) describing all such procedures and standards and specifying that they must be complied with as part of this designation.[2] If any party (or the EPA on its own initiative) is not satisfied that the final DMMP recommends sufficient procedures and standards to reduce or eliminate disposal of dredged material in Long Island Sound to the greatest extent practicable, or if any party is not satisfied with the EPA's amendment adopting such procedures and standards, the party may petition the EPA to do a rulemaking to amend the designation to establish different or additional standards. The EPA will act on any such petition within 120 days.

(H) Disposal not subject to the restrictions in paragraphs (b)(4)(vi)(C) through (G) or (b)(4)(vi)(I) of this section shall be permitted only for materials resulting from currently authorized or permitted dredging projects at Norwalk, Rye and New Rochelle. Such disposal must meet all applicable statutory and regulatory requirements. All phases of any of these project must be initiated within four (4) years from the date of the designation, or the project will become subject to paragraph (b)(4)(vi)(I) of this section.

(I) Except for the projects covered by paragraph (b)(4)(vi)(H) of this section and until completion of the DMMP, disposal of dredged material at the designated sites pursuant to the designation in this paragraph (b)(4) shall be allowed only if, after full consideration of recommendations provided by an established Regional Dredging Team[3] (RDT), the USACE finds (and the EPA does not object to such finding), based on a fully documented analysis, that for a given dredging project:

(1) There are no practicable alternatives (as defined in 40 CFR 227.16(b)) to open-water disposal in Long Island Sound and that any available practicable alternative to open-water disposal will be fully utilized for the maximum volume of dredged material practicable;

(2) Determinations relating to paragraph (b)(4)(vi)(I)(1) of this section will recognize that any alternative to open-water disposal may add additional costs. Disposal of dredged material at the designated sites pursuant to this paragraph (b)(4) shall not be allowed if a practicable alternative is available. Any project subject to this restriction must be permitted or authorized prior to the completion of the DMMP and completed within two years after the completion of the DMMP.

(J) Disposal shall be limited to dredged sediments that comply with the Ocean Dumping Regulations.

(K) Disposal of dredged material at the designated sites pursuant to the designation in this paragraph (b)(4) shall not be allowed for any materials subject to a waiver under 33 U.S.C. 1413(d) unless, for any project where a waiver is sought, the New England or New York District of the USACE provides notification, by certified mail at least thirty (30) days before making the waiver request, to the Governors of the states of Connecticut and New York and the North Atlantic Division of the USACE that it will be requesting a waiver.

(L) Transportation of dredged material to the sites shall only be allowed when weather and sea conditions will not interfere with safe transportation and will not create risk of spillage, leak or other loss of dredged material in transit. No disposal trips shall be initiated when the National Weather Service has issued a gale warning for local waters during

[1] If the EPA has acted in good faith to adopt substantially all procedures and standards for the use of the sites and the use of practicable alternatives to open-water disposal recommended in the DMMP, termination of the use of the sites based on the EPA not adopting all procedures and standards shall not occur unless a party first files a petition with the EPA pursuant to item 7 setting forth in detail each procedure or standard that the party believes the EPA must adopt in order to be consistent with the DMMP, and the EPA has an opportunity to act on the petition. Termination of the use of the sites shall not occur if in response to a petition the EPA determines that it has adopted substantially all procedures and standards for the use of the sites and the use of practicable alternatives to open-water disposal recommended in the DMMP, unless and until otherwise directed by a court. Termination of the use of the sites shall not occur based on not adopting a DMMP provision if the DMMP provision is not consistent with applicable law. Termination of the use of the sites shall not occur based on the EPA not meeting the 60 and 120 day rulemaking deadlines set forth in item 7, but use of the sites shall be suspended if the EPA misses either deadline, until the EPA issues a final rule. Termination of the use of the sites shall not occur based on the EPA adopting procedures and standards which are stricter than the recommendations of the DMMP.

[2] The EPA must preserve its discretion, in response to public comments, not to adopt such an amendment to this designation. The EPA understands that the State of New York has reserved its rights to revive its objection to this designation if the DMMP procedures and standards are not adopted.

[3] A Regional Dredging Team (RDT) comprised of regulatory and coastal policy specialists from state and federal agencies will be formed.

the time period necessary to complete dumping operations.

(M) The parties participating in the DMMP will need to seek additional funding in order to develop the DMMP. Nothing in the designation in this paragraph (b)(4) or elsewhere guarantees that any agency will be able to obtain funding for the DMMP. This designation shall not be interpreted as or constitute a commitment that the United States will obligate or expend funds in contravention of the Anti-Deficiency Act, 31 U.S.C. 1341. Rather, the sole remedy for any failure to meet the conditions specified in this paragraph (b)(4)(vi) shall be the restriction of the authority to dispose of dredged material, as provided in this paragraph (b)(4).

(N) Nothing in the designation in this paragraph (b)(4) or elsewhere precludes the EPA from exercising its statutory authority to designate other ocean disposal sites, not subject to the restrictions in paragraph (b)(4)(vi), or taking any subsequent action to modify the site designation in paragraph (b)(4), provided that the EPA makes any such designation or takes such subsequent action through a separate rulemaking in accordance with all applicable legal requirements. Nothing in this designation shall be interpreted to restrict the EPA's authorities under the MPRSA or the implementing regulations or to amend the implementing regulations.

(5) Western Long Island Sound Dredged Material Disposal Site (WLIS).

(i) *Location:* Corner Coordinates (NAD 1983) 41°00.1′ N., 73°29.8′ W.; 41°00.1′ N., 73°28.1′ W.; 40°58.9′ N., 73°29.8′ W.; 40°58.9′ N., 73°28.1′ W.

(ii) *Size:* A 1.2 by 1.3 nautical mile rectangular area, about 1.56 square nautical miles in size.

(iii) *Depth:* Ranges from 79 to 118 feet (24 to 36 meters).

(iv) *Primary use:* Dredged material disposal.

(v) *Period of use:* Continuing use except as provided in paragraph (b)(5)(vi) of this section.

(vi) *Restrictions:* See 40 CFR 228.15(b)(4)(vi).

* * * * *

[FR Doc. 05–10847 Filed 6–2–05; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

44 CFR Part 64

[Docket No. FEMA–7879]

Suspension of Community Eligibility

AGENCY: Federal Emergency Management Agency, Emergency Preparedness and Response Directorate, Department of Homeland Security.

ACTION: Final rule.

SUMMARY: This rule identifies communities, where the sale of flood insurance has been authorized under the National Flood Insurance Program (NFIP), that are scheduled for suspension on the effective dates listed within this rule because of noncompliance with the floodplain management requirements of the program. If the Federal Emergency Management Agency (FEMA) receives documentation that the community has adopted the required floodplain management measures prior to the effective suspension date given in this rule, the suspension will not occur and a notice of this will be provided by publication in the **Federal Register** on a subsequent date.

DATES: *Effective Dates:* The effective date of each community's scheduled suspension is the third date (''Susp.'') listed in the third column of the following tables.

ADDRESSES: If you wish to determine whether a particular community was suspended on the suspension date, contact the appropriate FEMA Regional Office or the NFIP servicing contractor.

FOR FURTHER INFORMATION CONTACT: Michael M. Grimm, Mitigation Division, 500 C Street, SW.; Room 412, Washington, DC 20472, (202) 646–2878.

SUPPLEMENTARY INFORMATION: The NFIP enables property owners to purchase flood insurance which is generally not otherwise available. In return, communities agree to adopt and administer local floodplain management aimed at protecting lives and new construction from future flooding. Section 1315 of the National Flood Insurance Act of 1968, as amended, 42 U.S.C. 4022, prohibits flood insurance coverage as authorized under the National Flood Insurance Program, 42 U.S.C. 4001 *et seq.*; unless an appropriate public body adopts adequate floodplain management measures with effective enforcement measures. The communities listed in this document no longer meet that statutory requirement for compliance with program regulations, 44 CFR part 59 *et seq.* Accordingly, the communities will be suspended on the effective date in the third column. As of that date, flood insurance will no longer be available in the community. However, some of these communities may adopt and submit the required documentation of legally enforceable floodplain management measures after this rule is published but prior to the actual suspension date. These communities will not be suspended and will continue their eligibility for the sale of insurance. A notice withdrawing the suspension of the communities will be published in the **Federal Register**.

In addition, the Federal Emergency Management Agency has identified the special flood hazard areas in these communities by publishing a Flood Insurance Rate Map (FIRM). The date of the FIRM if one has been published, is indicated in the fourth column of the table. No direct Federal financial assistance (except assistance pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act not in connection with a flood) may legally be provided for construction or acquisition of buildings in the identified special flood hazard area of communities not participating in the NFIP and identified for more than a year, on the Federal Emergency Management Agency's initial flood insurance map of the community as having flood-prone areas (section 202(a) of the Flood Disaster Protection Act of 1973, 42 U.S.C. 4106(a), as amended). This prohibition against certain types of Federal assistance becomes effective for the communities listed on the date shown in the last column. The Administrator finds that notice and public comment under 5 U.S.C. 553(b) are impracticable and unnecessary because communities listed in this final rule have been adequately notified.

Each community receives a 6-month, 90-day, and 30-day notification letter addressed to the Chief Executive Officer that the community will be suspended unless the required floodplain management measures are met prior to the effective suspension date. Since these notifications have been made, this final rule may take effect within less than 30 days.

National Environmental Policy Act. This rule is categorically excluded from the requirements of 44 CFR part 10, Environmental Considerations. No environmental impact assessment has been prepared.

Regulatory Flexibility Act. The Administrator has determined that this

LONG ISLAND SOUND

FINAL
DREDGED MATERIAL MANAGEMENT PLAN AND FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

APPENDIX G

ALTERNATIVES SELECTION AND SCREENING PROCESS

Appendix G – Alternative Selection and Screening Process
Table of Contents

1. TECHNICAL APPROACH G-1

1.1 Identification of Alternatives G-1

1.2 Data Collection G-3

1.3 Screening Database G-4

1.4 Evaluation Factors and Metrics G-5

1.4.1 Suitability Evaluation Factor G-5

1.4.2 Capacity Evaluation Factor G-8

1.4.3 Distance Evaluation Factor G-9

1.4.4 Site Impacts Evaluation Factor G-10

1.4.5 Cost Evaluation Factor G-12

1.5 Scoring G-13

2. RESULTS G-14

3. REFERENCES G-15

List of Tables

G-1 Open-Water Placement Evaluation Factor Metrics G-6

G-2 Confined Placement Suitability Evaluation Factor Metrics G-7

G-3 Beneficial Use Suitability Evaluation Factor Metrics G-8

G-4 Capacity Evaluation Factor Metrics G-9

G-5 Distance Evaluation Factor for Direct Placement Alternative Sites G-9

G-6 Distance Evaluation Factor for Upland Alternative Sites G-10

G-7 Impact Evaluation Factor Metrics G-11

ATTACHMENT – Screening Matrix Tables

APPENDIX G
ALTERNATIVE SELECTION AND SCREENING PROCESS

The purpose of this appendix is to describe the screening process used to evaluate and rank the various potential dredged material placement alternatives presented in the DMMP and the PEIS for each of the USACE Navigation Projects within the Long Island Sound study area. This screening does not identify or select the "preferred" alternative for any of the projects; rather, it is a guide to assist the USACE in identifying the most feasible and cost-effective alternatives within the universe of potential alternatives. Screening was also performed for other Federal agency (non-USACE) projects, which are presented with the USACE Navigation Projects by dredging center.

1 TECHNICAL APPROACH

As recommended by the Long Island Sound DMMP Working Group, the USACE developed a formal, quantitative screening process using Multi-Criteria Decision Analysis (MCDA) to evaluate and rank placement alternatives for each of the USACE Navigation Projects in Long Island Sound (Linkov, et al., 2013). In addition to the physical, logistical, and economic factors that were used to score and rank placement alternatives (Section 1.4), the evaluation hierarchy and relative priorities expressed by the Working Group were used to guide the development of the impacts/benefits portion of the screening process. The following sections describe the technical approach used to develop and perform the alternative screening analysis.

1.1 IDENTIFICATION OF ALTERNATIVES

During the process of identifying potential alternative sites, the USACE and EPA, in coordination with the states and with input from the public, reviewed all potential upland, shoreline, and in-water locations where dredged material could be placed in the Long Island Sound area. The study area under consideration during the review of potential alternatives includes all of Connecticut; Westchester, Bronx, Queens, Suffolk, and Nassau counties of New York, as well as the Boroughs of Brooklyn (Kings County) and Manhattan (New York County), New York; and Washington County in Rhode Island (Section 1.4). The Long Island Sound PEIS evaluates only those alternatives located within the study area. Additional alternatives located outside of the study area may provide feasible, environmentally acceptable, and cost-effective options for specific projects within Long Island Sound. These alternatives are discussed briefly Chapter 3 of the PEIS and on a project-specific basis in the Long Island Sound DMMP but are not included in the analysis or screening of alternatives in this PEIS.

Several USACE-sponsored studies were conducted to identify potential containment, beneficial use, and upland alternative sites within the study area (USACE, 2009); (USACE, 2010); (USACE, 2011); (USACE, 2012a); (USACE, 2012b). These studies identified, characterized, and evaluated the feasibility of the sites for potential use for dredged material management from USACE Navigation Projects, as well as smaller, non-USACE projects. Various approaches were taken to identify and prescreen the sites and are described in detail in the individual reports, which are summarized below.

- The Upland, Beneficial Use, and Sediment Dewatering Site Inventory was completed in two phases. Phase 1 of the study (USACE, 2009) described, in preliminary fashion, the universe of sites potentially available for upland placement, beneficial use, or dewatering of dredged material for use by the Long Island Sound region's navigational facilities. The initial report screened the sites to identify the ones that were considered potentially viable for use by USACE in management of dredged material from USACE Navigation Projects. The Phase 1 inventory consisted of 157 potential sites that could potentially accept dredged material and 22 potential dewatering sites. The 157 sites with capacity for material consisted of 104 beaches, 5 habitat restoration sites, 6 landfills, 10 redevelopment-construction sites, 1 mine reclamation site, 1 Brownfield site, and 30 concrete/asphalt plants.
- The Phase 2 study (USACE, 2010) built on the 2009 work to more fully describe and characterize those upland and beneficial use sites that may be available for processing or placement of dredged material from USACE Navigation Projects. This was achieved through site visits, site operator/owner interviews, and communications among USACE, the states, and interested stakeholders. The final site inventory consisted of 102 sites at 99 different locations: 67 beaches, 1 mine reclamation site, 6 landfills, 3 redevelopment/construction sites, 4 habitat restoration areas, and 21 potential dewatering sites.
- A separate study (USACE, 2011) involved further screening and investigation of the smaller upland, beneficial use, and dewatering sites that were not investigated under Phase 2 described above. These sites were evaluated for use by smaller, mainly non-Federal navigational interests, to meet one of the stated goals of the Long Island Sound DMMP—namely, to identify alternatives that could be used by non-Federal navigation interests in their alternative analysis for management of their dredged material. The list of potential alternative sites for smaller, non-Federal projects included 75 beaches, 30 concrete and asphalt plants, and 16 potential dewatering sites. These alternatives are not being evaluated in this PEIS.
- The containment site report (USACE, 2012a) evaluated both in-harbor and open-water CAD cells, shoreline CDFs, and island CDFs. The report includes a general description of dredged material containment methods, a summary of previously developed or proposed containment projects in Long Island Sound and elsewhere, a site-by-site assessment of candidate sites in the Long Island Sound study area, and an estimated capacity for dredged material at each site. Preliminary engineering designs are also discussed, and potential impacts are summarized. The final list of 18 containment sites consists of 4 CAD cells, 8 shoreline CDFs, and 6 island CDFs.
- The nearshore berm report (USACE, 2012b) includes a general description of nearshore berm placement methods, a site-by-site assessment of candidate sites in the Long Island Sound study area, and an estimate of the available capacity for dredged material placement at each site. Preliminary engineering designs are also discussed and potential impacts are summarized.

In addition to these studies, the USACE provided information on specific alternative sites within the study area that have been used in the past for placement of dredged material from USACE and other Federal agency projects.

1.2 DATA COLLECTION

Battelle used background information and data provided by USACE, as well as information compiled during the Long Island Sound DMMP study efforts and information from the EIS for the designation of dredged material placement sites in central and western Long Island Sound (EPA, 2004), to describe and characterize each of the USACE Navigation Projects and potential placement alternatives. These data included the following sources:

- **List of USACE Navigation Projects.** The list of USACE Navigation Projects was derived from the list of projects included in the Dredging Needs Study (USACE, 2009a). The list was further refined using input and information from USACE during the preparation of this PEIS. For example, some dredging projects have distinct areas with varying sediment types within the dredging footprint that would generate different types of dredged material (e.g., sandy material from an outer harbor and silty material from an inner harbor); these projects were split into sub-projects to be evaluated separately. Projects from the Connecticut River that historically have been placed in-river (bar or island placement) were not included in the screening. Projects that are no longer authorized Federal channels have also been removed from the screening.
- **Dredged material characterization data for USACE Navigation Projects.** These data were received from USACE and included the year in which sediment was last tested or dredged, the chemical and physical properties of the sediment based on previous testing, and the most recent placement sites used for each project (USACE, 2014).
- **Dredging center write-ups in the Long Island Sound DMMP.** The dredged material characterizations for USACE and other Federal agency projects were updated in the dredging center write-ups in the Long Island Sound DMMP. These data included the year in which sediment was last tested or dredged, the chemical and physical properties of the sediment based on previous testing, and the most recent placement sites used for each project.
- **Projected 30-year dredged material volumes for each USACE Navigation Project (USACE, 2009a).** These data were available from the 2009 Long Island Sound Dredging Needs Report (USACE, 2009a). The report data were updated by the USACE to account for dredging that occurred between 2009 (when the report was prepared) and 2014 (when the draft PEIS was prepared). These data were compiled for individual USACE Navigation Projects and for other Federal agency projects (U.S. Navy, U.S. Coast Guard, U.S. Merchant Marine Academy). Data for non-Federal dredging projects were also gathered but were aggregated by dredging center (as defined in the Dredging Needs Report (USACE, 2009a) rather than by individual project.
- **Alternative site characteristics (location, capacity, and target sediment type).** These data were available from the Long Island Sound DMMP study reports (USACE (2009b); USACE (2010); USACE (2011); USACE (2012a); USACE, (2012b)) and the EIS for the designation of dredged material placement sites in central and western Long Island Sound (EPA, 2004). As described above (Section 1.1 Identification of Alternatives), these study reports contain an initial level of screening used to identify potentially feasible alternative sites for use by Federal dredging projects and to exclude

those sites that are not likely feasible due to location, capacity, engineering guidelines, or other criteria.

- **Dewatering site characteristics.** Upland alternative sites would require the use of a sediment dewatering or re-handling facility to dry and consolidate the dredged material prior to transport and placement. A series of study reports was prepared that identified, characterized, and screened potential dewatering sites for use by USACE Navigation Projects (USACE (2009b); USACE (2010)). In addition to the "feasible" and "potentially feasible" dewatering sites identified in the Phase 2 upland and dewatering site report ((USACE, 2010), the USACE provided a list of "local" dewatering sites that have been used in the past for dredged material from specific harbors. This list of dewatering sites was used to evaluate the feasibility of the upland alternatives sites.
- **Distance data.** Distances between alternative placement sites, USACE and other Federal dredging projects, and dewatering sites were calculated using ArcView GIS software. Each site was mapped, and straight-line distances between each location pair were calculated. For non-Federal projects, distances between dredging centers and the various alternative sites and dewatering sites were calculated using the same method.
- **Additional alternative site data.** In instances where the USACE was aware of historical placement sites that had not been identified in the alternative site inventory, the USACE provided additional documentation on the location, capacity, and target material for these locations.

The data collected for the USACE Navigation Projects, alternative placement sites, and dewatering sites (including distance data) were entered into Excel spreadsheets. These spreadsheets were then loaded into an MS Access Database for analysis (Section 1.2).

1.3 SCREENING DATABASE

An MS Access database was created to store, organize, query, and export the screening data and results. Database queries were used to compile the data into new data tables, check for blank or orphan records, perform data calculations, and assign scoring values. Linked views in MS Access were used to summarize and compile scores for each of the evaluation factors described below (Section 1.3) and to calculate a total score for each USACE Navigation Project and alternative site pair (project–alternative pair) (Section 1.4).

A unique screening ID was assigned to each alternative site in the database, consisting of the alternative site type and Site ID. This screening ID was the identifier used to link data and evaluation scores for each alternative site among multiple database tables and views.

The full suite of alternative sites described in Chapter 4 of the PEIS was screened against each USACE Navigation Project and other Federal agency projects. The alternatives were carried through the entire screening process, except in cases where a project's dredged material characteristics were incompatible with use at a given alternative site type as an example silty dredged material where the alternative would be beach renourishment requiring coarse sand. In these cases, the incompatible alternative was flagged (i.e. scored as -1) and was not scored for the remaining evaluation factors for that project (Section 1.3).

1.4 EVALUATION FACTORS AND METRICS

Alternative sites that were identified in the DMMP background studies were screened against each USACE Navigation Project using a series of evaluation factors to identify those alternatives that would most likely be feasible for each project. Screening was conducted using four evaluation factors:

- Suitability/compatibility of project material for placement at a variety of alternative site types
- Available alternative site capacity to receive project material
- Distance between dredging project and alternative site
- Impacts (physical, environmental, cultural, infrastructure, and socioeconomic)

Metrics were developed for the first four evaluation factors above to quantitatively score each alternative site by project. Three scoring categories were developed for each factor (Green, Yellow, and Red). The "Green" category indicated a favorable or compatible ranking, and the "Red" category indicated an unfavorable or incompatible ranking. The "Yellow" category indicated either a moderate ranking or a lack of data to assign a clear ranking. Metrics were not developed for the dredging and placement costs; instead, estimated costs were included with the screening results for comparison purposes but were not included in the quantitative screening scores.

The following sections describe the rationale and approach for applying the metrics to each of the evaluation factors listed above.

1.4.1 Suitability Evaluation Factor

The suitability factor was used to evaluate the suitability of dredged material generated by USACE Navigation Projects for placement at a variety of alternative site types. This evaluation was performed for classes of alternatives, rather than specific alternative sites, because suitability criteria are based on the use of dredged material by alternative type, rather than specific alternative sites. The types of alternatives considered included:

- Open-Water Placement
- Confined Placement
- Beneficial Use

Suitability for Open-Water Placement

The evaluation of anticipated suitability of project material for unconfined, open-water placement was based on existing chemistry data and previous placement history for each USACE Navigation Project. These data were used to classify the dredged material for each project into one of three categories using the metrics presented in Table G-1. For those USACE Navigation Projects with no available testing results, sediment testing data from nearby non-Federal private dredging permit applications were used to anticipate material types at the USACE Navigation Projects. The open-water placement alternatives were then scored based on their feasibility to receive dredged material from each USACE Navigation Project. For many of the projects, recent sediment chemistry data were unavailable. In these cases, previous open-water placement of a project's material was assumed to mean that the project's

current material would be suitable for open-water placement. For these projects, the open-water placement alternatives were assigned to the "Green" category and given a scoring value of 100. In the past, when a project's dredged material was placed at an upland facility or CDF, it was assumed that the project's current material would likely not be suitable for unconfined, open-water placement, unless recent sediment chemistry data indicated otherwise. For these projects, the open-water placement alternatives were assigned to the "Red" category and received a score of -1. For those projects for which a suitability determination could not be made based on lack of recent sediment chemistry data or placement history, the open-water placement alternatives were assigned to the "Yellow" category and assigned a score of 50. Suitability scores are presented below.

Table G-1. Open-Water Placement Evaluation Factor Metrics

Category	Metric	Scoring Value
Green	Likely suitable; previous open-water placement	100
Yellow	Unknown; additional testing required	50
Red	Likely unsuitable; previous upland placement	-1

Suitability/Compatibility for Confined Placement

The confined placement alternative types that were screened against the USACE Navigation Projects included:

- Confined Open-Water Placement
- In-Harbor CAD Cells
- CDFs

The evaluation of anticipated suitability of project material for confined placement was based on the existing chemistry and physical data for each USACE Navigation Project. Dredged material characterized as primarily sand was assumed to be clean fill. Dredged material characterized as silt and clay was assumed to be clean fill unless the available chemistry data indicated otherwise.

The confined placement alternatives (confined open-water placement, CAD cells, and CDFs) may receive two types of material: suitable (clean, sandy) material for the cap and unsuitable (contaminated) material for the base. Therefore, a "cap" option and a "base" option were created for each containment alternative type (confined open-water placement, CAD cells, and CDFs). The "cap" and "base" options for a given alternative were mutually exclusive, so if a project had compatible material for a CAD cap, then it was assumed to not have compatible material for a CAD base. The confined alternatives were scored based on their feasibility to receive dredged material from each of the USACE Navigation Projects. For projects that had compatible material, the confined placement alternatives were assigned to the "Green" category and given a scoring value of 100 for that alternative type (Table G-2). For projects with incompatible material, the confined placement alternatives were assigned to the "Red" category and received a score of -1. A suitability score of -1 removed an alternative type from further consideration for a given project, and this alternative was not evaluated using the remaining

factors. For those projects for which a determination of compatibility could not be made based on lack of recent sediment grain size data or chemistry data, the confined placement alternatives were assigned to the "Yellow" category and assigned a score of 50. Suitability/compatibility scores are presented below.

Table G-2. Confined Placement Suitability Evaluation Factor Metrics

Category	Metric		Scoring Value
	Cap Material	Base Material	
Green	Primarily sand (<40% fines)	Sand with >40% fines, or primarily silt and clay	100
Yellow	Unknown	Unknown	50
Red	Sand with >40% fines, or primarily silt and clay	Primarily sand (<40% fines)	-1

Suitability/Compatibility for Beneficial Use

The evaluation of anticipated suitability of project material for beneficial reuse was based on existing physical data and, in some cases, on existing chemical data, for each USACE Navigation Project. Dredged material characterized as primarily sand was assumed to be clean fill. Dredged material characterized as silt and clay was assumed to be clean fill unless the available chemistry data indicated otherwise. These data were used to classify the dredged material for each USACE Navigation Project against various beneficial use alternatives and assign each project to one of three categories using the metrics presented in Table G-3. Compatible material was specific to each alternative type:

- Beaches – Coarse to medium sand (up to 15% – 20% fines)
- Berms – Coarse to silty sand (up to 30% – 40% fines)
- Landfill cover/capping – Clean fill, silty sand or fine material (silt/clay)
- Brownfields and Mines/Quarries – Clean fill, fines acceptable
- All other beneficial reuse alternatives[1] – Clean fill

Beneficial use alternatives were scored based on their feasibility to receive dredged material from each USACE Navigation Project. For projects with compatible material for a given alternative type, the compatible alternatives were assigned to the "Green" category and received a score of 100. For projects with material that was likely incompatible with a given alternative type, the incompatible alternatives were assigned to the "Red" category and received a score of -1. A suitability score of -1 removed an alternative type from further consideration for a given project, and this alternative was not evaluated using the remaining factors. For those projects for which it was unknown if the material was compatible for a given alternative,

[1] Concrete/asphalt plants were not evaluated as a beneficial use alternative for use by Federal Navigation Projects. The rationale for removing them was based on the fact that concrete/asphalt plants do not utilize silty material, and the sandy material that the plants would use would be more appropriate for beach nourishment. Concrete/asphalt plants were evaluated for non-Federal projects only.

the alternatives were assigned to the "Yellow" category and received a score of 50. Suitability/compatibility scores are presented below.

Table G-3. Beneficial Use Suitability Evaluation Factor Metrics

Category	Metric				Scoring Value
	Beach Material	Berm Material	Landfill Cover/Capping	Other Beneficial Use	
Green	Primarily sand (<20% fines)	Primarily sand (<40% fines)	Silty sand (>40% fines) or primarily silt/clay	Clean fill, fines acceptable	100
Yellow	Unknown	Unknown	Unknown	Unknown	50
Red	Sand with >20% fines or primarily silt/clay	Sand with > 40% fines or primarily silt/clay	Primarily sand (<40% fines)	Not compatible	-1

1.4.2 Capacity Evaluation Factor

The capacity evaluation of each specific alternative site was based on the percentage of project material that each alternative site could accept. Alternative site capacity data were derived from the DMMP background reports for each alternative type (USACE (2010); USACE (2012a); USACE (2012b)). Capacity information for the open-water sites was provided by USACE during the preparation of this PEIS.

To determine the volume of cap material that could be accepted at each confined placement alternative site, a cap depth of 3 feet was assumed and multiplied by the area of the site. The volume of base material was then calculated by subtracting the cap volume from the total site capacity found in the containment site study report (USACE, 2012b). For most alternative sites, the capacity percentage was calculated as the available alternative site capacity (in cubic yards) divided by the projected 30-year dredging volume at each project (in cubic yards). For beaches and feeder berms, material placed at the site would likely be transported away from the site over time, making additional capacity available. For these alternatives, the capacity percentage was calculated using the average volume of material per placement event (in cubic yards), rather than the 30-year dredging volume at each project.

Alternative sites were scored based on their percent capacity to receive a project's dredged material (e.g., an alternative site with 25% capacity for a given project received a score of 25) (Table G-4). Any site with >100% capacity was assigned a score of 100. Capacity scores are presented below.

Table G-4. Capacity Evaluation Factor Metrics		
Category	**Metric**	**Scoring Value**
Green	≥100% available capacity	100
Yellow	1% – 99% available capacity	1 – 99, based on percentage
Red	0% available capacity	0

1.4.3 Distance Evaluation Factor

For the evaluation of distance, the specific alternative sites were organized into two groups based on anticipated methods for transport and placement of dredged material from the USACE Navigation Projects to the alternative sites:

- Alternatives with direct placement of material (open water, CAD cells, CDFs, beaches, and berms)
- Alternatives that require sediment dewatering/re-handling before placement (landfill placement and cover/capping, brownfields, habitat restoration)

Distances for the direct placement alternatives reflect the distance between each USACE Navigation Project and each direct placement alternative site. Metrics for each alternative type were assigned based on reasonable costs plus either an 8-hour work day for water transport distances (20 miles) or a maximum pumping distance (2 miles) for beaches and berms (Table G-5). Alternative sites located within these distances were assigned to the "Green" category and received score of 100. Alternative sites that are farther away, but could still be economically and logistically feasible, were assigned to the "Yellow" category and received a score of 50. Alternative sites that were not feasible based on their distance from USACE Navigation Projects were assigned to the "Red" category and received a score of 0. Distance scores are presented below.

Table G-5. Distance Evaluation Factor for Direct Placement Alternative Sites				
Category	**Metric**			**Scoring Value**
	Water Transport	**Berms**	**Beaches**	
Green	< 20 miles	< 2 miles	< 2 miles	100
Yellow	20 – 30 miles	2 – 10 miles	2 – 5 miles	50
Red	> 30 miles	> 10 miles	>5 miles	0[a]
[a]Beaches located greater than 5 miles from a USACE Navigation Project were scored as -1, because material cannot be pumped beyond 5 miles. Therefore, beaches greater than 5 miles away were excluded from the analysis.				

Distances for the upland alternative sites were derived using a two-step process:

1) Distances between the USACE Navigation Projects and all dewatering sites (feasible, potential, local) were calculated, and an Access query was run to identify the closest dewatering site to each Federal navigation project.
2) Using the closest dewatering site for each project, the distance from that dewatering site to each alternative site was calculated and scored.

Metrics for upland distances are consistent with USACE cost calculations (10, 25, >25 miles) (Table G-6). Distance scores are presented below.

Table G-6. Distance Evaluation Factor for Upland Alternative Sites

Category	Metric	Scoring Value
Green	<10 miles	100
Yellow	10 – 25 miles	50
Red	> 25 miles	0

1.4.4 Site Impacts Evaluation Factor

The impacts evaluation was based on anticipated adverse impacts and benefits to four categories of resources within the study area:

- Physical resources (waves, currents, littoral drift, and sediment type)
- Environmental resources (biological resources, water, sediment, and air quality)
- Cultural resources (historic districts and buildings, archaeological sites, and shipwrecks), and
- Infrastructure (moorings, ports, utilities, recreational areas, etc.).

These categories were developed in the Long Island Sound DMMP background reports that described the Confined Open Water, In-Harbor CAD Cell, Island CDF, Nearshore CDF, and Nearshore Bar/Berm Alternative sites (USACE (2012a); USACE (2012b)). These reports assessed site-specific impacts for these alternative sites based on the resource data gathered and presented in the reports. The types of impacts assessed for each resource are summarized in Appendix G. However, impacts for the entire suite of resources presented in the Affected Environment section of this PEIS were not part of the previous impact assessment. Therefore, impacts for resources not included in the USACE reports (i.e., plankton, benthic invertebrates, water quality, sediment quality, bioaccumulation potential, air quality/noise) were assessed to create a complete impact assessment for screening of these alternative site types.

For the remaining alternative site types for which site-specific impacts were not previously developed (i.e., unconfined open water, beach renourishment, habitat restoration, brownfield restoration, landfill placement and capping), anticipated impacts were developed using site-specific resource information from the Affected Environment chapter of this PEIS, as well as other existing NEPA documents (e.g., the designation EIS for WLDS and CLDS (EPA, 2004)).

In cases where site-specific information was lacking for a particular resource, generic impacts were developed using best professional judgment, assuming that the resource could be present at a particular site.

Socioeconomic impacts were assessed for all alternative site types according to Section 122 of the River and Harbor Act and Flood Control Act of 1970, P.L. 91-611. Socioeconomic parameters for which adverse impacts were assessed included:

- Destruction/disruption of man-made/natural resources
- Aesthetic values
- Community cohesion
- Availability of public facilities and services
- Employment effects
- Tax and property value losses
- Injurious displacement of people, businesses, and farms
- Disruption of desirable community and regional growth

Once impacts had been developed for all alternative sites and resources, adverse impacts were then assigned scores using the metrics described in Table G-7. For resources with multiple types of impacts, each impact type was scored using the following scale:

- Where placement of dredged material was anticipated to result in no or an unlikely adverse impact, the impact was assigned a score of 100.
- Where placement of dredged material was anticipated to result in a potential adverse impact, the impact was assigned a score of 50.
- Where placement of dredged material was anticipated to result in an adverse impact, the impact was assigned a score of 0.

The impact scores were then averaged across types of impacts for a given resource to generate an impact score per resource. These resource-specific scores were then averaged across resources to generate a single impact score for each alternative site. This score is based on the anticipated impacts resulting from the placement of dredged material at a specific alternative site and is not influenced by the dredging project generating the material. Therefore, this impact score was applied to its respective alternative site across all USACE Navigation Projects. Impact scores are presented below.

Table G-7. Impact Evaluation Factor Metrics

Category	Metric	Scoring Value
Green	No/Unlikely Adverse Impact	100
Yellow	Potential Adverse Impact	50
Red	Likely Adverse Impact	0

In addition to adverse impacts, positive impacts (or benefits) resulting from the placement of dredged material at each potential alternative site were also assessed. Site benefits were not quantified in the screening, but are described in the database. The presence of benefits (environmental and socioeconomic) is indicated in separate columns in the screening results. A response of "Yes" in the benefits column indicates that there is a potential benefit to at least one of the resources evaluated. In most cases, potential benefits would depend on the final site design. Benefits data are presented below.

1.4.5 Cost Evaluation Factor

Dredging and placement cost information used in the alternative screening were developed by USACE (Appendix D) and take into account dredging methods, alternative types, dredging volumes, and haul distances. The Excel cost spreadsheet generated by USACE was formatted into a normalized table and loaded into the Access database. A description of how these data and variables were used to develop an estimated cost for each project–alternative pair is provided below.

Dredging Methods: Where costs for two different dredging methods for a given volume, alternative type, and distance were provided, the lower of the two costs was used for the cost calculations and screening, and the associated method was noted in the Access database. For example, 1,000 cy of material transported to an ocean placement site 10 miles away would have an estimated cost of $615,323 if a bucket dredge were used and of $750,363 if a hopper dredged were used (Appendix D). The lower cost ($615,323) and associated method (bucket dredge) were retained in the normalized data table and loaded into the Access database for cost calculations.

Alternative Types: Costs for each alternative type were associated in the database with specific alternative sites within the same category. For example, the cost category titled "Containment Island Placement" was used to estimate costs for all of the island and nearshore CDF alternative sites (Appendix D).

Dredging Volumes: USACE developed cost estimates based on discrete dredging volumes (i.e., 1,000 CY, 2,000 CY, 5,000 CY, 10,000 CY, etc.). Because some projects will be dredged multiple times over the 30-year project period, an average volume (in cubic yards) per dredging event was developed for each USACE Navigation Project. Because these dredging volumes often did not correspond exactly to the discrete dredging volumes used to develop costs, the cost for each project–alternative pair was interpolated using the costs associated with the two discrete dredging volumes that bracketed the project's estimated average dredging volume per event. These two volumes (x1 and x2) and their associated costs (y1 and y2) were used to produce a line with slope:

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

The y-intercept was calculated as:

$$b = y1 - m * x$$

Finally, the project's estimated average dredging volume (x) was inserted into the equation of a line to solve for the cost associated with the project volume:

$$y = mx + b$$

A few project–alternative pairs resulted in a combination of capacity-distance for which no cost was provided by the USACE (e.g., a project with less than 1,000 CY that uses an alternative site located 60 miles away from the project). These costs were not estimated for the screening and were flagged with the qualifier "cost not estimated."

For projects with estimated average per-event dredging volumes greater than the greatest dredging volume for which costs were developed, the greatest estimated volume was used and the associated costs were flagged with the qualifier "highest estimated volume."

For projects with an estimated average per-event dredging volume that occurred between volumes for which the least costly method differed, the method for the higher capacity was selected and flagged with the qualifier "methods differ by volume."

Haul Distances: For direct placement alternatives (beaches, berms, open water, CADs, and CDFs), the distance used to identify the cost was the straight-line distance from the project to the alternative site (i.e., the same distance used for the distance evaluation factor screening above). For the upland alternatives (landfill placement, landfill cover/capping, habitat restoration, and brownfields), the distance used to identify the cost was the sum of 1) the straight-line distance between the project and the nearest dewatering facility, and 2) the straight-line distance between that dewatering facility and the upland alternative site.

The resulting cost estimate for each project–alternative pair was then divided by the average per-event dredging volume to obtain a cost per cubic yard ($/CY). These unit costs are not included as a quantitative screen (i.e., they were not included in the screening score) but are listed in the screening results for the purpose of comparison among alternatives. Estimated costs for each project–alternative pair are presented below.

1.5 SCORING

Linked views in MS Access were used to compile the scores from each evaluation factor (suitability, capacity, distance, impacts) into a summary score for each of the alternative sites by USACE Navigation Project. If any of the alternative sites received a score of "-1" because the project's dredged material characteristics were incompatible with that alternative site type, that alternative was not scored for the remaining evaluation factors, and it retained a final score of -1.

The summary score allows alternative sites to be ranked by USACE Navigation Project to identify the most feasible alternatives based on the four evaluation factors used. The summary scores for each project–alternative pair are presented below. Benefits and cost information, which were not included in the total screening score, are included as separate columns in the summary table of results.

2 RESULTS

The screening process provides a relative ranking of all potential alternative sites for each USACE and other Federal agency project; it does not identify or select a "preferred" alternative for any of the projects. It is a guide to assist the USACE in identifying the most feasible and cost-effective alternatives within the universe of potential alternatives. The screening results for the individual evaluation factors for each project–alternative pair are presented below. The alternative sites associated with the 10 highest total scores for each of the USACE and other Federal agency projects are presented in the DMMP and PEIS. When reviewing these results, the following assumptions should be considered:

- **Suitability/Compatibility:** Suitability of material was determined based on the most recent sediment testing results and/or most recent placement site used for each USACE and other Federal agency project. In some cases, the most recent testing occurred decades ago and may not reflect current conditions. All project material would be tested to determine suitability for placement before dredging occurred.

- **Capacity:** Alternative site capacity was calculated using either the 30-year projected dredging volume or the average per-event volume (for beaches and feeder berms) for each project, and did not consider that multiple placements of smaller volumes could occur over the project lifetime. Therefore, the available capacity used to score each alternative site assumes that all project material would be placed at that one alternative site. The scoring also did not take into consideration that an alternative site could be used by multiple projects over the 30-year period of the DMMP, or that a single project could use multiple alternative sites during a dredging event.

- **Distances:** Distances between project–alternative pairs are straight-line distances and do not reflect actual haul distances that equipment would use to transport material from dredging projects to alternative sites.

- **Impacts:** Impacts are based on resource data (where available) and reflect potential or anticipated impacts. Project-specific NEPA documents would need to be prepared that describe in greater detail the current conditions and anticipated impacts associated with placement of dredged material at each alternative site considered for each dredging project.

A final cost-analysis screening was performed on each FNP and other Federal agency project. Where the top ten screening score results did not include the least costly alternatives or did not include a mix of applicable beneficial use alternatives, the top ten lists were augmented to include those additional alternatives for comparison of both costs and impacts.

3 REFERENCES

EPA, 2004. *Final Environmental Impact Statement for the Designation of Dredged Material Disposal Sites in Central and Western Long Island Sound, Connecticut and New York,* s.l.: U.S. Environmental Protection Agency. April 2004. Report + appendices.

Linkov, I., Bates, M. E. & Collier, Z. A., 2013. *Stakeholder Elicitation for Long Island Sound Dredged Material Management Plan,* s.l.: s.n.

USACE, 2009a. *Long Island Sound Dredged Material Management Plan – Dredging Needs Report, Final Report,* s.l.: Contract No. DACW33-03-D-0004, Delivery Order No. 43. Prepared for USACE-NAE by Battelle. October 2009.

USACE, 2009b. *Long Island Sound Dredged Material Management Plan – Upland, Beneficial Use, and Sediment De-watering Site Inventory (Phase 1), Final Report,* s.l.: Contract No. DACW33-03-D-0004, Delivery Order No. 43. Prepared for USACE-NAE by Battelle, October 2009.

USACE, 2010. *Long Island Sound Regional Dredged Material Management Plan (DMMP): Upland, Beneficial Use, and Sediment Dewatering Site Investigations Phase 2,* East Falmouth, Massachusetts: Woods Hole Group for the U.S. Army Corps of Engineers, New England District. Task Order #24, November 2010. 640 pp. + appendices.

USACE, 2011. *Long Island Sound Dredged Material Management Plan – Follow On Characterization of Small Site Management Alternatives for Potential Non-Federal Project Consideration (Phase 1A),* s.l.: U.S. Army Corps of Engineers, New England District, Contract No. DACW33-03-D-0004, Delivery Order No. 43.

USACE, 2012a. *Long Island Sound Dredged Material Management Plan – Final Near Shore Inventory Report,* s.l.: U.S. Army Corps of Engineers, November 2012.

USACE, 2012b. *Long Island Sound Dredged Material Management Plan – Final Containment Report,* s.l.: U.S. Army Corps of Engineers, November 2012.

USACE, 2012c. *Draft Final Dredged Material Management Plan and Environmental Assessment, FONSI and Section 404(B)(1) Evaluation for Maintenance Dredging and Dredged Material Disposal Facility Construction, Bridgeport Harbor, Bridgeport, Connecticut,* s.l.: s.n.

USACE, 2014. *Harbor Characterization of U.S. Army Corps of Engineers and Non-Corps Projects by Sediment Type and Chemistry in Long Island Sound, CT & NY,* s.l.: U.S. Army Corps of Engineers.

This Page Intentionally Left Blank

APPENDIX G – ATTACHMENT

Screening Tables

Table G-1. USACE and Other Federal Agency Navigation Projects and Projected Dredging Needs Volumes.

Sub-Project Name	Project Name	Project Town	Project State	Maintenance Volume (CY)	Improvement Volume (CY)	Total Volume (CY)	Average Event Volume (CY)
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Block Island Harbor of Refuge	New Shoreham	RI	208,000	0	208,000	28,800
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Block Island Harbor of Refuge	New Shoreham	RI	2,200	0	2,200	2,200
Great Salt Pond	Great Salt Pond	New Shoreham	RI	140,000	0	140,000	14,100
Hay West Harbor	Hay West Harbor	Fishers Island	NY	12,000	0	12,000	12,000
Pawcatuck River	Pawcatuck River	Stonington	CT	173,000	0	173,000	261,000
Little Narragansett Bay - Entrance Channel	Little Narragansett Bay	Stonington	CT	65,100	0	65,100	20,800
Little Narragansett Bay - Inner Bay Channel	Little Narragansett Bay	Stonington	CT	88,000	0	88,000	261,000
Watch Hill Cove	Watch Hill Cove	Stonington	CT	12,200	0	12,200	12,200
Stonington Harbor	Stonington Harbor	Stonington	CT	6,600	0	6,600	6,600
Mystic Harbor - Maintenance	Mystic Harbor	Groton & Stonington	CT	105,100	0	105,100	133,000
Mystic Harbor - Improvement	Mystic Harbor	Groton & Stonington	CT	0	450,000	450,000	450,000
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	New London Harbor	New London	CT	785,300	0	785,300	785,000
New London Harbor - 15-foot Shaws Cove	New London Harbor	New London	CT	30,900	0	30,900	30,900
Thames River - Lower Channels, Navy Base to Harbor	Thames River	New London & Groton	CT	832,000	0	832,000	832,000
Thames River - Upper Channel, to Norwich	Thames River	New London & Groton	CT	2,902,500	0	2,902,500	2,902,500
U.S. Navy New London - Maintenance - Suitable	Naval Submarine Base, New London	Groton	CT	75,000	0	75,000	75,000
U.S. Navy New London - Maintenance - Unsuitable	Naval Submarine Base, New London	Groton	CT	50,000	0	50,000	50,000
U.S. Navy New London - Improvement	Naval Submarine Base, New London	Groton	CT	0	350,000	350,000	175,000
U.S. Coast Guard Station, New London	U.S. Coast Guard Station, New London	New London	CT	4,000	0	4,000	4,000
U.S. Coast Guard Academy	U.S. Coast Guard Academy	New London	CT	110,000	0	110,000	55,000
Niantic Bay and Harbor - Entrance Channel	Niantic Bay and Harbor	East Lyme & Waterford	CT	9,500	0	9,500	9,500
Niantic Bay and Harbor - Upper Channel	Niantic Bay and Harbor	East Lyme & Waterford	CT	8,500	0	8,500	8,500
North Cove	North Cove	Old Saybrook	CT	872,700	0	872,700	291,000
Essex Cove	Essex Cove	Essex	CT	25,000	0	25,000	25,000
Eightmile River	Eightmile River	Lyme	CT	45,200	0	45,200	45,200
Connecticut River Main Channels - Entrance Bars	Connecticut River Below Hartford	Various	CT	878,000	0	878,000	439,000
Connecticut River Main Channels - Lower Bars	Connecticut River Below Hartford	Various	CT	281,000	0	281,000	281,000
Patchogue River - Entrance Channel	Patchogue River	Westbrook	CT	85,800	0	85,800	14,300
Patchogue River - Inner Harbor	Patchogue River	Westbrook	CT	34,200	0	34,200	11,400
Duck Island Harbor of Refuge	Duck Island Harbor of Refuge	Westbrook	CT	1,948,000	0	1,948,000	1,948,000

Table G-1. USACE and Other Federal Agency Navigation Projects and Projected Dredging Needs Volumes.

Sub-Project Name	Project Name	Project Town	Project State	Maintenance Volume (CY)	Improvement Volume (CY)	Total Volume (CY)	Average Event Volume (CY)
Clinton Harbor - Entrance Channel	Clinton Harbor	Clinton	CT	110,600	0	110,600	21,400
Clinton Harbor - Inner Harbor	Clinton Harbor	Clinton	CT	54,300	0	54,300	19,000
Guilford Harbor - Middle	Guilford Harbor	Guilford	CT	122,200	0	122,200	61,100
Guilford Harbor - Entrance and Inner	Guilford Harbor	Guilford	CT	13,600	0	13,600	6,800
Stony Creek Harbor	Stony Creek Harbor	Branford	CT	132,700	0	132,700	65,000
Branford Harbor	Branford Harbor	Branford	CT	289,200	0	289,200	144,400
New Haven Harbor - Maintenance	New Haven Harbor	New Haven	CT	2,640,000	0	2,640,000	880,000
New Haven Harbor - Improvement	New Haven Harbor	New Haven	CT	0	5,100,000	5,100,000	5,100,000
West River	West River	New Haven	CT	227,300	0	227,300	114,000
Mill River	Mill River	New Haven	CT	201,500	0	201,500	418,600
Quinnipiac River	Quinnipiac River	New Haven	CT	217,100	0	217,100	418,600
U.S. Coast Guard Sector Long Island Sound	U.S. Coast Guard Sector Long Island Sound	New Haven	CT	60,000	0	60,000	20,000
Milford Harbor - Entrance Channel and Outer Anchorage	Milford Harbor	Milford	CT	66,300	0	66,300	22,000
Milford Harbor - Inner Channels and Anchorages	Milford Harbor	Milford	CT	133,200	0	133,200	44,400
Housatonic River downstream of Pope's Island	Housatonic River	Stratford to Ansonia	CT	1,237,000	0	1,237,000	410,000
Housatonic River upstream of Pope's Island	Housatonic River	Stratford to Ansonia	CT	203,900	0	203,900	203,900
Johnsons Creek	Johnsons Creek	Bridgeport	CT	88,000	0	88,000	88,000
Black Rock Harbor	Black Rock Harbor	Bridgeport	CT	619,500	0	619,500	619,500
Southport Harbor - Entrance Channel	Southport Harbor	Fairfield	CT	35,100	0	35,100	16,600
Southport Harbor - Inner Harbor	Southport Harbor	Fairfield	CT	43,500	0	43,500	22,000
Westport Harbor	Westport Harbor	Westport	CT	50,700	0	50,700	50,700
Norwalk Harbor - Suitable	Norwalk Harbor	Norwalk	CT	627,000	0	627,000	209,000
Norwalk Harbor-West Branch I-95 Area	Norwalk Harbor	Norwalk	CT	60,000	0	60,000	20,000
Wilson Point	Wilson Point	Norwalk	CT	618,900	0	618,900	618,900
Fivemile River	Fivemile River	Darien & Norwalk	CT	55,400	0	55,400	55,400
Westcott Cove - Sand	Westcott Cove	Stamford	CT	34,300	0	34,300	34,300
Westcott Cove - Fines	Westcott Cove	Stamford	CT	34,400	0	34,400	34,400
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Stamford Harbor	Stamford	CT	486,000	0	486,000	486,000
Stamford Harbor - 12-Foot East Branch Channel	Stamford Harbor	Stamford	CT	144,600	0	144,600	144,600
Mianus River	Mianus River	Greenwich	CT	137,700	0	137,700	69,000
Greenwich Harbor - Entrance Channel - Suitable	Greenwich Harbor	Greenwich	CT	90,800	0	90,800	45,000
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Greenwich Harbor	Greenwich	CT	336,900	0	336,900	168,000
Port Chester Harbor	Port Chester Harbor	Rye	NY	366,000	0	366,000	183,000
Milton Harbor	Milton Harbor	Rye	NY	140,400	0	140,400	70,200
Mamaroneck Harbor	Mamaroneck Harbor	Mamaroneck	NY	210,100	0	210,100	70,033

Table G-1. USACE and Other Federal Agency Navigation Projects and Projected Dredging Needs Volumes.

Sub-Project Name	Project Name	Project Town	Project State	Maintenance Volume (CY)	Improvement Volume (CY)	Total Volume (CY)	Average Event Volume (CY)
Echo Bay	Echo Bay	New Rochelle	NY	59,200	0	59,200	59,200
New Rochelle Harbor	New Rochelle Harbor	New Rochelle	NY	82,600	0	82,600	82,600
Eastchester Creek - Suitable	Eastchester Creek	Bronx	NY	111,500	0	111,500	111,500
Eastchester Creek - Unsuitable	Eastchester Creek	Bronx	NY	286,300	0	286,300	286,300
Little Neck Bay	Little Neck Bay	Bayside & Douglaston	NY	1,114,400	0	1,114,400	557,200
Yocum Sailing Center, US Merchant Marine Academy	Yocum Sailing Center, US Merchant Marine Academy	Great Neck	NY	66,400	0	66,400	33,200
Hempstead Harbor	Hempstead Harbor	Roslyn	NY	186,900	0	186,900	186,900
Glen Cove Creek	Glen Cove Creek	Glen Cove	NY	53,500	0	53,500	17,800
Huntington Harbor - Sand	Huntington Harbor	Huntington	NY	27,800	0	27,800	13,900
Huntington Harbor - Silt	Huntington Harbor	Huntington	NY	27,800	0	27,800	13,900
Northport Harbor - Sand	Northport Harbor	Huntington	NY	50,800	0	50,800	25,400
Northport Harbor - Silt	Northport Harbor	Huntington	NY	50,800	0	50,800	25,400
U.S. Coast Guard, Station Eatons Neck	U.S. Coast Guard, Station Eatons Neck	Northport	NY	16,000	0	16,000	8,000
Port Jefferson Harbor - Sand	Port Jefferson Harbor	Brookhaven	NY	5,000	0	5,000	5,000
Port Jefferson Harbor - Silt	Port Jefferson Harbor	Brookhaven	NY	5,000	0	5,000	5,000
Mattituck Harbor and Inlet	Mattituck Harbor and Inlet	Mattituck	NY	113,200	0	113,200	56,600
Mattituck Harbor and Inlet - Silt - Example	Mattituck Harbor and Inlet			7,000	0	7,000	7,000
Peconic River	Peconic River	Riverhead	NY	13,300	0	13,300	13,300
Peconic River - Sand - Example	Peconic River			7,000	0	7,000	7,000
Greenport Harbor	Greenport Harbor	Greenport	NY	3,200	0	3,200	3,200
US DHS Plum Gut Harbor and Orient Point	US DHS Plum Gut Harbor and Orient Point	Orient Point	NY	20,000	0	20,000	10,000
Lake Montauk Harbor	Lake Montauk Harbor	Montauk	NY	193,200	0	193,200	32,200
U.S. Coast Guard Station	U.S. Coast Guard Station	Montauk	NY	0	0	0	0

Table G-2. Alternative Site Location and Capacity Information.

Screening ID	Alternative Type	Alternative Site Name	Alternative Site Address	Town	State	Site Capacity (CY)
Beach-111	Beach	Crescent Beach (Shelter Island)	Shore Road	Shelter Island	NY	32,200
Beach-121	Beach	Gin Beach		East Hampton	NY	12,200
Beach-170	Beach	Sunken Meadow State Park	New York 25A & Sunken Meadow Pkwy	Kings Park	NY	216,800
Beach-171	Beach	Wildwood State Park	North Wading River Road	Calverton	NY	221,500
Beach-173	Beach	Hither Hills State Park	Montauk Hwy	East Hampton	NY	431,500
Beach-177	Beach	Shadmoor State Park	S. Fox St & Route 27	Montauk	NY	27,100
Beach-178	Beach	Camp Hero State Park	Camp Hero Road	Montauk	NY	103,800
Beach-179	Beach	Montauk Point State Park	Montauk Point State Pkwy	Montauk	NY	198,900
Beach-180	Beach	Orient Beach State Park	State Pkway, Orient, NY 11957	Orient	NY	161,800
Beach-181	Beach	Orchard Beach	Pelham Bay Park, Bruckner Blvd	Bronx	NY	33,750
Beach-320	Beach	Calf Pasture Beach	Calf Pasture Beach Rd	Norwalk	CT	43,000
Beach-323	Beach	Seaside Beach	350 Waldemere Ave	Bridgeport	CT	176,700
Beach-325	Beach	Altschuler Beach	1 Palace St	West Haven	CT	69,100
Beach-327	Beach	Bradley Point Park	Capt Thomas Blvd	West Haven	CT	15,600
Beach-329	Beach	Morse Beach	101 Beach St	West Haven	CT	23,900
Beach-330	Beach	Oak Street Beach	Capt Thomas Blvd, Parcel J	West Haven	CT	23,900
Beach-331	Beach	Peck Beach	322 Beach St	West Haven	CT	40,200
Beach-332	Beach	Sandy Point (West Haven)	Beach St	West Haven	CT	37,400
Beach-333	Beach	Savin Rock	6 Rock St	West Haven	CT	2,400
Beach-337	Beach	Lighthouse Point Park Beach	21 Lighthouse Rd	New Haven	CT	4,600
Beach-339	Beach	Jacobs Beach	Seaside Avenue	Guilford	CT	8,600
Beach-343	Beach	Clinton Town Beach	Waterside Ln	Clinton	CT	1,600
Beach-344	Beach	Middle Beach		Westbrook	CT	900
Beach-345	Beach	West Beach	Seaside Avenue	Westbrook	CT	57,000
Beach-348	Beach	White Sands Beach	11 Seaside Lane	Old Lyme	CT	2,300
Beach-364	Beach	Silver Sands State Park (FSPP)	0 East Broadway	Milford	CT	28,400
Beach-365	Beach	Hammonasset State Park	Boston Post Rd (Route 1)	Madison	CT	562,700
Beach-367	Beach	Rocky Neck State Park	244 W Main St	East Lyme	CT	14,100
Beach-368	Beach	Bluff Point State Park	0 Depot Road	Groton	CT	177,100
Beach-381	Beach	Watch Hill Beach	151 Bay St	Westerly	RI	30,500
Beach-382	Beach	Napatree Point Beach	Fort Rd	Westerly	RI	91,900
Beach-384	Beach	Misquamicut State Beach	251 Atlantic Avenue	Westerly	RI	43,200

Table G-2. Alternative Site Location and Capacity Information.

Screening ID	Alternative Type	Alternative Site Name	Alternative Site Address	Town	State	Site Capacity (CY)
Beach-433	Beach	Southport Beach (FSPP)	1505 Pequot Ave, Spt	Fairfield	CT	21,200
Beach-434	Beach	Sasco Hill Beach (FSPP)	1401 Sasco Hill Rd	Fairfield	CT	8,500
Beach-436	Beach	Jennings Beach (FSPP)	880 South Benson Rd	Fairfield	CT	33,400
Beach-437	Beach	Plum Island		Orient	NY	56,100
Beach-438	Beach	Burial Hill Beach	Beachside Avenue	Westport	CT	3,700
Beach-440	Beach	Compo Beach	60 Compo Beach Rd	Westport	CT	88,800
Beach-441	Beach	Cove Island Beach	Cove Rd	Stamford	CT	27,100
Beach-442	Beach	Cummings Park Beaches	Shippan Ave	Stamford	CT	52,200
Beach-444	Beach	Gulf Beach	561 Gulf Street	Milford	CT	7,100
Beach-445	Beach	Jamesport State Park	Sound Ave., Mattituck, NY 11952	Riverhead	NY	161,900
Beach-446	Beach	Theodore Roosevelt County Park	Montauk Hwy	East Hampton	NY	577,000
Beach-447	Beach	Prospect Beach	711 Ocean Avenue	West Haven	CT	85,300
Beach-449	Beach	Sherwood Island State Park	Sherwood Island	Westport	CT	96,300
Beach-450	Beach	Short Beach	Short Beach Dr	Stratford	CT	73,500
Beach-451	Beach	Woodmont Shore Beach	0 Beach Avenue	Milford	CT	700
Beach-453	Beach	Lake Montauk Harbor	Unknown	East Hampton	NY	400,000
Beach-454 East	Beach	Hashamomuck Cove - County Road 48	County Rd 48 - Hashamomuck Cove	Southold	NY	219,800
Beach-454 West	Beach	Hashamomuck Cove - Kenney's Beach	Kenneys Beach	Southold	NY	68,500
Beach-455/82	Beach	Mattituck Harbor 111/Bailie's Beach	east side of Mattituck Inlet, Mattituck, NY 11952	Southold/Mattituck	NY	100,000
Beach-456	Beach	Bayville		Oyster Bay	NY	104,200
Beach-457	Beach	East Wharf Beach	Middle Beach	Madison	CT	5,700
Beach-459	Beach	Fort Nathan Hale Park	408 Townsend Ave	New Haven	CT	7,100
Beach-467	Beach	Long Beach	Lordship Blvd	Stratford	CT	31,300
Beach-468	Beach	Russian Beach	Beach Dr	Stratford	CT	42,800
Beach-474	Beach	South Pine Creek Beach	1424 S Pine Creek Rd	Fairfield	CT	100
Beach-480	Beach	duBois Beach	Water St & 2 Water St	Stonington	CT	4,500
Beach-600	Beach	Crescent Beach (Block Island)	Corn Neck Road	New Shoreham	RI	66,667
Beach-610	Beach	Sachem's Pond West Beach	West Beach Road	New Shoreham	RI	66,667

Table G-2. Alternative Site Location and Capacity Information.

Screening ID	Alternative Type	Alternative Site Name	Alternative Site Address	Town	State	Site Capacity (CY)
Beach-620	Beach	Sandy Point Beach (Westerly)	Sandy Point Island	Westerly	RI	80,000
Beach-63	Beach	Asharoken Beach	Asharoken Ave., Northport	Huntington	NY	600,000
Beach-64	Beach	Hobart Beach	Eatons Neck Rd., Eatons Neck	Huntington	NY	173,900
Beach-67	Beach	Crescent Beach (Huntington)	Crescent Beach Dr.	Huntington	NY	4,800
Beach-68	Beach	Gold Star Battalion Beach	Browns Rd.	Huntington	NY	3,200
Beach-76	Beach	Town Beach	North Road (Route 48)	Southold	NY	31,300
Beach-79	Beach	Gull Pond Beach (Norman E. Klipp Park)	Manhanset Avenue, Greenport	Southold	NY	19,500
Berm-121/446	Nearshore Berm	Theodore Roosevelt County Park & Gin Beach		East Hampton	NY	202,358
Berm-170	Nearshore Berm	Sunken Meadow State Park	New York 25A & Sunken Meadow Pkwy	Kings Park	NY	242,799
Berm-171	Nearshore Berm	Wildwood State Park	North Wading River Road, Calverton, NY 11933	Calverton	NY	197,831
Berm-173	Nearshore Berm	Hither Hills State Park	Montauk Hwy	East Hampton	NY	276,053
Berm-177	Nearshore Berm	Shadmoor State Park	S. Fox St & Route 27, Montauk	East Hampton	NY	33,700
Berm-178	Nearshore Berm	Camp Hero State Park	Camp Hero Road, Montauk, NY 11954	East Hampton	NY	84,332
Berm-179	Nearshore Berm	Montauk Point State Park	Montauk Point State Pkwy, Montauk, NY 11954	East Hampton	NY	131,119
Berm-180	Nearshore Berm	Orient Beach State Park	State Pkway, Orient, NY 11957	Orient	NY	204,086
Berm-320	Nearshore Berm	Calf Pasture Beach	Calf Pasture Beach Rd	Norwalk	CT	30,243
Berm-323	Nearshore Berm	Seaside Beach	350 Waldemere Ave	Bridgeport	CT	143,060
Berm-327/333/330	Nearshore Berm	Bradley Point Park, Savin Rock & Oak Street Beach		West Haven	CT	214,709
Berm-337	Nearshore Berm	Lighthouse Point Park Beach	21 Lighthouse Rd	New Haven	CT	55,581
Berm-364b/364c	Nearshore Berm	Silver Sands State Park (west side)		Milford	CT	25,375
Berm-365	Nearshore Berm	Hammonasset State Park	Boston Post Rd (Route 1)	Madison	CT	140,012
Berm-367	Nearshore Berm	Rocky Neck State Park	244 W Main St	East Lyme	CT	48,576
Berm-368	Nearshore Berm	Bluff Point State Park	0 Depot Road	Groton	CT	72,277
Berm-381/382	Nearshore Berm	Watch Hill Beach & Napatree Point Beach		Westerly	RI	154,911

Table G-2. Alternative Site Location and Capacity Information.

Screening ID	Alternative Type	Alternative Site Name	Alternative Site Address	Town	State	Site Capacity (CY)
Berm-384	Nearshore Berm	Misquamicut State Beach	251 Atlantic Avenue	Westerly	RI	70,457
Berm-433	Nearshore Berm	Southport Beach	1505 Pequot Ave, Spt	Fairfield	CT	27,218
Berm-434	Nearshore Berm	Sasco Hill Beach	1401 Sasco Hill Rd	Fairfield	CT	20,076
Berm-438	Nearshore Berm	Burial Hill Beach	Beachside Avenue	Westport	CT	12,706
Berm-440	Nearshore Berm	Compo Beach	60 Compo Beach Rd	Westport	CT	58,356
Berm-441	Nearshore Berm	Cove Island Beach	Cove Rd	Stamford	CT	28,196
Berm-445	Nearshore Berm	Jamesport State Park	Sound Ave., Mattituck, NY 11952	Riverhead	NY	129,641
Berm-447	Nearshore Berm	Prospect Beach	711 Ocean Avenue	West Haven	CT	54,990
Berm-449	Nearshore Berm	Sherwood Island State Park		Westport	CT	105,931
Berm-451	Nearshore Berm	Woodmont Shore Beach	0 Beach Avenue	Milford	CT	8,157
Berm-453	Nearshore Berm	Lake Montauk Harbor	Unknown	East Hampton	NY	105,144
Berm-454A	Nearshore Berm	Hashamomuck Cove - County Road 48		Southold	NY	155,115
Berm-454B	Nearshore Berm	Hashamomuck Cove - Kenney's Beach		Southold	NY	72,800
Berm-455/82	Nearshore Berm	Mattituck Harbor 111 & Bailie's Beach		Mattituck	CT	35,133
Berm-456	Nearshore Berm	Bayville		Oyster Bay	NY	96,182
Berm-457	Nearshore Berm	East Wharf Beach	Middle Beach	Madison	CT	8,726
Berm-467	Nearshore Berm	Long Beach	Lordship Blvd	Stratford	CT	45,346
Berm-600	Nearshore Berm	Crescent Beach (Block Island)	Corn Neck Road	New Shoreham	RI	192,274
Berm-610	Nearshore Berm	Sachem's Pond West Beach	West Beach Road	New Shoreham	RI	194,495
Berm-620	Nearshore Berm	Sandy Point Beach (Westerly)	Sandy Point Island	Westerly	RI	80,000
Berm-63	Nearshore Berm	Asharoken Beach	Asharoken Ave., Northport	Huntington	NY	248,304
Berm-Grove Beach	Nearshore Berm	Grove Beach		Westbrook	CT	62,814
BF-422/423	Brownfield	Flushing Airport Wetlands/Flushing Airport Uplands		Flushing	NY	140,000
CAD-M_bse	CAD	Morris Cove		New Haven	CT	466,113
CAD-M_cap	CAD	Morris Cove		New Haven	CT	143,887
COW-E_bse	Confined Open Water	Sherwood Island Borrow Pit		Westport	CT	266,000
COW-E_cap	Confined Open Water	Sherwood Island Borrow Pit		Westport	CT	484,000

Table G-2. Alternative Site Location and Capacity Information.

Screening ID	Alternative Type	Alternative Site Name	Alternative Site Address	Town	State	Site Capacity (CY)
Habitat-427	Habitat Restoration	Plumb Beach		Brooklyn	NY	64,400
Habitat-429	Habitat Restoration	Jamaica Bay Marsh Islands		Hempstead	NY	750,000
IslandCDF-B_bse	Island CDF	Greenwich Captain Harbor		Greenwich	CT	498,179
IslandCDF-B_cap	Island CDF	Greenwich Captain Harbor		Greenwich	CT	331,821
IslandCDF-L_bse	Island CDF	New Haven Breakwaters		New Haven	CT	52,695,616
IslandCDF-L_cap	Island CDF	New Haven Breakwaters		New Haven	CT	5,554,384
IslandCDF-N_bse	Island CDF	Falkner Island		Guilford	CT	16,010,237
IslandCDF-N_cap	Island CDF	Falkner Island		Guilford	CT	1,169,763
IslandCDF-P_bse	Island CDF	Duck Island Roads		Clinton	CT	1,376,113
IslandCDF-P_cap	Island CDF	Duck Island Roads		Clinton	CT	233,887
IslandCDF-Q_bse	Island CDF	Twotree Island		Waterford	CT	2,966,181
IslandCDF-Q_cap	Island CDF	Twotree Island		Waterford	CT	433,819
IslandCDF-R_bse	Island CDF	Groton Black Ledge		Groton	CT	6,929,986
IslandCDF-R_cap	Island CDF	Groton Black Ledge		Groton	CT	570,014
LFCap-251	Landfill Cap	Manchester Landfill	236 Olcott St; 864 Middle Turnpike West	Manchester	CT	1,200,000
LFCap-61	Landfill Cap	Town of Brookhaven Landfill	350 Horseblock Road	Brookhaven	NY	700,000
LFPlace-59	Landfill Placement	110 Sand Company Clean Fill Disposal Site	Bethpage Spagnoli Road, Melville, NY 11747	Melville	NY	1,000,000
ShoreCDF-A_bse	Shoreline CDF	Hempstead Harbor		Hempstead	NY	2,787,737
ShoreCDF-A_cap	Shoreline CDF	Hempstead Harbor		Hempstead	NY	712,263
ShoreCDF-C_bse	Shoreline CDF	Norwalk Outer Harbor Islands - Marsh		Norwalk	CT	553,987
ShoreCDF-C_cap	Shoreline CDF	Norwalk Outer Harbor Islands - Marsh		Norwalk	CT	376,013
ShoreCDF-D_bse	Shoreline CDF	Norwalk Outer Harbor Islands - Containment		Norwalk	CT	242,568
ShoreCDF-D_cap	Shoreline CDF	Norwalk Outer Harbor Islands - Containment		Norwalk	CT	157,432
ShoreCDF-F_bse	Shoreline CDF	Penfield Reef		Fairfield	CT	33,539,314
ShoreCDF-F_cap	Shoreline CDF	Penfield Reef		Fairfield	CT	5,010,686
ShoreCDF-I_bse	Shoreline CDF	Bridgeport Yellow Mill Channel		Bridgeport	CT	197,902
ShoreCDF-I_cap	Shoreline CDF	Bridgeport Yellow Mill Channel		Bridgeport	CT	102,098

Table G-2. Alternative Site Location and Capacity Information.

Screening ID	Alternative Type	Alternative Site Name	Alternative Site Address	Town	State	Site Capacity (CY)
ShoreCDF-J_bse	Shoreline CDF	Stratford Point		Stratford	CT	33,666,906
ShoreCDF-J_cap	Shoreline CDF	Stratford Point		Stratford	CT	5,283,094
ShoreCDF-K_bse	Shoreline CDF	Milford Harbor		Milford	CT	219,089
ShoreCDF-K_cap	Shoreline CDF	Milford Harbor		Milford	CT	50,911
ShoreCDF-O_bse	Shoreline CDF	Clinton Harbor		Clinton	CT	59,848
ShoreCDF-O_cap	Shoreline CDF	Clinton Harbor		Clinton	CT	640,152
UOW-CLDS	Uncofined Open Water	Central Long Island Sound Disposal Site		Regional		20,000,000
UOW-CSDS	Uncofined Open Water	Cornfield Shoals Disposal Site		Regional		200,000,000
UOW-NLDS	Uncofined Open Water	New London Disposal Site		Regional		7,796,450
UOW-WLDS	Uncofined Open Water	Western Long Island Sound Disposal Site		Regional		20,000,000

Table G-3A. Sediment Suitability/Compatibility Data and Scoring by Project and Alternative Type.

Project Suitability Data							
Sub-Project Name	**Year Chemistry Tested**	**Chemical Characteristics**	**Most Recent Disposal Used**	**Year Grain Size Tested**	**Physical Sediment Type**	**Anticipated Open Water Suitability**	**Anticipated Beneficial Use Material Type**
Black Rock Harbor	1973	Moderate to high concentrations of metals, oil and grease, volatile solids, and potential pollutants	CLIS	1982	Primarily organic mud with some coarser material (sand and silty sand)	Suitable	Primarily silt and clay; unknown if clean fill
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	N/A	N/A	N/A	N/A	Silty sand (24 to 69 percent fines)	Suitable	Silty sand (24 to 69 percent fines); unknown if clean fill
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	N/A	N/A	Nearshore off Crescent Beach	2013	Sand (0.1 - 12% fines)	Suitable	Primarily sand; assumed clean fill
Branford Harbor	1987	Moderately high concentrations of cadmium, copper, chromium, lead, arsenic, and zinc	CLIS	1987	87-97% fines	Suitable	Primarily silt and clay; unknown if clean fill
Bridgeport Harbor - Inner Harbor	1982	Moderately highly to highly contaminated	CAD cells	1982	Primarily fine grained organic silt	Unsuitable	Primarily silt and clay; not clean fill
Bridgeport Harbor - Outer Harbor	2002	Bioaccumulation tests showed that both the clam worm and the bent nose clam significantly accumulated several PCB's and several PAH's, while the bent nose clam also accumulated copper and chromium.	CLIS	1982	Predominately coarser grained	Suitable	Silty sand; unknown if clean fill
Clinton Harbor - Entrance Channel	N/A	N/A	Hammonasset State Beach; nearshore; CSDS	2003	Sand (12 to 16% fines)	Suitable	Primarily sand; assumed clean fill
Clinton Harbor - Inner Harbor	N/A	N/A	N/A	1975	43 to 97% fines	Unknown	43 to 97% fines; unknown if clean fill
Connecticut River Main Channels - Entrance Bars	N/A	N/A	CSDS	2001	33 to 66% fines	Suitable	33 to 66% fines; assumed clean fill
Connecticut River Main Channels - Lower Bars	N/A	N/A	CSDS; Notts Island	1977	Primarily sand (<1% fines)	Suitable	Primarily sand; assumed clean fill
Duck Island Harbor of Refuge	N/A	N/A	N/A	1949	Suitable sand, per USACE	Suitable	Sand, per USACE
Eastchester Creek - Suitable	N/A	N/A	N/A	2009	Mostly silt and clay	Suitable	Primarily silt and clay; unknown if clean fill
Eastchester Creek - Unsuitable	N/A	N/A	N/A	2009	Mostly silt and clay	Unsuitable	Primarily silt and clay; unknown if clean fill
Echo Bay	N/A	N/A	N/A	2008	Samples EB3 and EB14 were mostly gravel. Samples EB2(3.0 and 5.5), EB4, EB7(1.0 and 4.0), EB8(5.0), EB10, EB11, EB13(5.0), EB16, and EB17 (1.0) were mostly sand. Samples EB5, EB8(2.0), EB9, EB12, EB13(2.0), EB15, and EB17(low) were mostly silt and clay.	Unknown	Unknown; unknown if clean fill
Eightmile River	N/A	N/A	N/A	1977	Sand and silty sand to clay (29 to 78% fines)	Unknown	Sand and silty sand to clay (29 to 78% fines); unknown if clean fill

Table G-3A. Sediment Suitability/Compatibility Data and Scoring by Project and Alternative Type.

	Suitability Scores				Beneficial Use Compatibility Scores					
Sub-Project Name	**Open Water Placement**	**Confined Open Water Placement - Base**	**Containment Cap**	**Containment Base**	**Nearshore Berm**	**Beach Renourishment**	**Landfill Cap**	**Landfill Placement**	**Brownfield**	**Habitat Restoration**
Black Rock Harbor	100	100	-1	100	-1	-1	100	100	50	50
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	100	100	-1	100	-1	-1	100	100	50	50
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	-1	100	-1	100	100	-1	-1	-1	-1
Branford Harbor	100	100	-1	100	-1	-1	100	100	50	50
Bridgeport Harbor - Inner Harbor	-1	-1	-1	100	-1	-1	-1	-1	-1	-1
Bridgeport Harbor - Outer Harbor	100	-1	100	-1	50	50	100	100	50	50
Clinton Harbor - Entrance Channel	100	-1	100	-1	100	100	-1	-1	-1	-1
Clinton Harbor - Inner Harbor	50	50	-1	100	-1	-1	100	100	50	50
Connecticut River Main Channels - Entrance Bars	100	100	-1	100	50	-1	100	100	100	100
Connecticut River Main Channels - Lower Bars	100	-1	100	-1	100	100	-1	-1	-1	-1
Duck Island Harbor of Refuge	100	-1	100	-1	100	100	-1	-1	-1	-1
Eastchester Creek - Suitable	100	100	-1	100	-1	-1	100	100	100	100
Eastchester Creek - Unsuitable	-1	-1	-1	100	-1	-1	-1	-1	-1	-1
Echo Bay	50	50	-1	100	50	50	50	50	50	50
Eightmile River	50	50	-1	100	-1	-1	100	100	50	50

Table G-3A. Sediment Suitability/Compatibility Data and Scoring by Project and Alternative Type.

Project Suitability Data							
Sub-Project Name	**Year Chemistry Tested**	**Chemical Characteristics**	**Most Recent Disposal Used**	**Year Grain Size Tested**	**Physical Sediment Type**	**Anticipated Open Water Suitability**	**Anticipated Beneficial Use Material Type**
Essex Cove	N/A	N/A	Notts Island	1974	sand and silty sand to clay (37 to 91% fines)	Unknown	Sand and silty sand to clay (37 to 91% fines); unknown if clean fill
Fivemile River	1974	High levels of TOC, a few metals, and volatile solids	CLIS and WLIS	1999	Predominantly silt and clay; 36-96% silt and clay; 4-36% sand and gravel	Suitable	Primarily silt and clay; unknown if clean fill
Glen Cove Creek	N/A	N/A	N/A	1996	Samples GC-01, -03, -06, -08, -09, and -13 were mostly silt and clay. Samples GC-02, -10, -12, -14, and -15 were mostly sand. Sample GC-11 was mostly gravel.	Unsuitable	Primarily silty sand; unknown if clean fill
Great Salt Pond	N/A	N/A	Nearshore off Beach West of Sachem Pond	2012	fine to medium grain sand; Sand - Beach or Nearshore Compatable	Suitable	Primarily sand; assumed clean fill
Greenport Harbor	N/A	N/A	N/A	N/A	Sand - per USACE	Unknown	Sand; assumed clean fill
Greenwich Harbor - Entrance Channel - Suitable	2012	Shoal sediments from the outer harbor end of the channel found to be suitable	Stamford Dumping Ground and upland	2012	Primarily silt and clay	Suitable	Primarily silt and clay; assumed clean fill
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	2012	Toxicity tests, tissue analysis, and risk assessment showed material is not suitable	Stamford Dumping Ground and upland	2012	Primarily silt and clay	Unsuitable	Primarily silt and clay; unsuitable
Guilford Harbor - Entrance and Inner	2013	N/A	Upland disposal	2013	Fines (up to 99%)	Suitable	Primarily silt and clay; assumed clean fill
Guilford Harbor - Middle	2013	N/A	Upland disposal	2013	Sand (1 - 7% fines)	Suitable	Primarily sand; assumed clean fill
Hay West Harbor	N/A	N/A	N/A	N/A	sands and fines (39 - 92% fines)	Suitable	Silty sand; unknown if clean fill
Hempstead Harbor	N/A	N/A	N/A	N/A	sands and fines	Unknown	Silty sand; unknown if clean fill
Housatonic River downstream of Pope's Island	1999	TOC was 0.12-1.45%; PAHs were below detection limits to 890 ppb	Nearshore off Point No Point in Stratford	1999	Sand (0.43-8.65% fines)	Suitable	Primarily sand; assumed clean fill
Housatonic River upstream of Pope's Island	1975	Zinc and copper	Several upland sites	1975	Fine grained material, per USACE	Suitable	Primarily silt and clay; assumed clean fill
Huntington Harbor - Sand	1971	Elevated oil, grease, metals	WLDS	1971	sand	Unknown	Sand; assumed clean fill
Huntington Harbor - Silt	1971	Elevated oil, grease, metals	WLDS	1971	mud (fines)	Unknown	mud; unknown if clean fill
Johnsons Creek	1980	Moderately high concentrations of metals and volatile solids	CLIS	1980	Gray or black organic silt	Unsuitable	Primarily silt and clay; unsuitable
Lake Montauk Harbor	N/A	N/A	N/A	2005	Predominantly gravel in intertidal and subtidal locations; Closest to the jetty there was sand (predominantly very coarse to coarse-grained sand, with trace amounts of medium, fine, and very fine sand)	Unknown	Primarily sand; assumed clean fill

Table G-3A. Sediment Suitability/Compatibility Data and Scoring by Project and Alternative Type.

	Suitability Scores				Beneficial Use Compatibility Scores					
Sub-Project Name	**Open Water Placement**	**Confined Open Water Placement - Base**	**Containment Cap**	**Containment Base**	**Nearshore Berm**	**Beach Renourishment**	**Landfill Cap**	**Landfill Placement**	**Brownfield**	**Habitat Restoration**
Essex Cove	50	50	-1	100	-1	-1	100	100	50	50
Fivemile River	100	100	-1	100	-1	-1	100	100	50	50
Glen Cove Creek	-1	-1	-1	100	-1	-1	-1	-1	-1	-1
Great Salt Pond	100	-1	100	-1	100	100	-1	-1	-1	-1
Greenport Harbor	50	-1	100	-1	100	100	-1	-1	-1	-1
Greenwich Harbor - Entrance Channel - Suitable	100	100	-1	100	-1	-1	100	100	100	100
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	-1	-1	-1	100	-1	-1	-1	-1	-1	-1
Guilford Harbor - Entrance and Inner	100	100	-1	100	-1	-1	100	100	100	100
Guilford Harbor - Middle	100	-1	100	-1	100	100	-1	-1	-1	-1
Hay West Harbor	100	100	-1	100	-1	-1	100	100	50	50
Hempstead Harbor	50	50	50	50	50	50	100	100	50	50
Housatonic River downstream of Pope's Island	100	-1	100	-1	100	100	-1	-1	-1	-1
Housatonic River upstream of Pope's Island	100	100	-1	100	-1	-1	100	100	100	100
Huntington Harbor - Sand	50	-1	100	-1	100	100	-1	-1	-1	-1
Huntington Harbor - Silt	50	50	-1	100	-1	-1	50	50	50	50
Johnsons Creek	-1	-1	-1	100	-1	-1	-1	-1	-1	-1
Lake Montauk Harbor	50	-1	100	-1	100	100	-1	-1	-1	-1

Table G-3A. Sediment Suitability/Compatibility Data and Scoring by Project and Alternative Type.

Project Suitability Data							
Sub-Project Name	**Year Chemistry Tested**	**Chemical Characteristics**	**Most Recent Disposal Used**	**Year Grain Size Tested**	**Physical Sediment Type**	**Anticipated Open Water Suitability**	**Anticipated Beneficial Use Material Type**
Little Narragansett Bay - Entrance Channel	2003	N/A	Misquamicut Beach (nearshore) [sandy material only]	2003	Sand with maximum 2% fines west of cove	Suitable	Primarily sand; assumed clean fill
Little Narragansett Bay - Inner Bay Channel	2003	N/A	NLDS or RISDS [silty material]	2003	east was 6-80% fines	Suitable	Primarily silt; unknown if clean fill
Little Neck Bay	N/A	N/A	N/A	N/A	Fines	Unknown	Primarily silt and clay; unknown if clean fill
Mamaroneck Harbor	N/A	N/A	N/A	1998	Mostly silt and clay	Unknown	Primarily silt and clay; unknown if clean fill
Mattituck Harbor and Inlet	N/A	N/A	Bailie's Beach	2003	Mostly gravel and sand	Suitable	Sand; assumed clean fill
Mattituck Harbor and Inlet - Silt - Example				2003	Silt and clay	Unknown	Silt; unknown if clean fill
Mianus River	2005	Low levels of contaminants, passes biological tests and risk assessment	Eaton's Neck Disposal Area; WLIS	2005	Organic black silt (average 87% fines)	Suitable	Primarily silt and clay (87% fines); assumed clean fill
Milford Harbor - Entrance Channel and Outer Anchorage	1985	low contaminant levels	Gulf Beach	1985	Medium to fine sand	Suitable	Primarily sand (medium to fine); assumed clean fill
Milford Harbor - Inner Channels and Anchorages	1985	High levels of cadmium, moderate levels of other contaminants	CLDS	1985	Sandy to silty clay (88 to 97% fines)	Suitable	Primarily silt and clay; assumed clean fill
Mill River	1986	Heavy metals and PCBs	CLIS	1980	Organic sandy silt	Unsuitable	Silty sand (63% fines); unknown if clean fill
Milton Harbor	1991	Higher levels of ammonia, phenols, arsenic, chromium, copper, mercury, nickel (one sample was below), lead, vanadium, and zinc than WLIS	WLIS with cap placed over it	1991	Silt (66.1%) with some clay and sand	Unknown	Primarily silt and clay; unknown if clean fill
Mystic Harbor - Improvement	2006	Metals, PAHs, TOC; Biological testing showed that material was not acutely toxic	NLDS or RISDS	2006	Predominately silt and clay (55-90% fines)	Suitable	Primarily silt and clay; unknown if clean fill
Mystic Harbor - Maintenance	2006	Metals, PAHs, TOC; Biological testing showed that material was not acutely toxic	NLDS or RISDS	2006	Predominately silt and clay (55-90% fines)	Suitable	Primarily silt and clay; unknown if clean fill
New Haven Harbor - Improvement	2010	PCBs, metals; Biological testing showed that material was not acutely toxic	CLIS	2010	Silt (60-78% silt, 19-24% clay, 1-11% very fine sand)	Suitable	Primarily silt and clay; unknown if clean fill
New Haven Harbor - Maintenance	2010	PCBs, metals; Biological testing showed that material was not acutely toxic	CLIS	2010	Silt (60-78% silt, 19-24% clay, 1-11% very fine sand)	Suitable	Primarily silt and clay; unknown if clean fill
New London Harbor - 15-foot Shaws Cove	1934	N/A	N/A	1934	Assumed to be unsuitable, fine-grained material, per USACE (see harbor write-up)	Unsuitable	Assumed to be fine-grained, and unsuitable (see harbor write-up)
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	N/A	N/A	NLDS	1984	Silt and clay (66 - 100% fines, 92.9% average)	Suitable	Primarily silt and clay; unknown if clean fill

Table G-3A. Sediment Suitability/Compatibility Data and Scoring by Project and Alternative Type.

	Suitability Scores				Beneficial Use Compatibility Scores					
Sub-Project Name	Open Water Placement	Confined Open Water Placement - Base	Containment Cap	Containment Base	Nearshore Berm	Beach Renourishment	Landfill Cap	Landfill Placement	Brownfield	Habitat Restoration
Little Narragansett Bay - Entrance Channel	100	-1	100	-1	100	100	-1	-1	-1	-1
Little Narragansett Bay - Inner Bay Channel	100	100	-1	100	-1	-1	100	100	50	50
Little Neck Bay	50	50	-1	100	-1	-1	100	100	50	50
Mamaroneck Harbor	50	50	-1	100	-1	-1	100	100	50	50
Mattituck Harbor and Inlet	50	-1	100	-1	100	100	-1	-1	-1	-1
Mattituck Harbor and Inlet - Silt - Example	50	50	-1	100	-1	-1	50	50	50	50
Mianus River	100	100	-1	100	-1	-1	100	100	100	100
Milford Harbor - Entrance Channel and Outer Anchorage	100	-1	100	-1	100	100	-1	-1	-1	-1
Milford Harbor - Inner Channels and Anchorages	100	100	-1	100	-1	-1	100	100	100	100
Mill River	-1	-1	-1	100	-1	-1	-1	-1	-1	-1
Milton Harbor	50	50	-1	100	-1	-1	100	100	50	50
Mystic Harbor - Improvement	100	100	-1	100	-1	-1	100	100	50	50
Mystic Harbor - Maintenance	100	100	-1	100	-1	-1	100	100	50	50
New Haven Harbor - Improvement	100	100	-1	100	-1	-1	100	100	50	50
New Haven Harbor - Maintenance	100	100	-1	100	-1	-1	100	100	50	50
New London Harbor - 15-foot Shaws Cove	-1	-1	-1	100	-1	-1	-1	-1	-1	-1
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	100	100	-1	100	-1	-1	100	100	50	50

Table G-3A. Sediment Suitability/Compatibility Data and Scoring by Project and Alternative Type.

Project Suitability Data							
Sub-Project Name	**Year Chemistry Tested**	**Chemical Characteristics**	**Most Recent Disposal Used**	**Year Grain Size Tested**	**Physical Sediment Type**	**Anticipated Open Water Suitability**	**Anticipated Beneficial Use Material Type**
New Rochelle Harbor	1990	Metals, PAHs, pesticides; Biological testing showed the sediment is not acutely toxic	WLIS	1990	silt	Suitable	Primarily silt and clay; unknown if clean fill
Niantic Bay and Harbor - Entrance Channel	N/A	N/A	Niantic Dumping Grounds	1977	Sand (4 to 10% percent fines)	Suitable	Primarily sand; assumed clean fill
Niantic Bay and Harbor - Upper Channel	N/A	N/A	Niantic Dumping Grounds	1977	Silty sand (16 to 71 % fines)	Unknown	Silty sand; unknown if clean fill (see harbor write-up)
North Cove	2003	Biological testing showed that material was not acutely toxic	CSDS	2000	Finely-grained silt-clay	Suitable	Primarily silt and clay; unknown if clean fill
Northport Harbor - Sand	1971	Elevated oil, grease, metals	WLDS, CLDS, upland	1971	Sand	Unknown	Sand; assumed clean fill
Northport Harbor - Silt	1971	Elevated oil, grease, metals	WLDS, CLDS, upland	1971	Mud (fine grained)	Uknown	Fine-grained; unknown clean fill
Norwalk Harbor - Suitable	2013	N/A	CLDS, WLDS	2001	Black silty clay or black clayey silt 6-7 feet deep, then gravelly sand	Suitable	Primarily silt and clay; assumed clean fill
Norwalk Harbor-West Branch I-95 Area	2001	Some material found biologically acutely toxic	contaminated material placed in CADs	2013	Clayey silt	Unsuitable	Primarily silt and clay; unsuitable
Patchogue River - Entrance Channel	2004	Biological testing showed the sediment is not acutely toxic	CSDS; Off Hammonasset Harbor	2004	Sand and silty sand (0 to 38% fines)	Suitable	Sand and silty sand; assumed clean fill
Patchogue River - Inner Harbor	2004	Biological testing showed the sediment is not acutely toxic	CSDS	2004	Silt and clay (68 to 94% fines)	Suitable	Silt and clay (68 to 94% fines); clean fill
Pawcatuck River	1948	N/A	Stonington Dumping Ground	1948	Mud and sand	Suitable	Primarily silt and clay; unknown if clean fill
Peconic River	N/A	N/A	N/A	N/A	sands and fines	Unknown	Fine-grained; unknown if clean fill
Peconic River - Sand - Example					Sand	Unknown	Sand; assumed clean fill
Pequonnock River	N/A	N/A	N/A	N/A	silt	Unsuitable	Primarily silt and clay; unknown if clean fill
Port Chester Harbor	1974	two samples contained high levels of lead, zinc, and nickel	WLIS-III	1994	Gravel, sand, and silt	Unsuitable	Gravel, sand, and silt; unsuitable
Port Jefferson Harbor - Sand	1971	Limited metals analysis	N/A	1971	sand	Unknown	Sand; assumed clean fill
Port Jefferson Harbor - Silt	1971	Limited metals analysis	N/A	1971	Silt	Unknown	Fines; unknown if clean fill
Quinnipiac River	1986	Copper	CLIS	1980	Organic sandy silt (63% fines)	Unsuitable	Silty sand (63%); unsuitable
Southport Harbor - Entrance Channel	1998	no significantly high values for any parameters	CLIS, WLIS	1998	Sand (2 - 14% fines)	Suitable	Primarily sand (2 - 14%); assumed clean fill
Southport Harbor - Inner Harbor	1998	One sample with high chromium, copper, lead, zinc	CLIS, WLIS	1998	Sand and silts (4 - 95% fines)	Suitable	Sand and silts (4 - 95% fines); assumed clean fill
Stamford Harbor - 12-Foot East Branch Channel	1978	relatively high levels of mercury, zinc, arsenic and copper	CLIS, capped with material from New Haven	1978	Sandy silt (average 80% fines)	Unsuitable	Sandy silt (average 80% fines); unsuitable

Table G-3A. Sediment Suitability/Compatibility Data and Scoring by Project and Alternative Type.

	Suitability Scores				Beneficial Use Compatibility Scores					
Sub-Project Name	Open Water Placement	Confined Open Water Placement - Base	Containment Cap	Containment Base	Nearshore Berm	Beach Renourishment	Landfill Cap	Landfill Placement	Brownfield	Habitat Restoration
New Rochelle Harbor	100	100	-1	100	-1	-1	100	100	50	50
Niantic Bay and Harbor - Entrance Channel	100	-1	100	-1	100	100	-1	-1	-1	-1
Niantic Bay and Harbor - Upper Channel	50	50	-1	100	-1	-1	100	100	50	50
North Cove	100	100	-1	100	-1	-1	100	100	50	50
Northport Harbor - Sand	50	-1	100	-1	100	100	-1	-1	-1	-1
Northport Harbor - Silt	50	50	-1	100	-1	-1	50	50	50	50
Norwalk Harbor - Suitable	100	100	-1	100	-1	-1	100	100	100	100
Norwalk Harbor-West Branch I-95 Area	-1	-1	-1	100	-1	-1	-1	-1	-1	-1
Patchogue River - Entrance Channel	100	-1	100	-1	100	100	-1	-1	-1	-1
Patchogue River - Inner Harbor	100	100	-1	100	-1	-1	100	100	100	100
Pawcatuck River	100	100	-1	100	-1	-1	100	100	50	50
Peconic River	50	-1	-1	100	-1	-1	50	50	50	50
Peconic River - Sand - Example	50	-1	100	-1	100	100	-1	-1	-1	-1
Pequonnock River	-1	-1	-1	100	-1	-1	-1	-1	50	50
Port Chester Harbor	-1	-1	-1	100	-1	-1	-1	-1	-1	-1
Port Jefferson Harbor - Sand	50	-1	100	-1	100	100	-1	-1	-1	-1
Port Jefferson Harbor - Silt	50	50	-1	100	-1	-1	50	50	50	50
Quinnipiac River	-1	-1	-1	100	-1	-1	-1	-1	-1	-1
Southport Harbor - Entrance Channel	100	-1	100	-1	100	100	-1	-1	-1	-1
Southport Harbor - Inner Harbor	100	100	-1	100	-1	-1	100	100	100	100
Stamford Harbor - 12-Foot East Branch Channel	-1	-1	-1	100	-1	-1	-1	-1	-1	-1

Table G-3A. Sediment Suitability/Compatibility Data and Scoring by Project and Alternative Type.

Project Suitability Data							
Sub-Project Name	**Year Chemistry Tested**	**Chemical Characteristics**	**Most Recent Disposal Used**	**Year Grain Size Tested**	**Physical Sediment Type**	**Anticipated Open Water Suitability**	**Anticipated Beneficial Use Material Type**
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	1976	No significantly high values for any of the chemical parameters tested; One moderately high value for lead, one moderately high value for vanadium	Stamford Dumping Grounds	1976	Silt (81 and 83% fines average)	Unknown	Silt (81 and 83% fines average); unknown clean fill
Stonington Harbor	N/A	N/A	Stonington Dumping Grounds	1990	Sandy gravel to sandy silt	Suitable	Silty sand; unknown if clean fill
Stony Creek Harbor	1992	Metals and PCBs	CLIS	1992	Silt and clay (94%) with fine sand	Suitable	Silt and clay; unknown if clean fill
Thames River - Lower Channels, Navy Base to Harbor	2000	PCBs, PAHs, perylene (possibly organic)	NLDS, contaminated area disposed of first	2000	Olive black or gray silty sand (2.5-65% fines, avg 23%)	Suitable	Fines (91 - 99%); unknown if clean fill
Thames River - Upper Channel, to Norwich	N/A	N/A	NLDS	1973	Fine grained material (up to 95% fines, average 68%)	Suitable	Fines (up to 95%; average 68%); unknown if clean fill
U.S. Coast Guard Academy	N/A	N/A	N/A	N/A	silt	Unknown	Primarily silt and clay; unknown if clean fill
U.S. Coast Guard Sector Long Island Sound	N/A	N/A	N/A	N/A	silt	Unknown	Primarily silt and clay; unknown if clean fill
U.S. Coast Guard Station	N/A	N/A	N/A	N/A	N/A	Unknown	Unknown; unknown if clean fill
U.S. Coast Guard Station, New London	N/A	N/A	N/A	N/A	silt	Unknown	Primarily silt and clay; unknown if clean fill
U.S. Coast Guard, Station Eatons Neck	N/A	N/A	N/A	N/A	N/A	Unknown	Unknown; unknown if clean fill
U.S. Navy New London - Improvement	N/A	N/A	N/A	N/A	Assumed to be fine-grained, suitable material, per USACE (see harbor write-up)	Suitable	Assumed to be fine-grained, suitable material, per USACE (see harbor write-up)
U.S. Navy New London - Maintenance - Suitable	2009	Contaminated	NLDS	2009	Fine-grained (41.2-56.8% silt and 42.2-57.8% clay)	Suitable	Primarily silt and clay; unlikely compatible
U.S. Navy New London - Maintenance - Unsuitable	2009	Contaminated	CAD cell	2009	Fine-grained (41.2-56.8% silt and 42.2-57.8% clay)	Unsuitable	Primarily silt and clay; unsuitable
US DHS Plum Gut Harbor and Orient Point	N/A	N/A	N/A	2007	Suitable Sand	Suitable	Sand; assumed clean fill
Watch Hill Cove	1949	N/A	South Shore of Napatree Beach and a Small Amount Upland Adjcent to the Fire Station as Fill	1949	Sand - Beach or Nearshore Compatible	Suitable	Primarily sand; assumed clean fill
West River	1986	Lead and copper	CLIS	1986	Silt and clay (86% fines)	Suitable	Primarily silt and clay; unknown if clean fill
Westcott Cove - Fines	1977	low levels of volatile solids, oil and grease, heavy metals, and other potential pollutants	upland park	1977	black, fine sandy organic silt (75% fines)	Unknown	Primarily silt (75% fines); unknown if clean fill

Table G-3A. Sediment Suitability/Compatibility Data and Scoring by Project and Alternative Type.

	Suitability Scores				Beneficial Use Compatibility Scores					
Sub-Project Name	**Open Water Placement**	**Confined Open Water Placement - Base**	**Containment Cap**	**Containment Base**	**Nearshore Berm**	**Beach Renourishment**	**Landfill Cap**	**Landfill Placement**	**Brownfield**	**Habitat Restoration**
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	50	50	-1	100	-1	-1	100	100	50	50
Stonington Harbor	100	100	-1	100	-1	-1	100	100	50	50
Stony Creek Harbor	100	100	-1	100	-1	-1	100	100	50	50
Thames River - Lower Channels, Navy Base to Harbor	100	100	-1	100	-1	-1	100	100	50	50
Thames River - Upper Channel, to Norwich	100	100	-1	100	-1	-1	100	100	50	50
U.S. Coast Guard Academy	50	50	-1	100	-1	-1	100	100	50	50
U.S. Coast Guard Sector Long Island Sound	50	50	-1	100	-1	-1	100	100	50	50
U.S. Coast Guard Station	50	50	50	50	50	50	50	50	50	50
U.S. Coast Guard Station, New London	50	50	-1	100	-1	-1	100	100	50	50
U.S. Coast Guard, Station Eatons Neck	50	50	50	50	50	50	50	50	50	50
U.S. Navy New London - Improvement	100	100	-1	100	-1	-1	100	100	100	100
U.S. Navy New London - Maintenance - Suitable	100	100	-1	100	-1	-1	100	100	-1	-1
U.S. Navy New London - Maintenance - Unsuitable	-1	-1	-1	100	-1	-1	-1	-1	-1	-1
US DHS Plum Gut Harbor and Orient Point	100	-1	100	-1	100	100	-1	-1	-1	-1
Watch Hill Cove	100	-1	100	-1	100	100	-1	-1	-1	-1
West River	100	100	-1	100	-1	-1	100	100	50	50
Westcott Cove - Fines	50	50	-1	100	-1	-1	100	100	50	50

Table G-3A. Sediment Suitability/Compatibility Data and Scoring by Project and Alternative Type.

Project Suitability Data							
Sub-Project Name	**Year Chemistry Tested**	**Chemical Characteristics**	**Most Recent Disposal Used**	**Year Grain Size Tested**	**Physical Sediment Type**	**Anticipated Open Water Suitability**	**Anticipated Beneficial Use Material Type**
Westcott Cove - Sand	1977	low levels of volatile solids, oil and grease, heavy metals, and other potential pollutants	West Beach	1977	gray, coarse and fine sand (<1% fines)	Suitable	Sand (,1% fines); assumed clean fill
Westport Harbor	2003	Metals, PAHs, pesticides, DDD, PCBs; Biological testing showed the sediment is not acutely toxic	CLIS or WLIS	2003	Fines (16 to 84% fines)	Suitable	Fines (16 to 84%); assumed clean fill
Wilson Point	N/A	N/A	N/A	1892	Mud	Unknown	Primarily silt and clay; unknown if clean fill
Yellow Mill Channel	1979	Moderately high concentrations of volatile solids, oil and grease, and metals	CLIS	1979	Gray or black organic silt	Suitable	Primarily silt and clay; unknown if clean fill
Yocum Sailing Center, US Merchant Marine Academy	N/A	N/A	N/A	N/A	N/A	Unknown	Unknown; unknown if clean fill

Table G-3A. Sediment Suitability/Compatibility Data and Scoring by Project and Alternative Type.

	Suitability Scores				Beneficial Use Compatibility Scores					
Sub-Project Name	Open Water Placement	Confined Open Water Placement - Base	Containment Cap	Containment Base	Nearshore Berm	Beach Renourishment	Landfill Cap	Landfill Placement	Brownfield	Habitat Restoration
Westcott Cove - Sand	100	-1	100	-1	100	100	-1	-1	-1	-1
Westport Harbor	100	100	-1	100	-1	-1	100	100	100	100
Wilson Point	50	50	-1	100	-1	-1	100	100	50	50
Yellow Mill Channel	100	100	-1	100	-1	-1	100	100	50	50
Yocum Sailing Center, US Merchant Marine Academy	50	50	50	50	50	50	50	50	50	50

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score **Screening_ID**

Sub-Project Name	Beach-111	Beach-121	Beach-170	Beach-171	Beach-173	Beach-177	Beach-178	Beach-179	Beach-180	Beach-181	Beach-320	Beach-323	Beach-325	Beach-327	Beach-329	Beach-330
Black Rock Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Branford Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Clinton Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Clinton Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Entrance Bars	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Lower Bars	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Duck Island Harbor of Refuge	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Eastchester Creek - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eastchester Creek - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Echo Bay	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Eightmile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Essex Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Fivemile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Glen Cove Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Great Salt Pond	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenwich Harbor - Entrance Channel - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Entrance and Inner	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Middle	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Hay West Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Hempstead Harbor	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Housatonic River downstream of Pope's Island	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Housatonic River upstream of Pope's Island	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Huntington Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Huntington Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Johnsons Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lake Montauk Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Beach-331	Beach-332	Beach-333	Beach-337	Beach-339	Beach-343	Beach-344	Beach-345	Beach-348	Beach-364	Beach-365	Beach-367	Beach-368	Beach-381	Beach-382	Beach-384	Beach-433
Black Rock Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Branford Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Clinton Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Clinton Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Entrance Bars	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Lower Bars	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Duck Island Harbor of Refuge	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Eastchester Creek - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eastchester Creek - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Echo Bay	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Eightmile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Essex Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Fivemile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Glen Cove Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Great Salt Pond	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenwich Harbor - Entrance Channel - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Entrance and Inner	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Middle	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Hay West Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Hempstead Harbor	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Housatonic River downstream of Pope's Island	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Housatonic River upstream of Pope's Island	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Huntington Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Huntington Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Johnsons Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lake Montauk Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Beach-434	Beach-436	Beach-437	Beach-438	Beach-440	Beach-441	Beach-442	Beach-444	Beach-445	Beach-446	Beach-447	Beach-449	Beach-450	Beach-451	Beach-453	Beach-454 East	Beach-454 West
Black Rock Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Branford Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Clinton Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Clinton Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Entrance Bars	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Lower Bars	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Duck Island Harbor of Refuge	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Eastchester Creek - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eastchester Creek - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Echo Bay	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Eightmile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Essex Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Fivemile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Glen Cove Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Great Salt Pond	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenwich Harbor - Entrance Channel - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Entrance and Inner	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Middle	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Hay West Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Hempstead Harbor	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Housatonic River downstream of Pope's Island	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Housatonic River upstream of Pope's Island	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Huntington Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Huntington Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Johnsons Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lake Montauk Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Beach-455/82	Beach-456	Beach-457	Beach-459	Beach-467	Beach-468	Beach-474	Beach-480	Beach-600	Beach-610	Beach-620	Beach-63	Beach-64	Beach-67	Beach-68	Beach-76	Beach-79	Berm-121/446
Black Rock Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Branford Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Clinton Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Clinton Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Entrance Bars	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50
Connecticut River Main Channels - Lower Bars	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Duck Island Harbor of Refuge	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Eastchester Creek - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eastchester Creek - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Echo Bay	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Eightmile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Essex Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Fivemile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Glen Cove Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Great Salt Pond	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenwich Harbor - Entrance Channel - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Entrance and Inner	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Middle	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Hay West Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Hempstead Harbor	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Housatonic River downstream of Pope's Island	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Housatonic River upstream of Pope's Island	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Huntington Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Huntington Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Johnsons Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lake Montauk Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Berm-170	Berm-171	Berm-173	Berm-177	Berm-178	Berm-179	Berm-180	Berm-320	Berm-323	Berm-327/333/330	Berm-337	Berm-364b/364c	Berm-365	Berm-367	Berm-368	Berm-381/382	Berm-384	Berm-433
Black Rock Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Branford Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Clinton Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Clinton Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Entrance Bars	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Connecticut River Main Channels - Lower Bars	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Duck Island Harbor of Refuge	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Eastchester Creek - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eastchester Creek - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Echo Bay	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Eightmile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Essex Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Fivemile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Glen Cove Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Great Salt Pond	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenwich Harbor - Entrance Channel - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Entrance and Inner	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Middle	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Hay West Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Hempstead Harbor	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Housatonic River downstream of Pope's Island	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Housatonic River upstream of Pope's Island	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Huntington Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Huntington Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Johnsons Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lake Montauk Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Berm-434	Berm-438	Berm-440	Berm-441	Berm-445	Berm-447	Berm-449	Berm-451	Berm-453	Berm-454A	Berm-454B	Berm-455/82	Berm-456	Berm-457	Berm-467	Berm-600	Berm-610	Berm-620
Black Rock Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Branford Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Clinton Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Clinton Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Entrance Bars	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Connecticut River Main Channels - Lower Bars	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Duck Island Harbor of Refuge	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Eastchester Creek - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eastchester Creek - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Echo Bay	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Eightmile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Essex Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Fivemile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Glen Cove Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Great Salt Pond	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenwich Harbor - Entrance Channel - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Entrance and Inner	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Middle	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Hay West Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Hempstead Harbor	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Housatonic River downstream of Pope's Island	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Housatonic River upstream of Pope's Island	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Huntington Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Huntington Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Johnsons Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lake Montauk Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Berm-63	Grove Beach	BF-422/423	CAD-M_bse	CAD-M_cap	COW-E_bse	COW-E_cap	Habitat-427	Habitat-429	IslandCDF-B_bse	IslandCDF-B_cap	IslandCDF-L_bse	IslandCDF-L_cap	IslandCDF-N_bse	IslandCDF-N_cap	IslandCDF-P_bse	IslandCDF-P_cap	IslandCDF-Q_bse	IslandCDF-Q_cap
Black Rock Harbor	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Branford Harbor	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Clinton Harbor - Entrance Channel	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Clinton Harbor - Inner Harbor	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Connecticut River Main Channels - Entrance Bars	50	50	100	100	-1	100	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1
Connecticut River Main Channels - Lower Bars	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Duck Island Harbor of Refuge	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Eastchester Creek - Suitable	-1	-1	100	100	-1	100	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1
Eastchester Creek - Unsuitable	-1	-1	-1	100	-1	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Echo Bay	50	50	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Eightmile River	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Essex Cove	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Fivemile River	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Glen Cove Creek	-1	-1	-1	100	-1	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Great Salt Pond	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Greenport Harbor	100	100	-1	-1	100	-1	50	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Greenwich Harbor - Entrance Channel - Suitable	-1	-1	100	100	-1	100	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	-1	-1	-1	100	-1	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Guilford Harbor - Entrance and Inner	-1	-1	100	100	-1	100	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1
Guilford Harbor - Middle	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Hay West Harbor	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Hempstead Harbor	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Housatonic River downstream of Pope's Island	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Housatonic River upstream of Pope's Island	-1	-1	100	100	-1	100	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1
Huntington Harbor - Sand	100	100	-1	-1	100	-1	50	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Huntington Harbor - Silt	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Johnsons Creek	-1	-1	-1	100	-1	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Lake Montauk Harbor	100	100	-1	-1	100	-1	50	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	IslandCDF-R_bse	IslandCDF-R_cap	LFCap-251	LFCap-61	LFPlace-59	ShoreCDF-A_bse	ShoreCDF-A_cap	ShoreCDF-C_bse	ShoreCDF-C_cap	ShoreCDF-D_bse	ShoreCDF-D_cap	ShoreCDF-F_bse	ShoreCDF-F_cap	ShoreCDF-I_bse	ShoreCDF-I_cap	ShoreCDF-J_bse
Black Rock Harbor	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Branford Harbor	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Clinton Harbor - Entrance Channel	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Clinton Harbor - Inner Harbor	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Connecticut River Main Channels - Entrance Bars	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Connecticut River Main Channels - Lower Bars	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Duck Island Harbor of Refuge	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Eastchester Creek - Suitable	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Eastchester Creek - Unsuitable	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1	100
Echo Bay	100	-1	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1	100
Eightmile River	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Essex Cove	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Fivemile River	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Glen Cove Creek	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1	100
Great Salt Pond	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Greenport Harbor	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Greenwich Harbor - Entrance Channel - Suitable	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1	100
Guilford Harbor - Entrance and Inner	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Guilford Harbor - Middle	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Hay West Harbor	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Hempstead Harbor	50	50	100	100	100	50	50	50	50	50	50	50	50	50	50	50
Housatonic River downstream of Pope's Island	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Housatonic River upstream of Pope's Island	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Huntington Harbor - Sand	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Huntington Harbor - Silt	100	-1	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1	100
Johnsons Creek	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1	100
Lake Montauk Harbor	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	ShoreCDF-J_cap	ShoreCDF-K_bse	ShoreCDF-K_cap	ShoreCDF-O_bse	ShoreCDF-O_cap	UOW-CLDS	UOW-CSDS	UOW-NLDS	UOW-WLDS
Black Rock Harbor	-1	100	-1	100	-1	100	100	100	100
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	-1	100	-1	100	-1	100	100	100	100
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	-1	100	-1	100	100	100	100	100
Branford Harbor	-1	100	-1	100	-1	100	100	100	100
Clinton Harbor - Entrance Channel	100	-1	100	-1	100	100	100	100	100
Clinton Harbor - Inner Harbor	-1	100	-1	100	-1	50	50	50	50
Connecticut River Main Channels - Entrance Bars	-1	100	-1	100	-1	100	100	100	100
Connecticut River Main Channels - Lower Bars	100	-1	100	-1	100	100	100	100	100
Duck Island Harbor of Refuge	100	-1	100	-1	100	100	100	100	100
Eastchester Creek - Suitable	-1	100	-1	100	-1	100	100	100	100
Eastchester Creek - Unsuitable	-1	100	-1	100	-1	-1	-1	-1	-1
Echo Bay	-1	100	-1	100	-1	50	50	50	50
Eightmile River	-1	100	-1	100	-1	50	50	50	50
Essex Cove	-1	100	-1	100	-1	50	50	50	50
Fivemile River	-1	100	-1	100	-1	100	100	100	100
Glen Cove Creek	-1	100	-1	100	-1	-1	-1	-1	-1
Great Salt Pond	100	-1	100	-1	100	100	100	100	100
Greenport Harbor	100	-1	100	-1	100	50	50	50	50
Greenwich Harbor - Entrance Channel - Suitable	-1	100	-1	100	-1	100	100	100	100
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	-1	100	-1	100	-1	-1	-1	-1	-1
Guilford Harbor - Entrance and Inner	-1	100	-1	100	-1	100	100	100	100
Guilford Harbor - Middle	100	-1	100	-1	100	100	100	100	100
Hay West Harbor	-1	100	-1	100	-1	100	100	100	100
Hempstead Harbor	50	50	50	50	50	50	50	50	50
Housatonic River downstream of Pope's Island	100	-1	100	-1	100	100	100	100	100
Housatonic River upstream of Pope's Island	-1	100	-1	100	-1	100	100	100	100
Huntington Harbor - Sand	100	-1	100	-1	100	50	50	50	50
Huntington Harbor - Silt	-1	100	-1	100	-1	50	50	50	50
Johnsons Creek	-1	100	-1	100	-1	-1	-1	-1	-1
Lake Montauk Harbor	100	-1	100	-1	100	50	50	50	50

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score **Screening_ID**

Sub-Project Name	Beach-111	Beach-121	Beach-170	Beach-171	Beach-173	Beach-177	Beach-178	Beach-179	Beach-180	Beach-181	Beach-320	Beach-323	Beach-325	Beach-327	Beach-329	Beach-330
Little Narragansett Bay - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Little Narragansett Bay - Inner Bay Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Little Neck Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mamaroneck Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mattituck Harbor and Inlet	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mattituck Harbor and Inlet - Silt - Example	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mianus River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milford Harbor - Entrance Channel and Outer Anchorage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Milford Harbor - Inner Channels and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mill River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milton Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - 15-foot Shaws Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Rochelle Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Niantic Bay and Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
North Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Northport Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Northport Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor-West Branch I-95 Area	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Patchogue River - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Patchogue River - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Pawcatuck River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Peconic River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Beach-331	Beach-332	Beach-333	Beach-337	Beach-339	Beach-343	Beach-344	Beach-345	Beach-348	Beach-364	Beach-365	Beach-367	Beach-368	Beach-381	Beach-382	Beach-384	Beach-433
Little Narragansett Bay - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Little Narragansett Bay - Inner Bay Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Little Neck Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mamaroneck Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mattituck Harbor and Inlet	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mattituck Harbor and Inlet - Silt - Example	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mianus River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milford Harbor - Entrance Channel and Outer Anchorage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Milford Harbor - Inner Channels and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mill River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milton Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - 15-foot Shaws Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Rochelle Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Niantic Bay and Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
North Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Northport Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Northport Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor-West Branch I-95 Area	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Patchogue River - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Patchogue River - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Pawcatuck River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Peconic River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Beach-434	Beach-436	Beach-437	Beach-438	Beach-440	Beach-441	Beach-442	Beach-444	Beach-445	Beach-446	Beach-447	Beach-449	Beach-450	Beach-451	Beach-453	Beach-454 East	Beach-454 West
Little Narragansett Bay - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Little Narragansett Bay - Inner Bay Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Little Neck Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mamaroneck Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mattituck Harbor and Inlet	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mattituck Harbor and Inlet - Silt - Example	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mianus River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milford Harbor - Entrance Channel and Outer Anchorage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Milford Harbor - Inner Channels and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mill River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milton Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - 15-foot Shaws Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Rochelle Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Niantic Bay and Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
North Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Northport Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Northport Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor-West Branch I-95 Area	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Patchogue River - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Patchogue River - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Pawcatuck River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Peconic River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Beach-455/82	Beach-456	Beach-457	Beach-459	Beach-467	Beach-468	Beach-474	Beach-480	Beach-600	Beach-610	Beach-620	Beach-63	Beach-64	Beach-67	Beach-68	Beach-76	Beach-79	Berm-121/446
Little Narragansett Bay - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Little Narragansett Bay - Inner Bay Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Little Neck Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mamaroneck Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mattituck Harbor and Inlet	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mattituck Harbor and Inlet - Silt - Example	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mianus River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milford Harbor - Entrance Channel and Outer Anchorage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Milford Harbor - Inner Channels and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mill River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milton Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - 15-foot Shaws Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Rochelle Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Niantic Bay and Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
North Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Northport Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Northport Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor-West Branch I-95 Area	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Patchogue River - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Patchogue River - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Pawcatuck River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Peconic River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Berm-170	Berm-171	Berm-173	Berm-177	Berm-178	Berm-179	Berm-180	Berm-320	Berm-323	Berm-327/333/330	Berm-337	Berm-364b/364c	Berm-365	Berm-367	Berm-368	Berm-381/382	Berm-384	Berm-433
Little Narragansett Bay - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Little Narragansett Bay - Inner Bay Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Little Neck Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mamaroneck Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mattituck Harbor and Inlet	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mattituck Harbor and Inlet - Silt - Example	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mianus River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milford Harbor - Entrance Channel and Outer Anchorage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Milford Harbor - Inner Channels and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mill River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milton Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - 15-foot Shaws Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Rochelle Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Niantic Bay and Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
North Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Northport Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Northport Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor-West Branch I-95 Area	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Patchogue River - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Patchogue River - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Pawcatuck River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Peconic River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Berm-434	Berm-438	Berm-440	Berm-441	Berm-445	Berm-447	Berm-449	Berm-451	Berm-453	Berm-454A	Berm-454B	Berm-455/82	Berm-456	Berm-457	Berm-467	Berm-600	Berm-610	Berm-620
Little Narragansett Bay - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Little Narragansett Bay - Inner Bay Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Little Neck Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mamaroneck Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mattituck Harbor and Inlet	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mattituck Harbor and Inlet - Silt - Example	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mianus River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milford Harbor - Entrance Channel and Outer Anchorage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Milford Harbor - Inner Channels and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mill River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milton Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - 15-foot Shaws Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Rochelle Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Niantic Bay and Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
North Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Northport Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Northport Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor-West Branch I-95 Area	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Patchogue River - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Patchogue River - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Pawcatuck River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Peconic River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Berm-63	Grove Beach	BF-422/423	CAD-M_bse	CAD-M_cap	COW-E_bse	COW-E_cap	Habitat-427	Habitat-429	IslandCDF-B_bse	IslandCDF-B_cap	IslandCDF-L_bse	IslandCDF-L_cap	IslandCDF-N_bse	IslandCDF-N_cap	IslandCDF-P_bse	IslandCDF-P_cap	IslandCDF-Q_bse	IslandCDF-Q_cap
Little Narragansett Bay - Entrance Channel	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Little Narragansett Bay - Inner Bay Channel	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Little Neck Bay	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Mamaroneck Harbor	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Mattituck Harbor and Inlet	100	100	-1	-1	100	-1	50	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Mattituck Harbor and Inlet - Silt - Example	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Mianus River	-1	-1	100	100	-1	100	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1
Milford Harbor - Entrance Channel and Outer Anchorage	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Milford Harbor - Inner Channels and Anchorages	-1	-1	100	100	-1	100	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1
Mill River	-1	-1	-1	100	-1	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Milton Harbor	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Mystic Harbor - Improvement	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Mystic Harbor - Maintenance	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
New Haven Harbor - Improvement	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
New Haven Harbor - Maintenance	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
New London Harbor - 15-foot Shaws Cove	-1	-1	-1	100	-1	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
New Rochelle Harbor	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Niantic Bay and Harbor - Entrance Channel	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Niantic Bay and Harbor - Upper Channel	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
North Cove	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Northport Harbor - Sand	100	100	-1	-1	100	-1	50	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Northport Harbor - Silt	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Norwalk Harbor - Suitable	-1	-1	100	100	-1	100	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1
Norwalk Harbor-West Branch I-95 Area	-1	-1	-1	100	-1	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Patchogue River - Entrance Channel	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Patchogue River - Inner Harbor	-1	-1	100	100	-1	100	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1
Pawcatuck River	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Peconic River	-1	-1	50	100	-1	-1	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	IslandCDF-R_bse	IslandCDF-R_cap	LFCap-251	LFCap-61	LFPlace-59	ShoreCDF-A_bse	ShoreCDF-A_cap	ShoreCDF-C_bse	ShoreCDF-C_cap	ShoreCDF-D_bse	ShoreCDF-D_cap	ShoreCDF-F_bse	ShoreCDF-F_cap	ShoreCDF-I_bse	ShoreCDF-I_cap	ShoreCDF-J_bse
Little Narragansett Bay - Entrance Channel	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Little Narragansett Bay - Inner Bay Channel	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Little Neck Bay	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Mamaroneck Harbor	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Mattituck Harbor and Inlet	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Mattituck Harbor and Inlet - Silt - Example	100	-1	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1	100
Mianus River	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Milford Harbor - Entrance Channel and Outer Anchorage	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Milford Harbor - Inner Channels and Anchorages	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Mill River	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1	100
Milton Harbor	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Mystic Harbor - Improvement	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Mystic Harbor - Maintenance	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
New Haven Harbor - Improvement	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
New Haven Harbor - Maintenance	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
New London Harbor - 15-foot Shaws Cove	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1	100
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
New Rochelle Harbor	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Niantic Bay and Harbor - Entrance Channel	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Niantic Bay and Harbor - Upper Channel	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
North Cove	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Northport Harbor - Sand	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Northport Harbor - Silt	100	-1	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1	100
Norwalk Harbor - Suitable	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Norwalk Harbor-West Branch I-95 Area	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1	100
Patchogue River - Entrance Channel	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Patchogue River - Inner Harbor	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Pawcatuck River	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Peconic River	100	-1	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1	100

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	ShoreCDF-J_cap	ShoreCDF-K_bse	ShoreCDF-K_cap	ShoreCDF-O_bse	ShoreCDF-O_cap	UOW-CLDS	UOW-CSDS	UOW-NLDS	UOW-WLDS
Little Narragansett Bay - Entrance Channel	100	-1	100	-1	100	100	100	100	100
Little Narragansett Bay - Inner Bay Channel	-1	100	-1	100	-1	100	100	100	100
Little Neck Bay	-1	100	-1	100	-1	50	50	50	50
Mamaroneck Harbor	-1	100	-1	100	-1	50	50	50	50
Mattituck Harbor and Inlet	100	-1	100	-1	100	50	50	50	50
Mattituck Harbor and Inlet - Silt - Example	-1	100	-1	100	-1	50	50	50	50
Mianus River	-1	100	-1	100	-1	100	100	100	100
Milford Harbor - Entrance Channel and Outer Anchorage	100	-1	100	-1	100	100	100	100	100
Milford Harbor - Inner Channels and Anchorages	-1	100	-1	100	-1	100	100	100	100
Mill River	-1	100	-1	100	-1	-1	-1	-1	-1
Milton Harbor	-1	100	-1	100	-1	50	50	50	50
Mystic Harbor - Improvement	-1	100	-1	100	-1	100	100	100	100
Mystic Harbor - Maintenance	-1	100	-1	100	-1	100	100	100	100
New Haven Harbor - Improvement	-1	100	-1	100	-1	100	100	100	100
New Haven Harbor - Maintenance	-1	100	-1	100	-1	100	100	100	100
New London Harbor - 15-foot Shaws Cove	-1	100	-1	100	-1	-1	-1	-1	-1
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	-1	100	-1	100	-1	100	100	100	100
New Rochelle Harbor	-1	100	-1	100	-1	100	100	100	100
Niantic Bay and Harbor - Entrance Channel	100	-1	100	-1	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	-1	100	-1	100	-1	50	50	50	50
North Cove	-1	100	-1	100	-1	100	100	100	100
Northport Harbor - Sand	100	-1	100	-1	100	50	50	50	50
Northport Harbor - Silt	-1	100	-1	100	-1	50	50	50	50
Norwalk Harbor - Suitable	-1	100	-1	100	-1	100	100	100	100
Norwalk Harbor-West Branch I-95 Area	-1	100	-1	100	-1	-1	-1	-1	-1
Patchogue River - Entrance Channel	100	-1	100	-1	100	100	100	100	100
Patchogue River - Inner Harbor	-1	100	-1	100	-1	100	100	100	100
Pawcatuck River	-1	100	-1	100	-1	100	100	100	100
Peconic River	-1	100	-1	100	-1	50	50	50	50

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score **Screening_ID**

Sub-Project Name	Beach-111	Beach-121	Beach-170	Beach-171	Beach-173	Beach-177	Beach-178	Beach-179	Beach-180	Beach-181	Beach-320	Beach-323	Beach-325	Beach-327	Beach-329	Beach-330
Peconic River - Sand - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Chester Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Jefferson Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Quinnipiac River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Southport Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Southport Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - 12-Foot East Branch Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stonington Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stony Creek Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Lower Channels, Navy Base to Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Upper Channel, to Norwich	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Sector Long Island Sound	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Station	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Coast Guard Station, New London	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard, Station Eatons Neck	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Navy New London - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
US DHS Plum Gut Harbor and Orient Point	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Watch Hill Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
West River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Fines	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Westport Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Wilson Point	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Yocum Sailing Center, US Merchant Marine Academy	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Beach-331	Beach-332	Beach-333	Beach-337	Beach-339	Beach-343	Beach-344	Beach-345	Beach-348	Beach-364	Beach-365	Beach-367	Beach-368	Beach-381	Beach-382	Beach-384	Beach-433
Peconic River - Sand - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Chester Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Jefferson Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Quinnipiac River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Southport Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Southport Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - 12-Foot East Branch Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stonington Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stony Creek Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Lower Channels, Navy Base to Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Upper Channel, to Norwich	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Sector Long Island Sound	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Station	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Coast Guard Station, New London	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard, Station Eatons Neck	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Navy New London - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
US DHS Plum Gut Harbor and Orient Point	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Watch Hill Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
West River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Fines	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Westport Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Wilson Point	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Yocum Sailing Center, US Merchant Marine Academy	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Beach-434	Beach-436	Beach-437	Beach-438	Beach-440	Beach-441	Beach-442	Beach-444	Beach-445	Beach-446	Beach-447	Beach-449	Beach-450	Beach-451	Beach-453	Beach-454 East	Beach-454 West
Peconic River - Sand - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Chester Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Jefferson Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Quinnipiac River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Southport Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Southport Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - 12-Foot East Branch Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stonington Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stony Creek Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Lower Channels, Navy Base to Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Upper Channel, to Norwich	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Sector Long Island Sound	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Station	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Coast Guard Station, New London	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard, Station Eatons Neck	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Navy New London - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
US DHS Plum Gut Harbor and Orient Point	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Watch Hill Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
West River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Fines	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Westport Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Wilson Point	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Yocum Sailing Center, US Merchant Marine Academy	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Beach-455/82	Beach-456	Beach-457	Beach-459	Beach-467	Beach-468	Beach-474	Beach-480	Beach-600	Beach-610	Beach-620	Beach-63	Beach-64	Beach-67	Beach-68	Beach-76	Beach-79	Berm-121/446
Peconic River - Sand - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Chester Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Jefferson Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Quinnipiac River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Southport Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Southport Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - 12-Foot East Branch Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stonington Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stony Creek Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Lower Channels, Navy Base to Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Upper Channel, to Norwich	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Sector Long Island Sound	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Station	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Coast Guard Station, New London	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard, Station Eatons Neck	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Navy New London - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
US DHS Plum Gut Harbor and Orient Point	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Watch Hill Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
West River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Fines	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Westport Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Wilson Point	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Yocum Sailing Center, US Merchant Marine Academy	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Berm-170	Berm-171	Berm-173	Berm-177	Berm-178	Berm-179	Berm-180	Berm-320	Berm-323	Berm-327/333/330	Berm-337	Berm-364b/364c	Berm-365	Berm-367	Berm-368	Berm-381/382	Berm-384	Berm-433
Peconic River - Sand - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Chester Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Jefferson Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Quinnipiac River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Southport Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Southport Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - 12-Foot East Branch Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stonington Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stony Creek Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Lower Channels, Navy Base to Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Upper Channel, to Norwich	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Sector Long Island Sound	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Station	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Coast Guard Station, New London	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard, Station Eatons Neck	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Navy New London - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
US DHS Plum Gut Harbor and Orient Point	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Watch Hill Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
West River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Fines	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Westport Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Wilson Point	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Yocum Sailing Center, US Merchant Marine Academy	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Berm-434	Berm-438	Berm-440	Berm-441	Berm-445	Berm-447	Berm-449	Berm-451	Berm-453	Berm-454A	Berm-454B	Berm-455/82	Berm-456	Berm-457	Berm-467	Berm-600	Berm-610	Berm-620
Peconic River - Sand - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Chester Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Jefferson Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Quinnipiac River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Southport Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Southport Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - 12-Foot East Branch Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stonington Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stony Creek Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Lower Channels, Navy Base to Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Upper Channel, to Norwich	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Sector Long Island Sound	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Station	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Coast Guard Station, New London	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard, Station Eatons Neck	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Navy New London - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
US DHS Plum Gut Harbor and Orient Point	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Watch Hill Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
West River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Fines	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Westport Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Wilson Point	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Yocum Sailing Center, US Merchant Marine Academy	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	Berm-63	Grove Beach	BF-422/423	CAD-M_bse	CAD-M_cap	COW-E_bse	COW-E_cap	Habitat-427	Habitat-429	IslandCDF-B_bse	IslandCDF-B_cap	IslandCDF-L_bse	IslandCDF-L_cap	IslandCDF-N_bse	IslandCDF-N_cap	IslandCDF-P_bse	IslandCDF-P_cap	IslandCDF-Q_bse	IslandCDF-Q_cap
Peconic River - Sand - Example	100	100	-1	-1	100	-1	50	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Port Chester Harbor	-1	-1	-1	100	-1	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Port Jefferson Harbor - Sand	100	100	-1	-1	100	-1	50	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Port Jefferson Harbor - Silt	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Quinnipiac River	-1	-1	-1	100	-1	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Southport Harbor - Entrance Channel	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Southport Harbor - Inner Harbor	-1	-1	100	100	-1	100	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1
Stamford Harbor - 12-Foot East Branch Channel	-1	-1	-1	100	-1	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Stonington Harbor	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Stony Creek Harbor	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Thames River - Lower Channels, Navy Base to Harbor	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Thames River - Upper Channel, to Norwich	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
U.S. Coast Guard Academy	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
U.S. Coast Guard Sector Long Island Sound	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
U.S. Coast Guard Station	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Coast Guard Station, New London	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
U.S. Coast Guard, Station Eatons Neck	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Navy New London - Improvement	-1	-1	100	100	-1	100	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1
U.S. Navy New London - Maintenance Suitable	-1	-1	-1	100	-1	100	100	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
U.S. Navy New London - Maintenance Unsuitable	-1	-1	-1	100	-1	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
US DHS Plum Gut Harbor and Orient Point	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Watch Hill Cove	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
West River	-1	-1	50	100	-1	100	100	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Westcott Cove - Fines	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Westcott Cove - Sand	100	100	-1	-1	100	-1	100	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100
Westport Harbor	-1	-1	100	100	-1	100	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1
Wilson Point	-1	-1	50	100	-1	50	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1
Yocum Sailing Center, US Merchant Marine Academy	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	IslandCDF-R_bse	IslandCDF-R_cap	LFCap-251	LFCap-61	LFPlace-59	ShoreCDF-A_bse	ShoreCDF-A_cap	ShoreCDF-C_bse	ShoreCDF-C_cap	ShoreCDF-D_bse	ShoreCDF-D_cap	ShoreCDF-F_bse	ShoreCDF-F_cap	ShoreCDF-I_bse	ShoreCDF-I_cap	ShoreCDF-J_bse
Peconic River - Sand - Example	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Port Chester Harbor	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1	100
Port Jefferson Harbor - Sand	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Port Jefferson Harbor - Silt	100	-1	50	50	50	100	-1	100	-1	100	-1	100	-1	100	-1	100
Quinnipiac River	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1	100
Southport Harbor - Entrance Channel	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Southport Harbor - Inner Harbor	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Stamford Harbor - 12-Foot East Branch Channel	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1	100
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Stonington Harbor	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Stony Creek Harbor	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Thames River - Lower Channels, Navy Base to Harbor	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Thames River - Upper Channel, to Norwich	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
U.S. Coast Guard Academy	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
U.S. Coast Guard Sector Long Island Sound	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
U.S. Coast Guard Station	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Coast Guard Station, New London	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
U.S. Coast Guard, Station Eatons Neck	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
U.S. Navy New London - Improvement	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
U.S. Navy New London - Maintenance Suitable	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
U.S. Navy New London - Maintenance Unsuitable	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1	100
US DHS Plum Gut Harbor and Orient Point	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Watch Hill Cove	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
West River	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Westcott Cove - Fines	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Westcott Cove - Sand	-1	100	-1	-1	-1	-1	100	-1	100	-1	100	-1	100	-1	100	-1
Westport Harbor	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Wilson Point	100	-1	100	100	100	100	-1	100	-1	100	-1	100	-1	100	-1	100
Yocum Sailing Center, US Merchant Marine Academy	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50

Table G-3B. Sediment Suitability/Compatibility Scoring by Project and Alternative Pairings.

Suitability Score

Sub-Project Name	ShoreCDF-J_cap	ShoreCDF-K_bse	ShoreCDF-K_cap	ShoreCDF-O_bse	ShoreCDF-O_cap	UOW-CLDS	UOW-CSDS	UOW-NLDS	UOW-WLDS
Peconic River - Sand - Example	100	-1	100	-1	100	50	50	50	50
Port Chester Harbor	-1	100	-1	100	-1	-1	-1	-1	-1
Port Jefferson Harbor - Sand	100	-1	100	-1	100	50	50	50	50
Port Jefferson Harbor - Silt	-1	100	-1	100	-1	50	50	50	50
Quinnipiac River	-1	100	-1	100	-1	-1	-1	-1	-1
Southport Harbor - Entrance Channel	100	-1	100	-1	100	100	100	100	100
Southport Harbor - Inner Harbor	-1	100	-1	100	-1	100	100	100	100
Stamford Harbor - 12-Foot East Branch Channel	-1	100	-1	100	-1	-1	-1	-1	-1
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	-1	100	-1	100	-1	50	50	50	50
Stonington Harbor	-1	100	-1	100	-1	100	100	100	100
Stony Creek Harbor	-1	100	-1	100	-1	100	100	100	100
Thames River - Lower Channels, Navy Base to Harbor	-1	100	-1	100	-1	100	100	100	100
Thames River - Upper Channel, to Norwich	-1	100	-1	100	-1	100	100	100	100
U.S. Coast Guard Academy	-1	100	-1	100	-1	50	50	50	50
U.S. Coast Guard Sector Long Island Sound	-1	100	-1	100	-1	50	50	50	50
U.S. Coast Guard Station	50	50	50	50	50	50	50	50	50
U.S. Coast Guard Station, New London	-1	100	-1	100	-1	50	50	50	50
U.S. Coast Guard, Station Eatons Neck	50	50	50	50	50	50	50	50	50
U.S. Navy New London - Improvement	-1	100	-1	100	-1	100	100	100	100
U.S. Navy New London - Maintenance Suitable	-1	100	-1	100	-1	100	100	100	100
U.S. Navy New London - Maintenance Unsuitable	-1	100	-1	100	-1	-1	-1	-1	-1
US DHS Plum Gut Harbor and Orient Point	100	-1	100	-1	100	100	100	100	100
Watch Hill Cove	100	-1	100	-1	100	100	100	100	100
West River	-1	100	-1	100	-1	100	100	100	100
Westcott Cove - Fines	-1	100	-1	100	-1	50	50	50	50
Westcott Cove - Sand	100	-1	100	-1	100	100	100	100	100
Westport Harbor	-1	100	-1	100	-1	100	100	100	100
Wilson Point	-1	100	-1	100	-1	50	50	50	50
Yocum Sailing Center, US Merchant Marine Academy	50	50	50	50	50	50	50	50	50

Table G-4. Capacity Scoring for Project and Alternative Pairings.

	Alternative Screening ID																
Sub-Project Name	**Beach-111**	**Beach-121**	**Beach-170**	**Beach-171**	**Beach-173**	**Beach-177**	**Beach-178**	**Beach-179**	**Beach-180**	**Beach-181**	**Beach-320**	**Beach-323**	**Beach-325**	**Beach-327**	**Beach-329**	**Beach-330**	**Beach-331**
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	42	100	100	100	94	100	100	100	100	100	100	100	54	83	83	100
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Great Salt Pond	100	87	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Hay West Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Pawcatuck River	12	5	83	85	100	10	40	76	62	13	16	68	26	6	9	9	15
Little Narragansett Bay - Entrance Channel	100	59	100	100	100	100	100	100	100	100	100	100	100	75	100	100	100
Little Narragansett Bay - Inner Bay Channel	12	5	83	85	100	10	40	76	62	13	16	68	26	6	9	9	15
Watch Hill Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Stonington Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mystic Harbor - Maintenance	24	9	100	100	100	20	78	100	100	25	32	100	52	12	18	18	30
Mystic Harbor - Improvement	7	3	48	49	96	6	23	44	36	8	10	39	15	3	5	5	9
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	4	2	28	28	55	3	13	25	21	4	5	23	9	2	3	3	5
New London Harbor - 15-foot Shaws Cove	100	39	100	100	100	88	100	100	100	100	100	100	100	50	77	77	100
Thames River - Lower Channels, Navy Base to Harbor	4	1	26	27	52	3	12	24	19	4	5	21	8	2	3	3	5
Thames River - Upper Channel, to Norwich	1	0	7	8	15	1	4	7	6	1	1	6	2	1	1	1	1
U.S. Navy New London - Maintenance - Suitable	43	16	100	100	100	36	100	100	100	45	57	100	92	21	32	32	54
U.S. Navy New London - Maintenance - Unsuitable	64	24	100	100	100	54	100	100	100	68	86	100	100	31	48	48	80
U.S. Navy New London - Improvement	18	7	100	100	100	15	59	100	92	19	25	100	39	9	14	14	23
U.S. Coast Guard Station, New London	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Coast Guard Academy	59	22	100	100	100	49	100	100	100	61	78	100	100	28	43	43	73
Niantic Bay and Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
North Cove	11	4	75	76	100	9	36	68	56	12	15	61	24	5	8	8	14
Essex Cove	100	49	100	100	100	100	100	100	100	100	100	100	100	62	96	96	100
Eightmile River	71	27	100	100	100	60	100	100	100	75	95	100	100	35	53	53	89
Connecticut River Main Channels - Entrance Bars	7	3	49	50	98	6	24	45	37	8	10	40	16	4	5	5	9

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Beach-332	Beach-333	Beach-337	Beach-339	Beach-343	Beach-344	Beach-345	Beach-348	Beach-364	Beach-365	Beach-367	Beach-368	Beach-381	Beach-382	Beach-384	Beach-433	Beach-434
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	8	16	30	6	3	100	8	99	100	49	100	100	100	100	74	30
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	100	100	100	100	73	41	100	100	100	100	100	100	100	100	100	100	100
Great Salt Pond	100	17	33	61	11	6	100	16	100	100	100	100	100	100	100	100	60
Hay West Harbor	100	20	38	72	13	8	100	19	100	100	100	100	100	100	100	100	71
Pawcatuck River	14	1	2	3	1	0	22	1	11	100	5	68	12	35	17	8	3
Little Narragansett Bay - Entrance Channel	100	12	22	41	8	4	100	11	100	100	68	100	100	100	100	100	41
Little Narragansett Bay - Inner Bay Channel	14	1	2	3	1	0	22	1	11	100	5	68	12	35	17	8	3
Watch Hill Cove	100	20	38	70	13	7	100	19	100	100	100	100	100	100	100	100	70
Stonington Harbor	100	36	70	100	24	14	100	35	100	100	100	100	100	100	100	100	100
Mystic Harbor - Maintenance	28	2	3	6	1	1	43	2	21	100	11	100	23	69	32	16	6
Mystic Harbor - Improvement	8	1	1	2	0	0	13	1	6	100	3	39	7	20	10	5	2
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	5	0	1	1	0	0	7	0	4	72	2	23	4	12	6	3	1
New London Harbor - 15-foot Shaws Cove	100	8	15	28	5	3	100	7	92	100	46	100	99	100	100	69	28
Thames River - Lower Channels, Navy Base to Harbor	4	0	1	1	0	0	7	0	3	68	2	21	4	11	5	3	1
Thames River - Upper Channel, to Norwich	1	0	0	0	0	0	2	0	1	19	0	6	1	3	1	1	0
U.S. Navy New London - Maintenance - Suitable	50	3	6	11	2	1	76	3	38	100	19	100	41	100	58	28	11
U.S. Navy New London - Maintenance - Unsuitable	75	5	9	17	3	2	100	5	57	100	28	100	61	100	86	42	17
U.S. Navy New London - Improvement	21	1	3	5	1	1	33	1	16	100	8	100	17	53	25	12	5
U.S. Coast Guard Station, New London	100	60	100	100	40	23	100	58	100	100	100	100	100	100	100	100	100
U.S. Coast Guard Academy	68	4	8	16	3	2	100	4	52	100	26	100	55	100	79	39	15
Niantic Bay and Harbor - Entrance Channel	100	25	48	91	17	9	100	24	100	100	100	100	100	100	100	100	89
Niantic Bay and Harbor - Upper Channel	100	28	54	100	19	11	100	27	100	100	100	100	100	100	100	100	100
North Cove	13	1	2	3	1	0	20	1	10	100	5	61	10	32	15	7	3
Essex Cove	100	10	18	34	6	4	100	9	100	100	56	100	100	100	100	85	34
Eightmile River	83	5	10	19	4	2	100	5	63	100	31	100	67	100	96	47	19
Connecticut River Main Channels - Entrance Bars	9	1	1	2	0	0	13	1	6	100	3	40	7	21	10	5	2

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Beach-436	Beach-437	Beach-438	Beach-440	Beach-441	Beach-442	Beach-444	Beach-445	Beach-446	Beach-447	Beach-449	Beach-450	Beach-451	Beach-453	Beach-454 East	454 West	Beach-455/82	Beach-456
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	100	13	100	94	100	25	100	100	100	100	100	2	100	100	100	100	100
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	100	100	100	100	100	100	100	100	100	100	100	100	32	100	100	100	100	100
Great Salt Pond	100	100	26	100	100	100	50	100	100	100	100	100	5	100	100	100	100	100
Hay West Harbor	100	100	31	100	100	100	59	100	100	100	100	100	6	100	100	100	100	100
Pawcatuck River	13	21	1	34	10	20	3	62	100	33	37	28	0	100	84	26	38	40
Little Narragansett Bay - Entrance Channel	100	100	18	100	100	100	34	100	100	100	100	100	3	100	100	100	100	100
Little Narragansett Bay - Inner Bay Channel	13	21	1	34	10	20	3	62	100	33	37	28	0	100	84	26	38	40
Watch Hill Cove	100	100	30	100	100	100	58	100	100	100	100	100	6	100	100	100	100	100
Stonington Harbor	100	100	56	100	100	100	100	100	100	100	100	100	11	100	100	100	100	100
Mystic Harbor - Maintenance	25	42	3	67	20	39	5	100	100	64	72	55	1	100	100	52	75	78
Mystic Harbor - Improvement	7	12	1	20	6	12	2	36	100	19	21	16	0	89	49	15	22	23
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	4	7	0	11	3	7	1	21	74	11	12	9	0	51	28	9	13	13
New London Harbor - 15-foot Shaws Cove	100	100	12	100	88	100	23	100	100	100	100	100	2	100	100	100	100	100
Thames River - Lower Channels, Navy Base to Harbor	4	7	0	11	3	6	1	19	69	10	12	9	0	48	26	8	12	13
Thames River - Upper Channel, to Norwich	1	2	0	3	1	2	0	6	20	3	3	3	0	14	8	2	3	4
U.S. Navy New London - Maintenance - Suitable	45	75	5	100	36	70	9	100	100	100	100	98	1	100	100	91	100	100
U.S. Navy New London - Maintenance - Unsuitable	67	100	7	100	54	100	14	100	100	100	100	100	1	100	100	100	100	100
U.S. Navy New London - Improvement	19	32	2	51	15	30	4	93	100	49	55	42	0	100	100	39	57	60
U.S. Coast Guard Station, New London	100	100	93	100	100	100	100	100	100	100	100	100	18	100	100	100	100	100
U.S. Coast Guard Academy	61	100	7	100	49	95	13	100	100	100	100	100	1	100	100	100	100	100
Niantic Bay and Harbor - Entrance Channel	100	100	39	100	100	100	75	100	100	100	100	100	7	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	100	100	44	100	100	100	84	100	100	100	100	100	8	100	100	100	100	100
North Cove	11	19	1	31	9	18	2	56	100	29	33	25	0	100	76	24	34	36
Essex Cove	100	100	15	100	100	100	28	100	100	100	100	100	3	100	100	100	100	100
Eightmile River	74	100	8	100	60	100	16	100	100	100	100	100	2	100	100	100	100	100
Connecticut River Main Channels - Entrance Bars	8	13	1	20	6	12	2	37	100	19	22	17	0	91	50	16	23	24

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Beach-457	Beach-459	Beach-467	Beach-468	Beach-474	Beach-480	Beach-600	Beach-610	Beach-620	Beach-63	Beach-64	Beach-67	Beach-68	Beach-76	Beach-79	Berm-121/446	Berm-170	Berm-171
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	20	25	100	100	0	16	100	100	100	100	100	17	11	100	68	97	100	95
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	100	100	100	100	5	100	100	100	100	100	100	100	100	100	100	100	100	100
Great Salt Pond	40	50	100	100	1	32	100	100	100	100	100	34	23	100	100	100	100	100
Hay West Harbor	48	59	100	100	1	38	100	100	100	100	100	40	27	100	100	100	100	100
Pawcatuck River	2	3	12	16	0	2	26	26	31	100	67	2	1	12	7	100	100	100
Little Narragansett Bay - Entrance Channel	27	34	100	100	0	22	100	100	100	100	100	23	15	100	94	100	100	100
Little Narragansett Bay - Inner Bay Channel	2	3	12	16	0	2	26	26	31	100	67	2	1	12	7	100	100	100
Watch Hill Cove	47	58	100	100	1	37	100	100	100	100	100	39	26	100	100	100	100	100
Stonington Harbor	86	100	100	100	2	68	100	100	100	100	100	73	48	100	100	100	100	100
Mystic Harbor - Maintenance	4	5	24	32	0	3	50	50	60	100	100	4	2	24	15	100	100	100
Mystic Harbor - Improvement	1	2	7	10	0	1	15	15	18	100	39	1	1	7	4	45	54	44
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	1	1	4	5	0	1	8	8	10	76	22	1	0	4	2	26	31	25
New London Harbor - 15-foot Shaws Cove	18	23	100	100	0	15	100	100	100	100	100	16	10	100	63	100	100	100
Thames River - Lower Channels, Navy Base to Harbor	1	1	4	5	0	1	8	8	10	72	21	1	0	4	2	24	29	24
Thames River - Upper Channel, to Norwich	0	0	1	1	0	0	2	2	3	21	6	0	0	1	1	7	8	7
U.S. Navy New London - Maintenance - Suitable	8	9	42	57	0	6	89	89	100	100	100	6	4	42	26	100	100	100
U.S. Navy New London - Maintenance - Unsuitable	11	14	63	86	0	9	100	100	100	100	100	10	6	63	39	100	100	100
U.S. Navy New London - Improvement	3	4	18	24	0	3	38	38	46	100	99	3	2	18	11	58	69	57
U.S. Coast Guard Station, New London	100	100	100	100	3	100	100	100	100	100	100	100	80	100	100	100	100	100
U.S. Coast Guard Academy	10	13	57	78	0	8	100	100	100	100	100	9	6	57	35	100	100	100
Niantic Bay and Harbor - Entrance Channel	60	75	100	100	1	47	100	100	100	100	100	51	34	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	67	84	100	100	1	53	100	100	100	100	100	56	38	100	100	100	100	100
North Cove	2	2	11	15	0	2	23	23	27	100	60	2	1	11	7	23	28	23
Essex Cove	23	28	100	100	0	18	100	100	100	100	100	19	13	100	78	100	100	100
Eightmile River	13	16	69	95	0	10	100	100	100	100	100	11	7	69	43	100	100	100
Connecticut River Main Channels - Entrance Bars	1	2	7	10	0	1	15	15	18	100	40	1	1	7	4	23	28	23

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Berm-173	Berm-177	Berm-178	Berm-179	Berm-180	Berm-320	Berm-323	Berm-327/333/330	Berm-337	364b/364c	Berm-365	Berm-367	Berm-368	Berm-381/382	Berm-384	Berm-433	Berm-434	Berm-438
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	100	100	63	98	15	69	100	27	12	67	23	35	100	100	13	10	6
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Great Salt Pond	100	100	100	94	100	22	100	100	40	18	100	35	52	100	100	19	14	9
Hay West Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Pawcatuck River	100	13	32	76	100	17	83	100	32	15	81	28	42	59	27	16	12	7
Little Narragansett Bay - Entrance Channel	100	100	100	100	100	46	100	100	85	39	100	75	100	100	100	42	31	20
Little Narragansett Bay - Inner Bay Channel	100	13	32	100	100	34	100	100	63	29	100	55	82	59	27	31	23	14
Watch Hill Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	98
Stonington Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mystic Harbor - Maintenance	100	25	63	100	100	29	100	100	53	24	100	46	69	100	53	26	19	12
Mystic Harbor - Improvement	61	7	19	29	45	7	32	48	12	6	31	11	16	34	16	6	4	3
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	35	4	11	17	26	4	18	27	7	3	18	6	9	20	9	3	3	2
New London Harbor - 15-foot Shaws Cove	100	100	100	100	100	98	100	100	100	82	100	100	100	100	100	88	65	41
Thames River - Lower Channels, Navy Base to Harbor	33	4	10	16	25	4	17	26	7	3	17	6	9	19	8	3	2	2
Thames River - Upper Channel, to Norwich	10	1	3	5	7	1	5	7	2	1	5	2	2	5	2	1	1	0
U.S. Navy New London - Maintenance - Suitable	100	45	100	100	100	40	100	100	74	34	100	65	96	100	94	36	27	17
U.S. Navy New London - Maintenance - Unsuitable	100	67	100	100	100	60	100	100	100	51	100	97	100	100	100	54	40	25
U.S. Navy New London - Improvement	79	19	48	37	58	9	41	61	16	7	40	14	21	89	40	8	6	4
U.S. Coast Guard Station, New London	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Coast Guard Academy	100	61	100	100	100	27	100	100	51	23	100	44	66	100	100	25	18	12
Niantic Bay and Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
North Cove	32	12	29	15	23	3	16	25	6	3	16	6	8	53	24	3	2	1
Essex Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	80	51
Eightmile River	100	75	100	100	100	67	100	100	100	56	100	100	100	100	100	60	44	28
Connecticut River Main Channels - Entrance Bars	31	8	19	15	23	3	16	24	6	3	16	6	8	35	16	3	2	1

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Berm-440	Berm-441	Berm-445	Berm-447	Berm-449	Berm-451	Berm-453	Berm-454A	Berm-454B	Berm-455/82	Berm-456	Berm-457	Berm-467	Berm-600	Berm-610	Berm-620	Berm-63	Grove Beach	BF-422/423
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	28	14	62	26	51	4	51	75	35	17	46	4	22	92	94	38	100	30	67
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Great Salt Pond	42	20	93	39	76	6	75	100	52	25	69	6	32	100	100	57	100	45	100
Hay West Harbor	100	100	100	100	100	68	100	100	100	100	100	73	100	100	100	100	100	100	100
Pawcatuck River	34	16	75	32	61	5	61	90	42	20	56	5	26	100	100	46	100	36	81
Little Narragansett Bay - Entrance Channel	90	43	100	84	100	13	100	100	100	54	100	13	70	100	100	100	100	96	100
Little Narragansett Bay - Inner Bay Channel	66	32	100	62	100	9	100	100	83	40	100	10	52	100	100	91	100	71	100
Watch Hill Cove	100	100	100	100	100	63	100	100	100	100	100	67	100	100	100	100	100	100	100
Stonington Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mystic Harbor - Maintenance	56	27	100	52	100	8	100	100	69	33	92	8	43	100	100	76	100	60	100
Mystic Harbor - Improvement	13	6	29	12	24	2	23	34	16	8	21	2	10	43	43	18	55	14	31
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	7	4	17	7	13	1	13	20	9	4	12	1	6	24	25	10	32	8	18
New London Harbor - 15-foot Shaws Cove	100	91	100	100	100	26	100	100	100	100	100	28	100	100	100	100	100	100	100
Thames River - Lower Channels, Navy Base to Harbor	7	3	16	7	13	1	13	19	9	4	12	1	5	23	23	10	30	8	17
Thames River - Upper Channel, to Norwich	2	1	4	2	4	0	4	5	3	1	3	0	2	7	7	3	9	2	5
U.S. Navy New London - Maintenance - Suitable	78	38	100	73	100	11	100	100	97	47	100	12	60	100	100	100	100	84	100
U.S. Navy New London - Maintenance - Unsuitable	100	56	100	100	100	16	100	100	100	70	100	17	91	100	100	100	100	100	100
U.S. Navy New London - Improvement	17	8	37	16	30	2	30	44	21	10	27	2	13	55	56	23	71	18	40
U.S. Coast Guard Station, New London	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Coast Guard Academy	53	26	100	50	96	7	96	100	66	32	87	8	41	100	100	73	100	57	100
Niantic Bay and Harbor - Entrance Channel	100	100	100	100	100	86	100	100	100	100	100	92	100	100	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	100	100	100	100	100	96	100	100	100	100	100	100	100	100	100	100	100	100	100
North Cove	7	3	15	6	12	1	12	18	8	4	11	1	5	22	22	9	28	7	16
Essex Cove	100	100	100	100	100	33	100	100	100	100	100	35	100	100	100	100	100	100	100
Eightmile River	100	62	100	100	100	18	100	100	100	78	100	19	100	100	100	100	100	100	100
Connecticut River Main Channels - Entrance Bars	7	3	15	6	12	1	12	18	8	4	11	1	5	22	22	9	28	7	16

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	CAD-M_bse	CAD-M_cap	COW-E_bse	COW-E_cap	Habitat-427	Habitat-429	IslandCDF-B_bse	IslandCDF-B_cap	IslandCDF-L_bse	IslandCDF-L_cap	IslandCDF-N_bse	IslandCDF-N_cap	IslandCDF-P_bse	IslandCDF-P_cap	IslandCDF-Q_bse	IslandCDF-Q_cap	IslandCDF-R_bse	IslandCDF-R_cap
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	69	100	100	31	100	100	100	100	100	100	100	100	100	100	100	100	100
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Great Salt Pond	100	100	100	100	46	100	100	100	100	100	100	100	100	100	100	100	100	100
Hay West Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Pawcatuck River	100	83	100	100	37	100	100	100	100	100	100	100	100	100	100	100	100	100
Little Narragansett Bay - Entrance Channel	100	100	100	100	99	100	100	100	100	100	100	100	100	100	100	100	100	100
Little Narragansett Bay - Inner Bay Channel	100	100	100	100	73	100	100	100	100	100	100	100	100	100	100	100	100	100
Watch Hill Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Stonington Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mystic Harbor - Maintenance	100	100	100	100	61	100	100	100	100	100	100	100	100	100	100	100	100	100
Mystic Harbor - Improvement	100	32	59	100	14	100	100	74	100	100	100	100	100	52	100	96	100	100
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	59	18	34	62	8	96	63	42	100	100	100	100	100	30	100	55	100	73
New London Harbor - 15-foot Shaws Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Thames River - Lower Channels, Navy Base to Harbor	56	17	32	58	8	90	60	40	100	100	100	100	100	28	100	52	100	69
Thames River - Upper Channel, to Norwich	16	5	9	17	2	26	17	11	100	100	100	40	47	8	100	15	100	20
U.S. Navy New London - Maintenance - Suitable	100	100	100	100	86	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Navy New London - Maintenance - Unsuitable	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Navy New London - Improvement	100	41	76	100	18	100	100	95	100	100	100	100	100	67	100	100	100	100
U.S. Coast Guard Station, New London	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Coast Guard Academy	100	100	100	100	59	100	100	100	100	100	100	100	100	100	100	100	100	100
Niantic Bay and Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
North Cove	53	16	30	55	7	86	57	38	100	100	100	100	100	27	100	50	100	65
Essex Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Eightmile River	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Connecticut River Main Channels - Entrance Bars	53	16	30	55	7	85	57	38	100	100	100	100	100	27	100	49	100	65

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	LFCap-251	LFCap-61	LFPlace-59	ShoreCDF-A_bse	ShoreCDF-A_cap	ShoreCDF-C_bse	ShoreCDF-C_cap	ShoreCDF-D_bse	ShoreCDF-D_cap	ShoreCDF-F_bse	ShoreCDF-F_cap	ShoreCDF-I_bse	ShoreCDF-I_cap	ShoreCDF-J_bse	ShoreCDF-J_cap	ShoreCDF-K_bse	ShoreCDF-K_cap
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	100	100	100	100	100	100	100	100	76	100	100	95	49	100	100	100	24
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Great Salt Pond	100	100	100	100	100	100	100	100	100	100	100	100	73	100	100	100	36
Hay West Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Pawcatuck River	100	100	100	100	100	100	100	100	91	100	100	100	59	100	100	100	29
Little Narragansett Bay - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	78
Little Narragansett Bay - Inner Bay Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	58
Watch Hill Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Stonington Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mystic Harbor - Maintenance	100	100	100	100	100	100	100	100	100	100	100	100	97	100	100	100	48
Mystic Harbor - Improvement	100	100	100	100	100	100	84	54	35	100	100	44	23	100	100	49	11
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	100	89	100	100	91	71	48	31	20	100	100	25	13	100	100	28	6
New London Harbor - 15-foot Shaws Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Thames River - Lower Channels, Navy Base to Harbor	100	84	100	100	86	67	45	29	19	100	100	24	12	100	100	26	6
Thames River - Upper Channel, to Norwich	41	24	34	96	25	19	13	8	5	100	100	7	4	100	100	8	2
U.S. Navy New London - Maintenance - Suitable	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	68
U.S. Navy New London - Maintenance - Unsuitable	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Navy New London - Improvement	100	100	100	100	100	100	100	69	45	100	100	57	29	100	100	63	15
U.S. Coast Guard Station, New London	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Coast Guard Academy	100	100	100	100	100	100	100	100	100	100	100	100	93	100	100	100	46
Niantic Bay and Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
North Cove	100	80	100	100	82	63	43	28	18	100	100	23	12	100	100	25	6
Essex Cove	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Eightmile River	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Connecticut River Main Channels - Entrance Bars	100	80	100	100	81	63	43	28	18	100	100	23	12	100	100	25	6

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	ShoreCDF-O_bse	ShoreCDF-O_cap	UOW-CLDS	UOW-CSDS	UOW-NLDS	UOW-WLDS
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	29	100	100	100	100	100
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	100	100	100	100	100	100
Great Salt Pond	43	100	100	100	100	100
Hay West Harbor	100	100	100	100	100	100
Pawcatuck River	35	100	100	100	100	100
Little Narragansett Bay - Entrance Channel	92	100	100	100	100	100
Little Narragansett Bay - Inner Bay Channel	68	100	100	100	100	100
Watch Hill Cove	100	100	100	100	100	100
Stonington Harbor	100	100	100	100	100	100
Mystic Harbor - Maintenance	57	100	100	100	100	100
Mystic Harbor - Improvement	13	100	100	100	100	100
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	8	82	100	100	100	100
New London Harbor - 15-foot Shaws Cove	100	100	100	100	100	100
Thames River - Lower Channels, Navy Base to Harbor	7	77	100	100	100	100
Thames River - Upper Channel, to Norwich	2	22	100	100	100	100
U.S. Navy New London - Maintenance - Suitable	80	100	100	100	100	100
U.S. Navy New London - Maintenance - Unsuitable	100	100	100	100	100	100
U.S. Navy New London - Improvement	17	100	100	100	100	100
U.S. Coast Guard Station, New London	100	100	100	100	100	100
U.S. Coast Guard Academy	54	100	100	100	100	100
Niantic Bay and Harbor - Entrance Channel	100	100	100	100	100	100
Niantic Bay and Harbor - Upper Channel	100	100	100	100	100	100
North Cove	7	73	100	100	100	100
Essex Cove	100	100	100	100	100	100
Eightmile River	100	100	100	100	100	100
Connecticut River Main Channels - Entrance Bars	7	73	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

	Alternative Screening ID																
Sub-Project Name	**Beach-111**	**Beach-121**	**Beach-170**	**Beach-171**	**Beach-173**	**Beach-177**	**Beach-178**	**Beach-179**	**Beach-180**	**Beach-181**	**Beach-320**	**Beach-323**	**Beach-325**	**Beach-327**	**Beach-329**	**Beach-330**	**Beach-331**
Connecticut River Main Channels - Lower Bars	11	4	77	79	100	10	37	71	58	12	15	63	25	6	9	9	14
Patchogue River - Entrance Channel	100	85	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Patchogue River - Inner Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Duck Island Harbor of Refuge	2	1	11	11	22	1	5	10	8	2	2	9	4	1	1	1	2
Clinton Harbor - Entrance Channel	100	57	100	100	100	100	100	100	100	100	100	100	100	73	100	100	100
Clinton Harbor - Inner Harbor	100	64	100	100	100	100	100	100	100	100	100	100	100	82	100	100	100
Guilford Harbor - Middle	53	20	100	100	100	44	100	100	100	55	70	100	100	26	39	39	66
Guilford Harbor - Entrance and Inner	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Stony Creek Harbor	50	19	100	100	100	42	100	100	100	52	66	100	100	24	37	37	62
Branford Harbor	22	8	100	100	100	19	72	100	100	23	30	100	48	11	17	17	28
New Haven Harbor - Maintenance	4	1	25	25	49	3	12	23	18	4	5	20	8	2	3	3	5
New Haven Harbor - Improvement	1	0	4	4	8	1	2	4	3	1	1	3	1	0	0	0	1
West River	28	11	100	100	100	24	91	100	100	30	38	100	61	14	21	21	35
Mill River	8	3	52	53	100	6	25	48	39	8	10	42	17	4	6	6	10
Quinnipiac River	8	3	52	53	100	6	25	48	39	8	10	42	17	4	6	6	10
U.S. Coast Guard Sector Long Island Sound	100	61	100	100	100	100	100	100	100	100	100	100	100	78	100	100	100
Milford Harbor - Entrance Channel and Outer Anchorage	100	55	100	100	100	100	100	100	100	100	100	100	100	71	100	100	100
Milford Harbor - Inner Channels and Anchorages	73	27	100	100	100	61	100	100	100	76	97	100	100	35	54	54	91
Housatonic River downstream of Pope's Island	8	3	53	54	100	7	25	49	39	8	10	43	17	4	6	6	10
Housatonic River upstream of Pope's Island	16	6	100	100	100	13	51	98	79	17	21	87	34	8	12	12	20
Johnsons Creek	37	14	100	100	100	31	100	100	100	38	49	100	79	18	27	27	46
Black Rock Harbor	5	2	35	36	70	4	17	32	26	5	7	29	11	3	4	4	6
Southport Harbor - Entrance Channel	100	73	100	100	100	100	100	100	100	100	100	100	100	94	100	100	100
Southport Harbor - Inner Harbor	100	55	100	100	100	100	100	100	100	100	100	100	100	71	100	100	100
Westport Harbor	64	24	100	100	100	53	100	100	100	67	85	100	100	31	47	47	79
Norwalk Harbor - Suitable	15	6	100	100	100	13	50	95	77	16	21	85	33	7	11	11	19
Norwalk Harbor-West Branch I-95 Area	100	61	100	100	100	100	100	100	100	100	100	100	100	78	100	100	100
Wilson Point	5	2	35	36	70	4	17	32	26	5	7	29	11	3	4	4	6
Fivemile River	58	22	100	100	100	49	100	100	100	61	78	100	100	28	43	43	73
Westcott Cove - Sand	94	36	100	100	100	79	100	100	100	98	100	100	100	45	70	70	100
Westcott Cove - Fines	94	35	100	100	100	79	100	100	100	98	100	100	100	45	69	69	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Beach-332	Beach-333	Beach-337	Beach-339	Beach-343	Beach-344	Beach-345	Beach-348	Beach-364	Beach-365	Beach-367	Beach-368	Beach-381	Beach-382	Beach-384	Beach-433	Beach-434
Connecticut River Main Channels - Lower Bars	13	1	2	3	1	0	20	1	10	100	5	63	11	33	15	8	3
Patchogue River - Entrance Channel	100	17	32	60	11	6	100	16	100	100	99	100	100	100	100	100	59
Patchogue River - Inner Harbor	100	21	40	75	14	8	100	20	100	100	100	100	100	100	100	100	75
Duck Island Harbor of Refuge	2	0	0	0	0	0	3	0	1	29	1	9	2	5	2	1	0
Clinton Harbor - Entrance Channel	100	11	21	40	7	4	100	11	100	100	66	100	100	100	100	99	40
Clinton Harbor - Inner Harbor	100	13	24	45	8	5	100	12	100	100	74	100	100	100	100	100	45
Guilford Harbor - Middle	61	4	8	14	3	1	93	4	46	100	23	100	50	100	71	35	14
Guilford Harbor - Entrance and Inner	100	35	68	100	24	13	100	34	100	100	100	100	100	100	100	100	100
Stony Creek Harbor	58	4	7	13	2	1	88	4	44	100	22	100	47	100	66	33	13
Branford Harbor	26	2	3	6	1	1	39	2	20	100	10	100	21	64	30	15	6
New Haven Harbor - Maintenance	4	0	1	1	0	0	6	0	3	64	2	20	3	10	5	2	1
New Haven Harbor - Improvement	1	0	0	0	0	0	1	0	1	11	0	3	1	2	1	0	0
West River	33	2	4	8	1	1	50	2	25	100	12	100	27	81	38	19	7
Mill River	9	1	1	2	0	0	14	1	7	100	3	42	7	22	10	5	2
Quinnipiac River	9	1	1	2	0	0	14	1	7	100	3	42	7	22	10	5	2
U.S. Coast Guard Sector Long Island Sound	100	12	23	43	8	5	100	12	100	100	71	100	100	100	100	100	43
Milford Harbor - Entrance Channel and Outer Anchorage	100	11	21	39	7	4	100	10	100	100	64	100	100	100	100	96	39
Milford Harbor - Inner Channels and Anchorages	84	5	10	19	4	2	100	5	64	100	32	100	69	100	97	48	19
Housatonic River downstream of Pope's Island	9	1	1	2	0	0	14	1	7	100	3	43	7	22	11	5	2
Housatonic River upstream of Pope's Island	18	1	2	4	1	0	28	1	14	100	7	87	15	45	21	10	4
Johnsons Creek	43	3	5	10	2	1	65	3	32	100	16	100	35	100	49	24	10
Black Rock Harbor	6	0	1	1	0	0	9	0	5	91	2	29	5	15	7	3	1
Southport Harbor - Entrance Channel	100	14	28	52	10	5	100	14	100	100	85	100	100	100	100	100	51
Southport Harbor - Inner Harbor	100	11	21	39	7	4	100	10	100	100	64	100	100	100	100	96	39
Westport Harbor	74	5	9	17	3	2	100	5	56	100	28	100	60	100	85	42	17
Norwalk Harbor - Suitable	18	1	2	4	1	0	27	1	14	100	7	85	15	44	21	10	4
Norwalk Harbor-West Branch I-95 Area	100	12	23	43	8	5	100	12	100	100	71	100	100	100	100	100	43
Wilson Point	6	0	1	1	0	0	9	0	5	91	2	29	5	15	7	3	1
Fivemile River	68	4	8	16	3	2	100	4	51	100	25	100	55	100	78	38	15
Westcott Cove - Sand	100	7	13	25	5	3	100	7	83	100	41	100	89	100	100	62	25
Westcott Cove - Fines	100	7	13	25	5	3	100	7	83	100	41	100	89	100	100	62	25

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Beach-436	Beach-437	Beach-438	Beach-440	Beach-441	Beach-442	Beach-444	Beach-445	Beach-446	Beach-447	Beach-449	Beach-450	Beach-451	Beach-453	Beach-454 East	454 West	Beach-455/82	Beach-456
Connecticut River Main Channels - Lower Bars	12	20	1	32	10	19	3	58	100	30	34	26	0	100	78	24	36	37
Patchogue River - Entrance Channel	100	100	26	100	100	100	50	100	100	100	100	100	5	100	100	100	100	100
Patchogue River - Inner Harbor	100	100	32	100	100	100	62	100	100	100	100	100	6	100	100	100	100	100
Duck Island Harbor of Refuge	2	3	0	5	1	3	0	8	30	4	5	4	0	21	11	4	5	5
Clinton Harbor - Entrance Channel	100	100	17	100	100	100	33	100	100	100	100	100	3	100	100	100	100	100
Clinton Harbor - Inner Harbor	100	100	19	100	100	100	37	100	100	100	100	100	4	100	100	100	100	100
Guilford Harbor - Middle	55	92	6	100	44	85	12	100	100	100	100	100	1	100	100	100	100	100
Guilford Harbor - Entrance and Inner	100	100	54	100	100	100	100	100	100	100	100	100	10	100	100	100	100	100
Stony Creek Harbor	51	86	6	100	42	80	11	100	100	100	100	100	1	100	100	100	100	100
Branford Harbor	23	39	3	61	19	36	5	100	100	59	67	51	0	100	100	47	69	72
New Haven Harbor - Maintenance	4	6	0	10	3	6	1	18	66	10	11	8	0	45	25	8	11	12
New Haven Harbor - Improvement	1	1	0	2	1	1	0	3	11	2	2	1	0	8	4	1	2	2
West River	29	49	3	78	24	46	6	100	100	75	84	64	1	100	100	60	88	91
Mill River	8	13	1	21	6	12	2	39	100	20	23	18	0	96	53	16	24	25
Quinnipiac River	8	13	1	21	6	12	2	39	100	20	23	18	0	96	53	16	24	25
U.S. Coast Guard Sector Long Island Sound	100	100	19	100	100	100	36	100	100	100	100	100	4	100	100	100	100	100
Milford Harbor - Entrance Channel and Outer Anchorage	100	100	17	100	100	100	32	100	100	100	100	100	3	100	100	100	100	100
Milford Harbor - Inner Channels and Anchorages	75	100	8	100	61	100	16	100	100	100	100	100	2	100	100	100	100	100
Housatonic River downstream of Pope's Island	8	14	1	22	7	13	2	39	100	21	23	18	0	98	54	17	24	25
Housatonic River upstream of Pope's Island	16	28	2	44	13	26	3	79	100	42	47	36	0	100	100	34	49	51
Johnsons Creek	38	64	4	100	31	59	8	100	100	97	100	84	1	100	100	78	100	100
Black Rock Harbor	5	9	1	14	4	8	1	26	93	14	16	12	0	65	35	11	16	17
Southport Harbor - Entrance Channel	100	100	22	100	100	100	43	100	100	100	100	100	4	100	100	100	100	100
Southport Harbor - Inner Harbor	100	100	17	100	100	100	32	100	100	100	100	100	3	100	100	100	100	100
Westport Harbor	66	100	7	100	53	100	14	100	100	100	100	100	1	100	100	100	100	100
Norwalk Harbor - Suitable	16	27	2	42	13	25	3	77	100	41	46	35	0	100	100	33	48	50
Norwalk Harbor-West Branch I-95 Area	100	100	19	100	100	100	36	100	100	100	100	100	4	100	100	100	100	100
Wilson Point	5	9	1	14	4	8	1	26	93	14	16	12	0	65	36	11	16	17
Fivemile River	60	100	7	100	49	94	13	100	100	100	100	100	1	100	100	100	100	100
Westcott Cove - Sand	97	100	11	100	79	100	21	100	100	100	100	100	2	100	100	100	100	100
Westcott Cove - Fines	97	100	11	100	79	100	21	100	100	100	100	100	2	100	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Beach-457	Beach-459	Beach-467	Beach-468	Beach-474	Beach-480	Beach-600	Beach-610	Beach-620	Beach-63	Beach-64	Beach-67	Beach-68	Beach-76	Beach-79	Berm-121/446	Berm-170	Berm-171
Connecticut River Main Channels - Lower Bars	2	3	11	15	0	2	24	24	28	100	62	2	1	11	7	72	86	70
Patchogue River - Entrance Channel	40	50	100	100	1	31	100	100	100	100	100	34	22	100	100	100	100	100
Patchogue River - Inner Harbor	50	62	100	100	1	39	100	100	100	100	100	42	28	100	100	100	100	100
Duck Island Harbor of Refuge	0	0	2	2	0	0	3	3	4	31	9	0	0	2	1	10	12	10
Clinton Harbor - Entrance Channel	27	33	100	100	0	21	100	100	100	100	100	22	15	100	91	100	100	100
Clinton Harbor - Inner Harbor	30	37	100	100	1	24	100	100	100	100	100	25	17	100	100	100	100	100
Guilford Harbor - Middle	9	12	51	70	0	7	100	100	100	100	100	8	5	51	32	100	100	100
Guilford Harbor - Entrance and Inner	84	100	100	100	1	66	100	100	100	100	100	71	47	100	100	100	100	100
Stony Creek Harbor	9	11	48	66	0	7	100	100	100	100	100	7	5	48	30	100	100	100
Branford Harbor	4	5	22	30	0	3	46	46	55	100	100	3	2	22	14	70	84	68
New Haven Harbor - Maintenance	1	1	4	5	0	1	8	8	9	68	20	1	0	4	2	8	9	7
New Haven Harbor - Improvement	0	0	1	1	0	0	1	1	2	12	3	0	0	1	0	4	5	4
West River	5	6	27	38	0	4	58	58	70	100	100	4	3	27	17	89	100	87
Mill River	1	2	7	10	0	1	16	16	19	100	42	1	1	7	5	100	100	98
Quinnipiac River	1	2	7	10	0	1	16	16	19	100	42	1	1	7	5	93	100	91
U.S. Coast Guard Sector Long Island Sound	29	36	100	100	1	23	100	100	100	100	100	24	16	100	98	100	100	100
Milford Harbor - Entrance Channel and Outer Anchorage	26	32	100	100	0	20	100	100	100	100	100	22	15	100	89	100	100	100
Milford Harbor - Inner Channels and Anchorages	13	16	70	96	0	10	100	100	100	100	100	11	7	70	44	100	100	100
Housatonic River downstream of Pope's Island	1	2	8	10	0	1	16	16	20	100	42	1	1	8	5	16	20	16
Housatonic River upstream of Pope's Island	3	3	15	21	0	2	33	33	39	100	85	2	2	15	10	99	100	97
Johnsons Creek	6	8	36	49	0	5	76	76	91	100	100	5	4	36	22	100	100	100
Black Rock Harbor	1	1	5	7	0	1	11	11	13	97	28	1	1	5	3	33	39	32
Southport Harbor - Entrance Channel	34	43	100	100	1	27	100	100	100	100	100	29	19	100	100	100	100	100
Southport Harbor - Inner Harbor	26	32	100	100	0	20	100	100	100	100	100	22	15	100	89	100	100	100
Westport Harbor	11	14	62	84	0	9	100	100	100	100	100	9	6	62	38	100	100	100
Norwalk Harbor - Suitable	3	3	15	20	0	2	32	32	38	100	83	2	2	15	9	32	39	32
Norwalk Harbor-West Branch I-95 Area	29	36	100	100	1	23	100	100	100	100	100	24	16	100	98	100	100	100
Wilson Point	1	1	5	7	0	1	11	11	13	97	28	1	1	5	3	33	39	32
Fivemile River	10	13	56	77	0	8	100	100	100	100	100	9	6	56	35	100	100	100
Westcott Cove - Sand	17	21	91	100	0	13	100	100	100	100	100	14	9	91	57	100	100	100
Westcott Cove - Fines	17	21	91	100	0	13	100	100	100	100	100	14	9	91	57	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Berm-173	Berm-177	Berm-178	Berm-179	Berm-180	Berm-320	Berm-323	Berm-327/333/330	Berm-337	364b/364c	Berm-365	Berm-367	Berm-368	Berm-381/382	Berm-384	Berm-433	Berm-434	Berm-438
Connecticut River Main Channels - Lower Bars	98	12	30	47	73	11	51	76	20	9	50	17	26	55	25	10	7	5
Patchogue River - Entrance Channel	100	100	100	100	100	35	100	100	65	30	100	57	84	100	100	32	23	15
Patchogue River - Inner Harbor	100	100	100	100	100	88	100	100	100	74	100	100	100	100	100	80	59	37
Duck Island Harbor of Refuge	14	2	4	7	10	2	7	11	3	1	7	2	4	8	4	1	1	1
Clinton Harbor - Entrance Channel	100	100	100	100	100	27	100	100	50	23	100	44	65	100	100	25	18	11
Clinton Harbor - Inner Harbor	100	100	100	100	100	56	100	100	100	47	100	89	100	100	100	50	37	23
Guilford Harbor - Middle	100	55	100	100	100	25	100	100	45	21	100	40	59	100	100	22	16	10
Guilford Harbor - Entrance and Inner	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	93
Stony Creek Harbor	100	52	100	99	100	23	100	100	42	19	100	37	54	100	100	21	15	10
Branford Harbor	95	23	58	45	71	10	49	74	19	9	48	17	25	100	49	9	7	4
New Haven Harbor - Maintenance	10	4	10	5	8	1	5	8	2	1	5	2	3	18	8	1	1	0
New Haven Harbor - Improvement	5	1	2	3	4	1	3	4	1	0	3	1	1	3	1	1	0	0
West River	100	30	74	58	90	13	63	94	24	11	62	21	32	100	62	12	9	6
Mill River	100	8	20	65	100	15	71	100	28	13	69	24	36	37	17	14	10	6
Quinnipiac River	100	8	20	60	94	14	66	99	26	12	64	22	33	37	17	13	9	6
U.S. Coast Guard Sector Long Island Sound	100	100	100	100	100	50	100	100	93	42	100	81	100	100	100	45	33	21
Milford Harbor - Entrance Channel and Outer Anchorage	100	100	100	100	100	46	100	100	84	38	100	73	100	100	100	41	30	19
Milford Harbor - Inner Channels and Anchorages	100	76	100	98	100	23	100	100	42	19	100	36	54	100	100	20	15	10
Housatonic River downstream of Pope's Island	22	8	21	11	16	2	12	17	4	2	11	4	6	38	17	2	2	1
Housatonic River upstream of Pope's Island	100	17	41	64	100	15	70	100	27	12	69	24	35	76	35	13	10	6
Johnsons Creek	100	38	96	100	100	34	100	100	63	29	100	55	82	100	80	31	23	14
Black Rock Harbor	45	5	14	21	33	5	23	35	9	4	23	8	12	25	11	4	3	2
Southport Harbor - Entrance Channel	100	100	100	100	100	86	100	100	100	72	100	100	100	100	100	78	57	36
Southport Harbor - Inner Harbor	100	100	100	100	100	70	100	100	100	58	100	100	100	100	100	63	46	29
Westport Harbor	100	66	100	100	100	60	100	100	100	50	100	96	100	100	100	54	40	25
Norwalk Harbor - Suitable	44	16	40	21	33	5	23	34	9	4	22	8	12	74	34	4	3	2
Norwalk Harbor-West Branch I-95 Area	100	100	100	100	100	50	100	100	93	42	100	81	100	100	100	45	33	21
Wilson Point	45	5	14	21	33	5	23	35	9	4	23	8	12	25	11	4	3	2
Fivemile River	100	61	100	100	100	55	100	100	100	46	100	88	100	100	100	49	36	23
Westcott Cove - Sand	100	98	100	100	100	88	100	100	100	74	100	100	100	100	100	79	59	37
Westcott Cove - Fines	100	98	100	100	100	88	100	100	100	74	100	100	100	100	100	79	58	37

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Berm-440	Berm-441	Berm-445	Berm-447	Berm-449	Berm-451	Berm-453	Berm-454A	Berm-454B	Berm-455/82	Berm-456	Berm-457	Berm-467	Berm-600	Berm-610	Berm-620	Berm-63	Grove Beach	BF-422/423
Connecticut River Main Channels - Lower Bars	21	10	46	20	38	3	37	55	26	13	34	3	16	68	69	28	88	22	50
Patchogue River - Entrance Channel	68	33	100	64	100	10	100	100	85	41	100	10	53	100	100	93	100	73	100
Patchogue River - Inner Harbor	100	82	100	100	100	24	100	100	100	100	100	26	100	100	100	100	100	100	100
Duck Island Harbor of Refuge	3	1	7	3	5	0	5	8	4	2	5	0	2	10	10	4	13	3	7
Clinton Harbor - Entrance Channel	53	25	100	50	96	7	95	100	66	32	87	8	41	100	100	72	100	57	100
Clinton Harbor - Inner Harbor	100	52	100	100	100	15	100	100	100	65	100	16	84	100	100	100	100	100	100
Guilford Harbor - Middle	48	23	100	45	87	7	86	100	60	29	79	7	37	100	100	65	100	51	100
Guilford Harbor - Entrance and Inner	100	100	100	100	100	60	100	100	100	100	100	64	100	100	100	100	100	100	100
Stony Creek Harbor	44	21	98	41	80	6	79	100	55	26	72	7	34	100	100	60	100	47	100
Branford Harbor	20	10	45	19	37	3	36	54	25	12	33	3	16	66	67	28	86	22	48
New Haven Harbor - Maintenance	2	1	5	2	4	0	4	6	3	1	4	0	2	7	7	3	9	2	5
New Haven Harbor - Improvement	1	1	3	1	2	0	2	3	1	1	2	0	1	4	4	2	5	1	3
West River	26	12	57	24	47	4	46	68	32	15	42	4	20	85	86	35	100	28	62
Mill River	29	14	64	27	53	4	52	77	36	17	48	4	23	95	97	40	100	31	69
Quinnipiac River	27	13	60	25	49	4	48	71	34	16	44	4	21	89	90	37	100	29	64
U.S. Coast Guard Sector Long Island Sound	97	47	100	92	100	14	100	100	100	59	100	15	76	100	100	100	100	100	100
Milford Harbor - Entrance Channel and Outer Anchorage	88	43	100	83	100	12	100	100	100	53	100	13	68	100	100	100	100	95	100
Milford Harbor - Inner Channels and Anchorages	44	21	97	41	80	6	79	100	55	26	72	7	34	100	100	60	100	47	100
Housatonic River downstream of Pope's Island	5	2	10	4	9	1	8	13	6	3	8	1	4	16	16	6	20	5	11
Housatonic River upstream of Pope's Island	29	14	64	27	52	4	52	76	36	17	47	4	22	94	95	39	100	31	69
Johnsons Creek	66	32	100	62	100	9	100	100	83	40	100	10	52	100	100	91	100	71	100
Black Rock Harbor	9	5	21	9	17	1	17	25	12	6	16	1	7	31	31	13	40	10	23
Southport Harbor - Entrance Channel	100	80	100	100	100	23	100	100	100	100	100	25	100	100	100	100	100	100	100
Southport Harbor - Inner Harbor	100	65	100	100	100	19	100	100	100	81	100	20	100	100	100	100	100	100	100
Westport Harbor	100	56	100	100	100	16	100	100	100	69	100	17	89	100	100	100	100	100	100
Norwalk Harbor - Suitable	9	4	21	9	17	1	17	25	12	6	15	1	7	31	31	13	40	10	22
Norwalk Harbor-West Branch I-95 Area	97	47	100	92	100	14	100	100	100	59	100	15	76	100	100	100	100	100	100
Wilson Point	9	5	21	9	17	1	17	25	12	6	16	1	7	31	31	13	40	10	23
Fivemile River	100	51	100	99	100	15	100	100	100	63	100	16	82	100	100	100	100	100	100
Westcott Cove - Sand	100	82	100	100	100	24	100	100	100	100	100	25	100	100	100	100	100	100	100
Westcott Cove - Fines	100	82	100	100	100	24	100	100	100	100	100	25	100	100	100	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	CAD-M_bse	CAD-M_cap	COW-E_bse	COW-E_cap	Habitat-427	Habitat-429	IslandCDF-B_bse	IslandCDF-B_cap	IslandCDF-L_bse	IslandCDF-L_cap	IslandCDF-N_bse	IslandCDF-N_cap	IslandCDF-P_bse	IslandCDF-P_cap	IslandCDF-Q_bse	IslandCDF-Q_cap	IslandCDF-R_bse	IslandCDF-R_cap
Connecticut River Main Channels - Lower Bars	100	51	95	100	23	100	100	100	100	100	100	100	100	83	100	100	100	100
Patchogue River - Entrance Channel	100	100	100	100	75	100	100	100	100	100	100	100	100	100	100	100	100	100
Patchogue River - Inner Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Duck Island Harbor of Refuge	24	7	14	25	3	39	26	17	100	100	100	60	71	12	100	22	100	29
Clinton Harbor - Entrance Channel	100	100	100	100	58	100	100	100	100	100	100	100	100	100	100	100	100	100
Clinton Harbor - Inner Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Guilford Harbor - Middle	100	100	100	100	53	100	100	100	100	100	100	100	100	100	100	100	100	100
Guilford Harbor - Entrance and Inner	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Stony Creek Harbor	100	100	100	100	49	100	100	100	100	100	100	100	100	100	100	100	100	100
Branford Harbor	100	50	92	100	22	100	100	100	100	100	100	100	100	81	100	100	100	100
New Haven Harbor - Maintenance	18	5	10	18	2	28	19	13	100	100	100	44	52	9	100	16	100	22
New Haven Harbor - Improvement	9	3	5	9	1	15	10	7	100	100	100	23	27	5	58	9	100	11
West River	100	63	100	100	28	100	100	100	100	100	100	100	100	100	100	100	100	100
Mill River	100	71	100	100	32	100	100	100	100	100	100	100	100	100	100	100	100	100
Quinnipiac River	100	66	100	100	30	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Coast Guard Sector Long Island Sound	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Milford Harbor - Entrance Channel and Outer Anchorage	100	100	100	100	97	100	100	100	100	100	100	100	100	100	100	100	100	100
Milford Harbor - Inner Channels and Anchorages	100	100	100	100	48	100	100	100	100	100	100	100	100	100	100	100	100	100
Housatonic River downstream of Pope's Island	38	12	22	39	5	61	40	27	100	100	100	95	100	19	100	35	100	46
Housatonic River upstream of Pope's Island	100	71	100	100	32	100	100	100	100	100	100	100	100	100	100	100	100	100
Johnsons Creek	100	100	100	100	73	100	100	100	100	100	100	100	100	100	100	100	100	100
Black Rock Harbor	75	23	43	78	10	100	80	54	100	100	100	100	100	38	100	70	100	92
Southport Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Southport Harbor - Inner Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Westport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Norwalk Harbor - Suitable	74	23	42	77	10	100	79	53	100	100	100	100	100	37	100	69	100	91
Norwalk Harbor-West Branch I-95 Area	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Wilson Point	75	23	43	78	10	100	80	54	100	100	100	100	100	38	100	70	100	92
Fivemile River	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Westcott Cove - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Westcott Cove - Fines	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	LFCap-251	LFCap-61	LFPlace-59	ShoreCDF-A_bse	ShoreCDF-A_cap	ShoreCDF-C_bse	ShoreCDF-C_cap	ShoreCDF-D_bse	ShoreCDF-D_cap	ShoreCDF-F_bse	ShoreCDF-F_cap	ShoreCDF-I_bse	ShoreCDF-I_cap	ShoreCDF-J_bse	ShoreCDF-J_cap	ShoreCDF-K_bse	ShoreCDF-K_cap
Connecticut River Main Channels - Lower Bars	100	100	100	100	100	100	100	86	56	100	100	70	36	100	100	78	18
Patchogue River - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	59
Patchogue River - Inner Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Duck Island Harbor of Refuge	62	36	51	100	37	28	19	12	8	100	100	10	5	100	100	11	3
Clinton Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	92	100	100	100	46
Clinton Harbor - Inner Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	94
Guilford Harbor - Middle	100	100	100	100	100	100	100	100	100	100	100	100	84	100	100	100	42
Guilford Harbor - Entrance and Inner	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Stony Creek Harbor	100	100	100	100	100	100	100	100	100	100	100	100	77	100	100	100	38
Branford Harbor	100	100	100	100	100	100	100	84	54	100	100	68	35	100	100	76	18
New Haven Harbor - Maintenance	45	27	38	100	27	21	14	9	6	100	100	7	4	100	100	8	2
New Haven Harbor - Improvement	24	14	20	55	14	11	7	5	3	100	98	4	2	100	100	4	1
West River	100	100	100	100	100	100	100	100	69	100	100	87	45	100	100	96	22
Mill River	100	100	100	100	100	100	100	100	78	100	100	98	51	100	100	100	25
Quinnipiac River	100	100	100	100	100	100	100	100	73	100	100	91	47	100	100	100	23
U.S. Coast Guard Sector Long Island Sound	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	85
Milford Harbor - Entrance Channel and Outer Anchorage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	77
Milford Harbor - Inner Channels and Anchorages	100	100	100	100	100	100	100	100	100	100	100	100	77	100	100	100	38
Housatonic River downstream of Pope's Island	97	57	81	100	58	45	30	20	13	100	100	16	8	100	100	18	4
Housatonic River upstream of Pope's Island	100	100	100	100	100	100	100	100	77	100	100	97	50	100	100	100	25
Johnsons Creek	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	58
Black Rock Harbor	100	100	100	100	100	89	61	39	25	100	100	32	16	100	100	35	8
Southport Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Southport Harbor - Inner Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Westport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Norwalk Harbor - Suitable	100	100	100	100	100	88	60	39	25	100	100	32	16	100	100	35	8
Norwalk Harbor-West Branch I-95 Area	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	85
Wilson Point	100	100	100	100	100	90	61	39	25	100	100	32	16	100	100	35	8
Fivemile River	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	92
Westcott Cove - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Westcott Cove - Fines	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	ShoreCDF-O_bse	ShoreCDF-O_cap	UOW-CLDS	UOW-CSDS	UOW-NLDS	UOW-WLDS
Connecticut River Main Channels - Lower Bars	21	100	100	100	100	100
Patchogue River - Entrance Channel	70	100	100	100	100	100
Patchogue River - Inner Harbor	100	100	100	100	100	100
Duck Island Harbor of Refuge	3	33	100	100	100	100
Clinton Harbor - Entrance Channel	54	100	100	100	100	100
Clinton Harbor - Inner Harbor	100	100	100	100	100	100
Guilford Harbor - Middle	49	100	100	100	100	100
Guilford Harbor - Entrance and Inner	100	100	100	100	100	100
Stony Creek Harbor	45	100	100	100	100	100
Branford Harbor	21	100	100	100	100	100
New Haven Harbor - Maintenance	2	24	100	100	100	100
New Haven Harbor - Improvement	1	13	100	100	100	100
West River	26	100	100	100	100	100
Mill River	30	100	100	100	100	100
Quinnipiac River	28	100	100	100	100	100
U.S. Coast Guard Sector Long Island Sound	100	100	100	100	100	100
Milford Harbor - Entrance Channel and Outer Anchorage	90	100	100	100	100	100
Milford Harbor - Inner Channels and Anchorages	45	100	100	100	100	100
Housatonic River downstream of Pope's Island	5	52	100	100	100	100
Housatonic River upstream of Pope's Island	29	100	100	100	100	100
Johnsons Creek	68	100	100	100	100	100
Black Rock Harbor	10	100	100	100	100	100
Southport Harbor - Entrance Channel	100	100	100	100	100	100
Southport Harbor - Inner Harbor	100	100	100	100	100	100
Westport Harbor	100	100	100	100	100	100
Norwalk Harbor - Suitable	10	100	100	100	100	100
Norwalk Harbor-West Branch I-95 Area	100	100	100	100	100	100
Wilson Point	10	100	100	100	100	100
Fivemile River	100	100	100	100	100	100
Westcott Cove - Sand	100	100	100	100	100	100
Westcott Cove - Fines	100	100	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

	Alternative Screening ID																
Sub-Project Name	**Beach-111**	**Beach-121**	**Beach-170**	**Beach-171**	**Beach-173**	**Beach-177**	**Beach-178**	**Beach-179**	**Beach-180**	**Beach-181**	**Beach-320**	**Beach-323**	**Beach-325**	**Beach-327**	**Beach-329**	**Beach-330**	**Beach-331**
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	7	3	45	46	89	6	21	41	33	7	9	36	14	3	5	5	8
Stamford Harbor - 12-Foot East Branch Channel	22	8	100	100	100	19	72	100	100	23	30	100	48	11	17	17	28
Mianus River	47	18	100	100	100	39	100	100	100	49	62	100	100	23	35	35	58
Greenwich Harbor - Entrance Channel - Suitable	72	27	100	100	100	60	100	100	100	75	96	100	100	35	53	53	89
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	19	7	100	100	100	16	62	100	96	20	26	100	41	9	14	14	24
Port Chester Harbor	18	7	100	100	100	15	57	100	88	18	23	97	38	9	13	13	22
Milton Harbor	46	17	100	100	100	39	100	100	100	48	61	100	98	22	34	34	57
Mamaroneck Harbor	46	17	100	100	100	39	100	100	100	48	61	100	99	22	34	34	57
Echo Bay	54	21	100	100	100	46	100	100	100	57	73	100	100	26	40	40	68
New Rochelle Harbor	39	15	100	100	100	33	100	100	100	41	52	100	84	19	29	29	49
Eastchester Creek - Suitable	29	11	100	100	100	24	93	100	100	30	39	100	62	14	21	21	36
Eastchester Creek - Unsuitable	11	4	76	77	100	9	36	69	57	12	15	62	24	5	8	8	14
Little Neck Bay	6	2	39	40	77	5	19	36	29	6	8	32	12	3	4	4	7
Yocum Sailing Center, US Merchant Marine Academy	97	37	100	100	100	82	100	100	100	100	100	100	100	47	72	72	100
Hempstead Harbor	17	7	100	100	100	14	56	100	87	18	23	95	37	8	13	13	22
Glen Cove Creek	100	69	100	100	100	100	100	100	100	100	100	100	100	88	100	100	100
Huntington Harbor - Sand	100	88	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Huntington Harbor - Silt	100	88	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Northport Harbor - Sand	100	48	100	100	100	100	100	100	100	100	100	100	100	61	94	94	100
Northport Harbor - Silt	100	48	100	100	100	100	100	100	100	100	100	100	100	61	94	94	100
U.S. Coast Guard, Station Eatons Neck	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Silt	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mattituck Harbor and Inlet	57	22	100	100	100	48	100	100	100	60	76	100	100	28	42	42	71
Mattituck Harbor and Inlet - Silt - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Peconic River	100	92	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Peconic River - Sand - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
US DHS Plum Gut Harbor and Orient Point	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Lake Montauk Harbor	100	38	100	100	100	84	100	100	100	100	100	100	100	48	74	74	100
U.S. Coast Guard Station	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Beach-332	Beach-333	Beach-337	Beach-339	Beach-343	Beach-344	Beach-345	Beach-348	Beach-364	Beach-365	Beach-367	Beach-368	Beach-381	Beach-382	Beach-384	Beach-433	Beach-434
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	8	0	1	2	0	0	12	0	6	100	3	36	6	19	9	4	2
Stamford Harbor - 12-Foot East Branch Channel	26	2	3	6	1	1	39	2	20	100	10	100	21	64	30	15	6
Mianus River	54	3	7	12	2	1	83	3	41	100	20	100	44	100	63	31	12
Greenwich Harbor - Entrance Channel - Suitable	83	5	10	19	4	2	100	5	63	100	31	100	68	100	96	47	19
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	22	1	3	5	1	1	34	1	17	100	8	100	18	55	26	13	5
Port Chester Harbor	20	1	3	5	1	0	31	1	16	100	8	97	17	50	24	12	5
Milton Harbor	53	3	7	12	2	1	81	3	40	100	20	100	43	100	62	30	12
Mamaroneck Harbor	53	3	7	12	2	1	81	3	41	100	20	100	44	100	62	30	12
Echo Bay	63	4	8	15	3	2	96	4	48	100	24	100	52	100	73	36	14
New Rochelle Harbor	45	3	6	10	2	1	69	3	34	100	17	100	37	100	52	26	10
Eastchester Creek - Suitable	34	2	4	8	1	1	51	2	25	100	13	100	27	82	39	19	8
Eastchester Creek - Unsuitable	13	1	2	3	1	0	20	1	10	100	5	62	11	32	15	7	3
Little Neck Bay	7	0	1	2	0	0	10	0	5	100	3	32	5	16	8	4	2
Yocum Sailing Center, US Merchant Marine Academy	100	7	14	26	5	3	100	7	86	100	42	100	92	100	100	64	26
Hempstead Harbor	20	1	2	5	1	0	30	1	15	100	8	95	16	49	23	11	5
Glen Cove Creek	100	13	26	48	9	5	100	13	100	100	79	100	100	100	100	100	48
Huntington Harbor - Sand	100	17	33	62	12	6	100	17	100	100	100	100	100	100	100	100	61
Huntington Harbor - Silt	100	17	33	62	12	6	100	17	100	100	100	100	100	100	100	100	61
Northport Harbor - Sand	100	9	18	34	6	4	100	9	100	100	56	100	100	100	100	83	33
Northport Harbor - Silt	100	9	18	34	6	4	100	9	100	100	56	100	100	100	100	83	33
U.S. Coast Guard, Station Eatons Neck	100	30	58	100	20	11	100	29	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Sand	100	48	92	100	32	18	100	46	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Silt	100	48	92	100	32	18	100	46	100	100	100	100	100	100	100	100	100
Mattituck Harbor and Inlet	66	4	8	15	3	2	100	4	50	100	25	100	54	100	76	37	15
Mattituck Harbor and Inlet - Silt - Example	100	34	66	100	23	13	100	33	100	100	100	100	100	100	100	100	100
Peconic River	100	18	35	65	12	7	100	17	100	100	100	100	100	100	100	100	64
Peconic River - Sand - Example	100	34	66	100	23	13	100	33	100	100	100	100	100	100	100	100	100
Greenport Harbor	100	75	100	100	50	28	100	72	100	100	100	100	100	100	100	100	100
US DHS Plum Gut Harbor and Orient Point	100	24	46	86	16	9	100	23	100	100	100	100	100	100	100	100	85
Lake Montauk Harbor	100	7	14	27	5	3	100	7	88	100	44	100	95	100	100	66	26
U.S. Coast Guard Station	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Beach-436	Beach-437	Beach-438	Beach-440	Beach-441	Beach-442	Beach-444	Beach-445	Beach-446	Beach-447	Beach-449	Beach-450	Beach-451	Beach-453	Beach-454 East	454 West	Beach-455/82	Beach-456
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	7	12	1	18	6	11	1	33	100	18	20	15	0	82	45	14	21	21
Stamford Harbor - 12-Foot East Branch Channel	23	39	3	61	19	36	5	100	100	59	67	51	0	100	100	47	69	72
Mianus River	48	81	5	100	39	76	10	100	100	100	100	100	1	100	100	99	100	100
Greenwich Harbor - Entrance Channel - Suitable	74	100	8	100	60	100	16	100	100	100	100	100	2	100	100	100	100	100
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	20	33	2	53	16	31	4	96	100	51	57	44	0	100	100	41	60	62
Port Chester Harbor	18	31	2	49	15	29	4	88	100	47	53	40	0	100	100	37	55	57
Milton Harbor	48	80	5	100	39	74	10	100	100	100	100	100	1	100	100	98	100	100
Mamaroneck Harbor	48	80	5	100	39	75	10	100	100	100	100	100	1	100	100	98	100	100
Echo Bay	56	95	6	100	46	88	12	100	100	100	100	100	1	100	100	100	100	100
New Rochelle Harbor	40	68	4	100	33	63	9	100	100	100	100	89	1	100	100	83	100	100
Eastchester Creek - Suitable	30	50	3	80	24	47	6	100	100	77	86	66	1	100	100	61	90	93
Eastchester Creek - Unsuitable	12	20	1	31	9	18	2	57	100	30	34	26	0	100	77	24	35	36
Little Neck Bay	6	10	1	16	5	9	1	29	100	15	17	13	0	72	39	12	18	19
Yocum Sailing Center, US Merchant Marine Academy	100	100	11	100	82	100	21	100	100	100	100	100	2	100	100	100	100	100
Hempstead Harbor	18	30	2	48	14	28	4	87	100	46	52	39	0	100	100	37	54	56
Glen Cove Creek	100	100	21	100	100	100	40	100	100	100	100	100	4	100	100	100	100	100
Huntington Harbor - Sand	100	100	27	100	100	100	51	100	100	100	100	100	5	100	100	100	100	100
Huntington Harbor - Silt	100	100	27	100	100	100	51	100	100	100	100	100	5	100	100	100	100	100
Northport Harbor - Sand	100	100	15	100	100	100	28	100	100	100	100	100	3	100	100	100	100	100
Northport Harbor - Silt	100	100	15	100	100	100	28	100	100	100	100	100	3	100	100	100	100	100
U.S. Coast Guard, Station Eatons Neck	100	100	46	100	100	100	89	100	100	100	100	100	9	100	100	100	100	100
Port Jefferson Harbor - Sand	100	100	74	100	100	100	100	100	100	100	100	100	14	100	100	100	100	100
Port Jefferson Harbor - Silt	100	100	74	100	100	100	100	100	100	100	100	100	14	100	100	100	100	100
Mattituck Harbor and Inlet	59	99	7	100	48	92	13	100	100	100	100	100	1	100	100	100	100	100
Mattituck Harbor and Inlet - Silt - Example	100	100	53	100	100	100	100	100	100	100	100	100	10	100	100	100	100	100
Peconic River	100	100	28	100	100	100	53	100	100	100	100	100	5	100	100	100	100	100
Peconic River - Sand - Example	100	100	53	100	100	100	100	100	100	100	100	100	10	100	100	100	100	100
Greenport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	22	100	100	100	100	100
US DHS Plum Gut Harbor and Orient Point	100	100	37	100	100	100	71	100	100	100	100	100	7	100	100	100	100	100
Lake Montauk Harbor	100	100	11	100	84	100	22	100	100	100	100	100	2	100	100	100	100	100
U.S. Coast Guard Station	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Beach-457	Beach-459	Beach-467	Beach-468	Beach-474	Beach-480	Beach-600	Beach-610	Beach-620	Beach-63	Beach-64	Beach-67	Beach-68	Beach-76	Beach-79	Berm-121/446	Berm-170	Berm-171
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	1	1	6	9	0	1	14	14	16	100	36	1	1	6	4	42	50	41
Stamford Harbor - 12-Foot East Branch Channel	4	5	22	30	0	3	46	46	55	100	100	3	2	22	13	100	100	100
Mianus River	8	10	45	62	0	7	97	97	100	100	100	7	5	45	28	100	100	100
Greenwich Harbor - Entrance Channel - Suitable	13	16	70	95	0	10	100	100	100	100	100	11	7	70	43	100	100	100
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	3	4	19	25	0	3	40	40	48	100	100	3	2	19	12	60	72	59
Port Chester Harbor	3	4	17	23	0	2	36	36	44	100	95	3	2	17	11	55	66	54
Milton Harbor	8	10	45	61	0	6	95	95	100	100	100	7	5	45	28	100	100	100
Mamaroneck Harbor	8	10	45	61	0	6	95	95	100	100	100	7	5	45	28	96	100	94
Echo Bay	10	12	53	72	0	8	100	100	100	100	100	8	5	53	33	100	100	100
New Rochelle Harbor	7	9	38	52	0	5	81	81	97	100	100	6	4	38	24	100	100	100
Eastchester Creek - Suitable	5	6	28	38	0	4	60	60	72	100	100	4	3	28	17	100	100	100
Eastchester Creek - Unsuitable	2	2	11	15	0	2	23	23	28	100	61	2	1	11	7	71	85	69
Little Neck Bay	1	1	6	8	0	1	12	12	14	100	31	1	1	6	3	18	22	18
Yocum Sailing Center, US Merchant Marine Academy	17	21	94	100	0	14	100	100	100	100	100	14	10	94	59	100	100	100
Hempstead Harbor	3	4	17	23	0	2	36	36	43	100	93	3	2	17	10	100	100	100
Glen Cove Creek	32	40	100	100	1	25	100	100	100	100	100	27	18	100	100	100	100	100
Huntington Harbor - Sand	41	51	100	100	1	32	100	100	100	100	100	35	23	100	100	100	100	100
Huntington Harbor - Silt	41	51	100	100	1	32	100	100	100	100	100	35	23	100	100	100	100	100
Northport Harbor - Sand	22	28	100	100	0	18	100	100	100	100	100	19	13	100	77	100	100	100
Northport Harbor - Silt	22	28	100	100	0	18	100	100	100	100	100	19	13	100	77	100	100	100
U.S. Coast Guard, Station Eatons Neck	71	89	100	100	1	56	100	100	100	100	100	60	40	100	100	100	100	100
Port Jefferson Harbor - Sand	100	100	100	100	2	90	100	100	100	100	100	96	64	100	100	100	100	100
Port Jefferson Harbor - Silt	100	100	100	100	2	90	100	100	100	100	100	96	64	100	100	100	100	100
Mattituck Harbor and Inlet	10	13	55	76	0	8	100	100	100	100	100	8	6	55	34	100	100	100
Mattituck Harbor and Inlet - Silt - Example	81	100	100	100	1	64	100	100	100	100	100	69	46	100	100	100	100	100
Peconic River	43	53	100	100	1	34	100	100	100	100	100	36	24	100	100	100	100	100
Peconic River - Sand - Example	81	100	100	100	1	64	100	100	100	100	100	69	46	100	100	100	100	100
Greenport Harbor	100	100	100	100	3	100	100	100	100	100	100	100	100	100	100	100	100	100
US DHS Plum Gut Harbor and Orient Point	57	71	100	100	1	45	100	100	100	100	100	48	32	100	100	100	100	100
Lake Montauk Harbor	18	22	97	100	0	14	100	100	100	100	100	15	10	97	61	100	100	100
U.S. Coast Guard Station	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Berm-173	Berm-177	Berm-178	Berm-179	Berm-180	Berm-320	Berm-323	Berm-327/333/330	Berm-337	364b/364c	Berm-365	Berm-367	Berm-368	Berm-381/382	Berm-384	Berm-433	Berm-434	Berm-438
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	57	7	17	27	42	6	29	44	11	5	29	10	15	32	14	6	4	3
Stamford Harbor - 12-Foot East Branch Channel	100	23	58	91	100	21	99	100	38	18	97	34	50	100	49	19	14	9
Mianus River	100	49	100	95	100	22	100	100	40	18	100	35	52	100	100	20	15	9
Greenwich Harbor - Entrance Channel - Suitable	100	75	100	100	100	33	100	100	61	28	100	53	80	100	100	30	22	14
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	82	20	50	39	61	9	42	64	16	8	42	14	21	92	42	8	6	4
Port Chester Harbor	75	18	46	36	56	8	39	59	15	7	38	13	20	85	39	7	5	3
Milton Harbor	100	48	100	93	100	22	100	100	40	18	100	35	51	100	100	19	14	9
Mamaroneck Harbor	100	48	100	62	97	14	68	100	26	12	67	23	34	100	100	13	10	6
Echo Bay	100	57	100	100	100	51	100	100	94	43	100	82	100	100	100	46	34	21
New Rochelle Harbor	100	41	100	100	100	37	100	100	67	31	100	59	88	100	85	33	24	15
Eastchester Creek - Suitable	100	30	76	100	100	27	100	100	50	23	100	44	65	100	63	24	18	11
Eastchester Creek - Unsuitable	96	12	29	46	71	11	50	75	19	9	49	17	25	54	25	10	7	4
Little Neck Bay	25	6	15	12	18	3	13	19	5	2	13	4	6	28	13	2	2	1
Yocum Sailing Center, US Merchant Marine Academy	100	100	100	100	100	46	100	100	84	38	100	73	100	100	100	41	30	19
Hempstead Harbor	100	18	45	70	100	16	77	100	30	14	75	26	39	83	38	15	11	7
Glen Cove Creek	100	100	100	100	100	57	100	100	100	47	100	91	100	100	100	51	38	24
Huntington Harbor - Sand	100	100	100	100	100	100	100	100	100	91	100	100	100	100	100	98	72	46
Huntington Harbor - Silt	100	100	100	100	100	100	100	100	100	91	100	100	100	100	100	98	72	46
Northport Harbor - Sand	100	100	100	100	100	60	100	100	100	50	100	96	100	100	100	54	40	25
Northport Harbor - Silt	100	100	100	100	100	60	100	100	100	50	100	96	100	100	100	54	40	25
U.S. Coast Guard, Station Eatons Neck	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	79
Port Jefferson Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Silt	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mattituck Harbor and Inlet	100	60	100	100	100	27	100	100	49	22	100	43	64	100	100	24	18	11
Mattituck Harbor and Inlet - Silt - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Peconic River	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	96
Peconic River - Sand - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
US DHS Plum Gut Harbor and Orient Point	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	64
Lake Montauk Harbor	100	100	100	68	100	16	74	100	29	13	72	25	37	100	100	14	10	7
U.S. Coast Guard Station	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	Berm-440	Berm-441	Berm-445	Berm-447	Berm-449	Berm-451	Berm-453	Berm-454A	Berm-454B	Berm-455/82	Berm-456	Berm-457	Berm-467	Berm-600	Berm-610	Berm-620	Berm-63	Grove Beach	BF-422/423
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	12	6	27	11	22	2	22	32	15	7	20	2	9	40	40	16	51	13	29
Stamford Harbor - 12-Foot East Branch Channel	40	19	90	38	73	6	73	100	50	24	67	6	31	100	100	55	100	43	97
Mianus River	42	20	94	40	77	6	76	100	53	26	70	6	33	100	100	58	100	46	100
Greenwich Harbor - Entrance Channel - Suitable	64	31	100	61	100	9	100	100	80	39	100	10	50	100	100	88	100	69	100
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	17	8	38	16	31	2	31	46	22	10	29	3	13	57	58	24	74	19	42
Port Chester Harbor	16	8	35	15	29	2	29	42	20	10	26	2	12	53	53	22	68	17	38
Milton Harbor	42	20	92	39	75	6	75	100	52	25	69	6	32	100	100	57	100	45	100
Mamaroneck Harbor	28	13	62	26	50	4	50	74	35	17	46	4	22	92	93	38	100	30	67
Echo Bay	99	48	100	93	100	14	100	100	100	59	100	15	77	100	100	100	100	100	100
New Rochelle Harbor	71	34	100	67	100	10	100	100	88	43	100	11	55	100	100	97	100	76	100
Eastchester Creek - Suitable	52	25	100	49	95	7	94	100	65	32	86	8	41	100	100	72	100	56	100
Eastchester Creek - Unsuitable	20	10	45	19	37	3	37	54	25	12	34	3	16	67	68	28	87	22	49
Little Neck Bay	5	3	12	5	10	1	9	14	7	3	9	1	4	17	17	7	22	6	13
Yocum Sailing Center, US Merchant Marine Academy	88	42	100	83	100	12	100	100	100	53	100	13	68	100	100	100	100	95	100
Hempstead Harbor	31	15	69	29	57	4	56	83	39	19	51	5	24	100	100	43	100	34	75
Glen Cove Creek	100	53	100	100	100	15	100	100	100	66	100	16	85	100	100	100	100	100	100
Huntington Harbor - Sand	100	100	100	100	100	29	100	100	100	100	100	31	100	100	100	100	100	100	100
Huntington Harbor - Silt	100	100	100	100	100	29	100	100	100	100	100	31	100	100	100	100	100	100	100
Northport Harbor - Sand	100	56	100	100	100	16	100	100	100	69	100	17	89	100	100	100	100	100	100
Northport Harbor - Silt	100	56	100	100	100	16	100	100	100	69	100	17	89	100	100	100	100	100	100
U.S. Coast Guard, Station Eatons Neck	100	100	100	100	100	51	100	100	100	100	100	55	100	100	100	100	100	100	100
Port Jefferson Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Silt	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mattituck Harbor and Inlet	52	25	100	49	94	7	93	100	64	31	85	8	40	100	100	71	100	55	100
Mattituck Harbor and Inlet - Silt - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Peconic River	100	100	100	100	100	61	100	100	100	100	100	66	100	100	100	100	100	100	100
Peconic River - Sand - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
US DHS Plum Gut Harbor and Orient Point	100	100	100	100	100	41	100	100	100	100	100	44	100	100	100	100	100	100	100
Lake Montauk Harbor	30	15	67	28	55	4	54	80	38	18	50	5	23	100	100	41	100	33	72
U.S. Coast Guard Station	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	CAD-M_bse	CAD-M_cap	COW-E_bse	COW-E_cap	Habitat-427	Habitat-429	IslandCDF-B_bse	IslandCDF-B_cap	IslandCDF-L_bse	IslandCDF-L_cap	IslandCDF-N_bse	IslandCDF-N_cap	IslandCDF-P_bse	IslandCDF-P_cap	IslandCDF-Q_bse	IslandCDF-Q_cap	IslandCDF-R_bse	IslandCDF-R_cap
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	96	30	55	100	13	100	100	68	100	100	100	100	100	48	100	89	100	100
Stamford Harbor - 12-Foot East Branch Channel	100	100	100	100	45	100	100	100	100	100	100	100	100	100	100	100	100	100
Mianus River	100	100	100	100	47	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenwich Harbor - Entrance Channel - Suitable	100	100	100	100	71	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	100	43	79	100	19	100	100	98	100	100	100	100	100	69	100	100	100	100
Port Chester Harbor	100	39	73	100	18	100	100	91	100	100	100	100	100	64	100	100	100	100
Milton Harbor	100	100	100	100	46	100	100	100	100	100	100	100	100	100	100	100	100	100
Mamaroneck Harbor	100	68	100	100	31	100	100	100	100	100	100	100	100	100	100	100	100	100
Echo Bay	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
New Rochelle Harbor	100	100	100	100	78	100	100	100	100	100	100	100	100	100	100	100	100	100
Eastchester Creek - Suitable	100	100	100	100	58	100	100	100	100	100	100	100	100	100	100	100	100	100
Eastchester Creek - Unsuitable	100	50	93	100	22	100	100	100	100	100	100	100	100	82	100	100	100	100
Little Neck Bay	42	13	24	43	6	67	45	30	100	100	100	100	100	21	100	39	100	51
Yocum Sailing Center, US Merchant Marine Academy	100	100	100	100	97	100	100	100	100	100	100	100	100	100	100	100	100	100
Hempstead Harbor	100	77	100	100	34	100	100	100	100	100	100	100	100	100	100	100	100	100
Glen Cove Creek	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Huntington Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Huntington Harbor - Silt	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Northport Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Northport Harbor - Silt	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Coast Guard, Station Eatons Neck	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Silt	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mattituck Harbor and Inlet	100	100	100	100	57	100	100	100	100	100	100	100	100	100	100	100	100	100
Mattituck Harbor and Inlet - Silt - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Peconic River	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Peconic River - Sand - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
US DHS Plum Gut Harbor and Orient Point	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Lake Montauk Harbor	100	74	100	100	33	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Coast Guard Station	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	LFCap-251	LFCap-61	LFPlace-59	ShoreCDF-A_bse	ShoreCDF-A_cap	ShoreCDF-C_bse	ShoreCDF-C_cap	ShoreCDF-D_bse	ShoreCDF-D_cap	ShoreCDF-F_bse	ShoreCDF-F_cap	ShoreCDF-I_bse	ShoreCDF-I_cap	ShoreCDF-J_bse	ShoreCDF-J_cap	ShoreCDF-K_bse	ShoreCDF-K_cap
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	100	100	100	100	100	100	77	50	32	100	100	41	21	100	100	45	10
Stamford Harbor - 12-Foot East Branch Channel	100	100	100	100	100	100	100	100	100	100	100	100	71	100	100	100	35
Mianus River	100	100	100	100	100	100	100	100	100	100	100	100	74	100	100	100	37
Greenwich Harbor - Entrance Channel - Suitable	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	56
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	100	100	100	100	100	100	100	72	47	100	100	59	30	100	100	65	15
Port Chester Harbor	100	100	100	100	100	100	100	66	43	100	100	54	28	100	100	60	14
Milton Harbor	100	100	100	100	100	100	100	100	100	100	100	100	73	100	100	100	36
Mamaroneck Harbor	100	100	100	100	100	100	100	100	75	100	100	94	49	100	100	100	24
Echo Bay	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	86
New Rochelle Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	62
Eastchester Creek - Suitable	100	100	100	100	100	100	100	100	100	100	100	100	92	100	100	100	46
Eastchester Creek - Unsuitable	100	100	100	100	100	100	100	85	55	100	100	69	36	100	100	77	18
Little Neck Bay	100	63	90	100	64	50	34	22	14	100	100	18	9	100	100	20	5
Yocum Sailing Center, US Merchant Marine Academy	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	77
Hempstead Harbor	100	100	100	100	100	100	100	100	84	100	100	100	55	100	100	100	27
Glen Cove Creek	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	95
Huntington Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Huntington Harbor - Silt	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Northport Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Northport Harbor - Silt	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Coast Guard, Station Eatons Neck	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Sand	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Jefferson Harbor - Silt	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Mattituck Harbor and Inlet	100	100	100	100	100	100	100	100	100	100	100	100	90	100	100	100	45
Mattituck Harbor and Inlet - Silt - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Peconic River	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Peconic River - Sand - Example	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Greenport Harbor	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
US DHS Plum Gut Harbor and Orient Point	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Lake Montauk Harbor	100	100	100	100	100	100	100	100	81	100	100	100	53	100	100	100	26
U.S. Coast Guard Station	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table G-4. Capacity Scoring for Project and Alternative Pairings.

Sub-Project Name	ShoreCDF-O_bse	ShoreCDF-O_cap	UOW-CLDS	UOW-CSDS	UOW-NLDS	UOW-WLDS
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	12	100	100	100	100	100
Stamford Harbor - 12-Foot East Branch Channel	41	100	100	100	100	100
Mianus River	43	100	100	100	100	100
Greenwich Harbor - Entrance Channel - Suitable	66	100	100	100	100	100
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	18	100	100	100	100	100
Port Chester Harbor	16	100	100	100	100	100
Milton Harbor	43	100	100	100	100	100
Mamaroneck Harbor	28	100	100	100	100	100
Echo Bay	100	100	100	100	100	100
New Rochelle Harbor	72	100	100	100	100	100
Eastchester Creek - Suitable	54	100	100	100	100	100
Eastchester Creek - Unsuitable	21	100	100	100	100	100
Little Neck Bay	5	57	100	100	100	100
Yocum Sailing Center, US Merchant Marine Academy	90	100	100	100	100	100
Hempstead Harbor	32	100	100	100	100	100
Glen Cove Creek	100	100	100	100	100	100
Huntington Harbor - Sand	100	100	100	100	100	100
Huntington Harbor - Silt	100	100	100	100	100	100
Northport Harbor - Sand	100	100	100	100	100	100
Northport Harbor - Silt	100	100	100	100	100	100
U.S. Coast Guard, Station Eatons Neck	100	100	100	100	100	100
Port Jefferson Harbor - Sand	100	100	100	100	100	100
Port Jefferson Harbor - Silt	100	100	100	100	100	100
Mattituck Harbor and Inlet	53	100	100	100	100	100
Mattituck Harbor and Inlet - Silt - Example	100	100	100	100	100	100
Peconic River	100	100	100	100	100	100
Peconic River - Sand - Example	100	100	100	100	100	100
Greenport Harbor	100	100	100	100	100	100
US DHS Plum Gut Harbor and Orient Point	100	100	100	100	100	100
Lake Montauk Harbor	31	100	100	100	100	100
U.S. Coast Guard Station	100	100	100	100	100	100

Table G-5A. Distance Data for Project and Alternative Pairings.

		Alternative Screening ID															
Project Name	**Dewatering_Site_ID**	**Beach-111**	**Beach-121**	**Beach-170**	**Beach-171**	**Beach-173**	**Beach-177**	**Beach-178**	**Beach-179**	**Beach-180**	**Beach-181**	**Beach-320**	**Beach-323**	**Beach-325**	**Beach-327**	**Beach-329**	**Beach-330**
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Direct Placement	43	21	91	67	27	22	18	17	37	119	96	86	73	73	72	73
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	RI_4_C																
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Direct Placement	43	21	91	67	27	22	18	17	37	119	96	86	73	73	72	73
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	RI_4_C																
Great Salt Pond	Direct Placement	41	20	89	65	26	21	17	16	36	117	94	84	71	71	70	71
Great Salt Pond	RI_4_C																
Hay West Harbor	CT_54																
Hay West Harbor	Direct Placement	23	14	70	46	17	17	16	16	17	97	73	63	49	50	48	49
Pawcatuck River	CT_54																
Pawcatuck River	Direct Placement	31	17	78	55	22	20	18	17	25	105	81	71	57	57	56	57
Little Narragansett Bay - Entrance Channel	CT_54																
Little Narragansett Bay - Entrance Channel	Direct Placement	31	18	77	54	23	20	19	18	24	105	81	70	56	56	55	56
Little Narragansett Bay - Inner Bay Channel	CT_54																
Little Narragansett Bay - Inner Bay Channel	Direct Placement	31	18	77	54	23	20	19	18	24	105	81	70	56	56	55	56
Watch Hill Cove	CT_54																
Watch Hill Cove	Direct Placement	31	17	78	55	22	19	17	17	25	106	81	71	57	57	56	57
Stonington Harbor	CT_54																
Stonington Harbor	Direct Placement	30	17	76	53	22	20	19	18	23	103	79	68	54	55	53	54
Mystic Harbor - Maintenance	CT_54																
Mystic Harbor - Maintenance	Direct Placement	27	18	73	50	22	21	20	19	21	100	76	65	51	51	50	51
Mystic Harbor - Improvement	CT_54																
Mystic Harbor - Improvement	Direct Placement	27	18	73	50	22	21	20	19	21	100	76	65	51	51	50	51
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	CT_54																
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Direct Placement	23	19	68	45	22	22	22	22	17	95	70	59	45	46	45	45
New London Harbor - 15-foot Shaws Cove	CT_54																
New London Harbor - 15-foot Shaws Cove	Direct Placement	23	19	68	45	22	22	22	22	17	95	70	59	45	46	45	45
Thames River - Lower Channels, Navy Base to Harbor	CT_54																
Thames River - Lower Channels, Navy Base to Harbor	Direct Placement	25	21	69	46	24	24	24	23	19	95	71	60	45	46	45	46
Thames River - Upper Channel, to Norwich	CT_54																
Thames River - Upper Channel, to Norwich	Direct Placement	27	25	70	48	27	27	27	27	22	96	71	60	46	46	45	46
U.S. Navy New London - Maintenance - Suitable	CT_54																
U.S. Navy New London - Maintenance - Suitable	Direct Placement	26	22	69	47	25	25	25	25	20	96	71	60	46	46	45	46
U.S. Navy New London - Maintenance - Unsuitable	CT_54																

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Beach-331	Beach-332	Beach-333	Beach-337	Beach-339	Beach-343	Beach-344	Beach-345	Beach-348	Beach-364	Beach-365	Beach-367	Beach-368	Beach-381	Beach-382	Beach-384	Beach-433	Beach-434
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	72	72	73	70	58	51	47	48	40	79	52	37	27	18	19	16	91	90
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage																		
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	72	72	73	70	58	51	47	48	40	79	52	37	27	18	19	16	91	90
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners																		
Great Salt Pond	71	70	71	69	56	49	45	46	38	77	50	35	25	16	17	14	89	88
Great Salt Pond																		
Hay West Harbor																		
Hay West Harbor	49	48	49	47	35	27	23	24	16	55	28	13	4	8	7	11	68	67
Pawcatuck River																		
Pawcatuck River	56	55	57	54	42	34	30	31	23	63	36	20	9	1	1	3	76	75
Little Narragansett Bay - Entrance Channel																		
Little Narragansett Bay - Entrance Channel	55	55	56	53	41	33	29	30	22	62	35	19	8	2	1	11	75	74
Little Narragansett Bay - Inner Bay Channel																		
Little Narragansett Bay - Inner Bay Channel	55	55	56	53	41	33	29	30	22	62	35	19	8	2	1	11	75	74
Watch Hill Cove																		
Watch Hill Cove	56	56	57	54	42	35	30	31	23	63	36	20	9	0	1	10	76	75
Stonington Harbor																		
Stonington Harbor	54	53	54	52	40	32	28	29	21	61	33	17	7	3	2	6	73	73
Mystic Harbor - Maintenance																		
Mystic Harbor - Maintenance	51	50	51	49	36	29	25	26	18	58	30	14	4	6	6	9	70	69
Mystic Harbor - Maintenance																		
Mystic Harbor - Maintenance	51	50	51	49	36	29	25	26	18	58	30	14	4	6	6	9	70	69
Mystic Harbor - Improvement																		
Mystic Harbor - Improvement	51	50	51	49	36	29	25	26	18	58	30	14	4	6	6	9	70	69
New London Harbor - Main Channel and Anchorage, 23-Foot Channel																		
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	45	44	46	43	31	23	19	20	12	52	25	9	3	12	11	15	65	64
New London Harbor - 15-foot Shaws Cove																		
New London Harbor - 15-foot Shaws Cove	45	44	46	43	31	23	19	20	12	52	25	9	3	12	11	15	65	64
Thames River - Lower Channels, Navy Base to Harbor																		
Thames River - Lower Channels, Navy Base to Harbor	45	44	46	43	31	23	19	20	13	52	25	9	4	12	12	15	65	64
Thames River - Upper Channel, to Norwich																		
Thames River - Upper Channel, to Norwich	45	45	46	44	32	24	20	21	14	53	26	11	7	14	13	16	66	65
U.S. Navy New London - Maintenance - Suitable																		
U.S. Navy New London - Maintenance - Suitable	45	44	46	43	31	24	20	21	13	52	26	10	5	13	12	15	65	65
U.S. Navy New London - Maintenance - Unsuitable																		

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Beach-436	Beach-437	Beach-438	Beach-440	Beach-441	Beach-442	Beach-444	Beach-445	Beach-446	Beach-447	Beach-449	Beach-450	Beach-451	Beach-453	Beach-454 East	Beach-454 West	Beach-455/82	Beach-456
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	88	33	92	94	102	103	78	56	20	74	92	81	75	21	44	48	53	105
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage																		
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	88	33	92	94	102	103	78	56	20	74	92	81	75	21	44	48	53	105
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners																		
Great Salt Pond	86	32	90	92	100	101	76	55	19	72	91	79	73	20	43	46	52	103
Great Salt Pond																		
Hay West Harbor																		
Hay West Harbor	65	12	69	71	79	81	54	36	14	50	70	58	51	14	24	27	34	83
Pawcatuck River																		
Pawcatuck River	72	20	77	79	87	88	62	44	16	58	78	66	59	17	32	35	42	92
Little Narragansett Bay - Entrance Channel																		
Little Narragansett Bay - Entrance Channel	72	19	76	78	87	88	61	44	17	57	77	65	58	18	31	35	41	91
Little Narragansett Bay - Inner Bay Channel																		
Little Narragansett Bay - Inner Bay Channel	72	19	76	78	87	88	61	44	17	57	77	65	58	18	31	35	41	91
Watch Hill Cove																		
Watch Hill Cove	73	20	77	79	87	89	62	44	16	58	78	66	59	17	32	35	42	92
Stonington Harbor																		
Stonington Harbor	70	18	75	77	85	86	60	43	17	55	75	63	56	18	30	34	40	89
Mystic Harbor - Maintenance																		
Mystic Harbor - Maintenance	67	16	72	74	82	83	56	40	18	52	72	60	53	18	28	31	38	86
Mystic Harbor - Improvement																		
Mystic Harbor - Improvement	67	16	72	74	82	83	56	40	18	52	72	60	53	18	28	31	38	86
New London Harbor - Main Channel and Anchorage, 23-Foot Channel																		
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	61	12	66	68	76	78	51	36	20	46	66	55	48	19	23	27	33	81
New London Harbor - 15-foot Shaws Cove																		
New London Harbor - 15-foot Shaws Cove	61	12	66	68	76	78	51	36	20	46	66	55	48	19	23	27	33	81
Thames River - Lower Channels, Navy Base to Harbor																		
Thames River - Lower Channels, Navy Base to Harbor	62	14	66	68	77	78	51	37	21	46	67	55	48	21	25	28	34	82
Thames River - Upper Channel, to Norwich																		
Thames River - Upper Channel, to Norwich	62	17	67	69	78	79	52	39	25	47	67	56	48	25	27	30	37	83
U.S. Navy New London - Maintenance - Suitable																		
U.S. Navy New London - Maintenance - Suitable	62	15	67	69	77	78	51	38	23	47	67	55	48	23	25	29	35	82
U.S. Navy New London - Maintenance - Unsuitable																		

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Beach-457	Beach-459	Beach-467	Beach-468	Beach-474	Beach-480	Beach-600	Beach-610	Beach-620	Beach-63	Beach-64	Beach-67	Beach-68	Beach-76	Beach-79	Berm-121/446	Berm-170	Berm-171	Berm-173
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	54	70	83	82	90	21	1	7	20	96	98	98	100	45	42	20	91	66	26
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage																			
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	54	70	83	82	90	21	1	7	20	96	98	98	100	45	42	20	91	66	26
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners																			
Great Salt Pond	52	69	81	80	88	19	8	2	18	95	97	97	99	44	40	19	89	65	25
Great Salt Pond																			
Hay West Harbor																			
Hay West Harbor	30	47	60	59	67	7	24	23	7	75	77	77	79	25	21	14	70	46	17
Pawcatuck River																			
Pawcatuck River	38	54	68	66	75	2	18	16	1	83	85	85	87	33	29	16	78	54	22
Little Narragansett Bay - Entrance Channel																			
Little Narragansett Bay - Entrance Channel	37	53	67	66	74	1	19	18	0	82	84	85	86	32	29	17	77	53	22
Little Narragansett Bay - Inner Bay Channel																			
Little Narragansett Bay - Inner Bay Channel	37	53	67	66	74	1	19	18	0	82	84	85	86	32	29	17	77	53	22
Watch Hill Cove																			
Watch Hill Cove	38	54	68	67	75	3	18	16	2	83	85	85	87	33	29	16	78	54	21
Stonington Harbor																			
Stonington Harbor	36	52	65	64	72	0	21	19	1	81	83	83	85	31	27	17	76	52	22
Mystic Harbor - Maintenance																			
Mystic Harbor - Maintenance	32	48	62	61	69	4	24	22	5	78	80	80	82	29	25	18	73	49	22
Mystic Harbor - Improvement																			
Mystic Harbor - Improvement	32	48	62	61	69	4	24	22	5	78	80	80	82	29	25	18	73	49	22
New London Harbor - Main Channel and Anchorage, 23-Foot Channel																			
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	27	43	57	55	64	9	29	28	10	72	74	75	77	24	21	19	68	44	21
New London Harbor - 15-foot Shaws Cove																			
New London Harbor - 15-foot Shaws Cove	27	43	57	55	64	9	29	28	10	72	74	75	77	24	21	19	68	44	21
Thames River - Lower Channels, Navy Base to Harbor																			
Thames River - Lower Channels, Navy Base to Harbor	27	43	57	56	64	10	30	28	11	73	75	76	77	26	22	21	68	46	24
Thames River - Upper Channel, to Norwich																			
Thames River - Upper Channel, to Norwich	28	43	58	56	65	11	32	30	12	74	76	77	79	28	25	25	70	47	27
U.S. Navy New London - Maintenance - Suitable																			
U.S. Navy New London - Maintenance - Suitable	27	43	57	56	64	10	31	29	11	74	75	76	78	26	23	22	69	46	25
U.S. Navy New London - Maintenance - Unsuitable																			

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Berm-177	Berm-178	Berm-179	Berm-180	Berm-320	Berm-323	Berm-327/333/330	Berm-337	Berm-364b/364c	Berm-365	Berm-367	Berm-368	Berm-381/382	Berm-384	Berm-433	Berm-434	Berm-438	Berm-440	Berm-441
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	22	18	17	36	95	86	72	71	79	53	36	27	19	16	91	90	92	93	101
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage																			
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	22	18	17	36	95	86	72	71	79	53	36	27	19	16	91	90	92	93	101
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners																			
Great Salt Pond	21	17	16	34	93	84	71	69	77	51	34	25	17	14	89	88	90	92	100
Great Salt Pond																			
Hay West Harbor																			
Hay West Harbor	17	16	15	15	73	63	49	47	56	29	12	4	7	11	68	67	69	71	79
Pawcatuck River																			
Pawcatuck River	20	18	16	23	80	71	56	55	64	37	20	9	1	3	76	75	77	79	87
Little Narragansett Bay - Entrance Channel																			
Little Narragansett Bay - Entrance Channel	21	19	17	23	80	70	56	54	63	36	19	8	2	4	75	74	76	78	86
Little Narragansett Bay - Inner Bay Channel																			
Little Narragansett Bay - Inner Bay Channel	21	19	17	23	80	70	56	54	63	36	19	8	2	4	75	74	76	78	86
Watch Hill Cove																			
Watch Hill Cove	20	18	16	23	81	71	57	55	64	37	20	10	1	3	76	75	77	79	87
Stonington Harbor																			
Stonington Harbor	21	19	17	22	78	68	54	52	61	34	17	7	3	6	73	73	75	76	85
Mystic Harbor - Maintenance																			
Mystic Harbor - Maintenance	21	20	19	19	75	65	51	49	58	31	14	4	6	9	70	70	72	73	82
Mystic Harbor - Improvement																			
Mystic Harbor - Improvement	21	20	19	19	75	65	51	49	58	31	14	4	6	9	70	70	72	73	82
New London Harbor - Main Channel and Anchorage, 23-Foot Channel																			
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	22	22	21	16	69	59	45	43	52	25	8	2	11	15	65	64	66	68	76
New London Harbor - 15-foot Shaws Cove																			
New London Harbor - 15-foot Shaws Cove	22	22	21	16	69	59	45	43	52	25	8	2	11	15	65	64	66	68	76
Thames River - Lower Channels, Navy Base to Harbor																			
Thames River - Lower Channels, Navy Base to Harbor	24	24	23	17	70	60	45	43	53	26	9	4	12	15	65	65	66	68	77
Thames River - Upper Channel, to Norwich																			
Thames River - Upper Channel, to Norwich	28	27	26	20	71	60	46	44	53	27	11	7	14	16	66	65	67	69	77
U.S. Navy New London - Maintenance - Suitable																			
U.S. Navy New London - Maintenance - Suitable	26	25	24	19	70	60	45	44	53	26	10	5	12	15	65	65	67	68	77
U.S. Navy New London - Maintenance - Unsuitable																			

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Berm-445	Berm-447	Berm-449	Berm-451	Berm-453	Berm-454A	Berm-454B	Berm-455/82	Berm-456	Berm-457	Berm-467	Berm-600	Berm-610	Berm-620	Berm-63	Berm-Grove Beach	BF-422/423	CAD-M_bse	CAD-M_cap
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	56	73	92	75	21	45	48	53	105	54	83	1	7	20	96	49		70	70
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage																	167		
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	56	73	92	75	21	45	48	53	105	54	83	1	7	20	96	49		70	70
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners																	167		
Great Salt Pond	55	72	91	73	20	43	47	52	104	52	81	8	2	18	95	47		68	68
Great Salt Pond																	166		
Hay West Harbor																	123		
Hay West Harbor	36	50	70	51	13	24	28	34	84	31	60	24	22	7	75	25		47	47
Pawcatuck River																	123		
Pawcatuck River	44	57	77	59	17	32	36	42	92	38	68	18	16	1	83	32		54	54
Little Narragansett Bay - Entrance Channel																	121		
Little Narragansett Bay - Entrance Channel	44	57	77	58	18	32	35	41	91	37	67	19	17	0	82	31		53	53
Little Narragansett Bay - Inner Bay Channel																	121		
Little Narragansett Bay - Inner Bay Channel	44	57	77	58	18	32	35	41	91	37	67	19	17	0	82	31		53	53
Watch Hill Cove																	123		
Watch Hill Cove	44	58	78	59	17	32	36	42	92	38	68	18	16	2	83	32		54	54
Stonington Harbor																	120		
Stonington Harbor	43	55	75	56	17	30	34	40	90	36	66	21	19	1	81	30		52	52
Mystic Harbor - Maintenance																	118		
Mystic Harbor - Maintenance	40	52	72	53	18	28	31	38	87	32	62	24	22	4	78	27		48	48
Mystic Harbor - Improvement																	118		
Mystic Harbor - Improvement	40	52	72	53	18	28	31	38	87	32	62	24	22	4	78	27		48	48
New London Harbor - Main Channel and Anchorage, 23-Foot Channel																	118		
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	36	46	66	48	19	23	27	33	81	27	57	29	27	10	72	21		43	43
New London Harbor - 15-foot Shaws Cove																	118		
New London Harbor - 15-foot Shaws Cove	36	46	66	48	19	23	27	33	81	27	57	29	27	10	72	21		43	43
Thames River - Lower Channels, Navy Base to Harbor																	112		
Thames River - Lower Channels, Navy Base to Harbor	37	46	67	48	21	25	28	34	82	27	57	30	28	10	73	22		43	43
Thames River - Upper Channel, to Norwich																	105		
Thames River - Upper Channel, to Norwich	39	47	67	48	24	27	30	36	83	28	58	32	30	12	74	23		43	43
U.S. Navy New London - Maintenance - Suitable																	114		
U.S. Navy New London - Maintenance - Suitable	38	47	67	48	22	26	29	35	82	27	58	31	29	11	73	22		43	43
U.S. Navy New London - Maintenance - Unsuitable																	114		

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	COW-E_bse	COW-E_cap	Habitat-427	Habitat-429	IslandCDF-B_bse	IslandCDF-B_cap	IslandCDF-L_bse	IslandCDF-L_cap	IslandCDF-N_bse	IslandCDF-N_cap	IslandCDF-P_bse	IslandCDF-P_cap	IslandCDF-Q_bse	IslandCDF-Q_cap	IslandCDF-R_bse	IslandCDF-R_cap
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	92	92			109	109	71	71	57	57	50	50	32	32	28	28
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage			177	174												
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	92	92			109	109	71	71	57	57	50	50	32	32	28	28
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners			177	174												
Great Salt Pond	90	90			108	108	69	69	56	56	48	48	30	30	26	26
Great Salt Pond			176	173												
Hay West Harbor			134	130												
Hay West Harbor	69	69			87	87	48	48	34	34	26	26	8	8	4	4
Pawcatuck River			134	131												
Pawcatuck River	77	77			95	95	55	55	42	42	34	34	15	15	10	10
Little Narragansett Bay - Entrance Channel			133	129												
Little Narragansett Bay - Entrance Channel	76	76			94	94	54	54	41	41	33	33	14	14	10	10
Little Narragansett Bay - Inner Bay Channel			133	129												
Little Narragansett Bay - Inner Bay Channel	76	76			94	94	54	54	41	41	33	33	14	14	10	10
Watch Hill Cove			134	131												
Watch Hill Cove	77	77			95	95	55	55	42	42	34	34	15	15	11	11
Stonington Harbor			132	128												
Stonington Harbor	75	75			93	93	53	53	39	39	31	31	13	13	8	8
Mystic Harbor - Maintenance			129	126												
Mystic Harbor - Maintenance	72	72			90	90	50	50	36	36	28	28	9	9	5	5
Mystic Harbor - Improvement			129	126												
Mystic Harbor - Improvement	72	72			90	90	50	50	36	36	28	28	9	9	5	5
New London Harbor - Main Channel and Anchorage, 23-Foot Channel			129	126												
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	66	66			84	84	44	44	31	31	23	23	4	4	2	2
New London Harbor - 15-foot Shaws Cove			129	126												
New London Harbor - 15-foot Shaws Cove	66	66			84	84	44	44	31	31	23	23	4	4	2	2
Thames River - Lower Channels, Navy Base to Harbor			123	120												
Thames River - Lower Channels, Navy Base to Harbor	67	67			85	85	45	45	32	32	23	23	6	6	4	4
Thames River - Upper Channel, to Norwich			116	113												
Thames River - Upper Channel, to Norwich	68	68			86	86	46	46	33	33	24	24	9	9	8	8
U.S. Navy New London - Maintenance - Suitable			125	122												
U.S. Navy New London - Maintenance - Suitable	67	67			85	85	44	44	32	32	24	24	7	7	5	5
U.S. Navy New London - Maintenance - Unsuitable			125	122												

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	LFCap-251	LFCap-61	LFPlace-59	ShoreCDF-A_bse	ShoreCDF-A_cap	ShoreCDF-C_bse	ShoreCDF-C_cap	ShoreCDF-D_bse	ShoreCDF-D_cap	ShoreCDF-F_bse	ShoreCDF-F_cap	ShoreCDF-I_bse	ShoreCDF-I_cap	ShoreCDF-J_bse	ShoreCDF-J_cap	ShoreCDF-K_bse
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage				112	112	97	97	97	97	87	87	84	84	81	81	78
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	89	125	148													
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners				112	112	97	97	97	97	87	87	84	84	81	81	78
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	89	125	148													
Great Salt Pond				111	111	95	95	95	95	85	85	83	83	79	79	76
Great Salt Pond	88	124	147													
Hay West Harbor	48	84	105													
Hay West Harbor				91	91	74	74	74	74	64	64	61	61	58	58	54
Pawcatuck River	48	85	106													
Pawcatuck River				99	99	82	82	82	82	72	72	69	69	66	66	62
Little Narragansett Bay - Entrance Channel	47	83	104													
Little Narragansett Bay - Entrance Channel				99	99	82	82	81	81	71	71	68	68	65	65	61
Little Narragansett Bay - Inner Bay Channel	47	83	104													
Little Narragansett Bay - Inner Bay Channel				99	99	82	82	81	81	71	71	68	68	65	65	61
Watch Hill Cove	49	85	106													
Watch Hill Cove				99	99	82	82	82	82	72	72	69	69	66	66	62
Stonington Harbor	46	82	103													
Stonington Harbor				97	97	80	80	80	80	69	69	66	66	63	63	60
Mystic Harbor - Maintenance	44	80	101													
Mystic Harbor - Maintenance				94	94	77	77	77	77	66	66	63	63	60	60	56
Mystic Harbor - Improvement	44	80	101													
Mystic Harbor - Improvement				94	94	77	77	77	77	66	66	63	63	60	60	56
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	43	80	101													
New London Harbor - Main Channel and Anchorage, 23-Foot Channel				89	89	71	71	71	71	61	61	58	58	55	55	51
New London Harbor - 15-foot Shaws Cove	43	80	101													
New London Harbor - 15-foot Shaws Cove				89	89	71	71	71	71	61	61	58	58	55	55	51
Thames River - Lower Channels, Navy Base to Harbor	38	74	95													
Thames River - Lower Channels, Navy Base to Harbor				90	90	72	72	72	72	62	62	58	58	57	57	51
Thames River - Upper Channel, to Norwich	31	67	88													
Thames River - Upper Channel, to Norwich				91	91	73	73	73	73	63	63	58	58	57	57	52
U.S. Navy New London - Maintenance - Suitable	40	76	97													
U.S. Navy New London - Maintenance - Suitable				90	90	72	72	72	72	61	61	58	58	55	55	51
U.S. Navy New London - Maintenance - Unsuitable	40	76	97													

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	ShoreCDF-K_cap	ShoreCDF-O_bse	ShoreCDF-O_cap	UOW-CLDS	UOW-CSDS	UOW-NLDS
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	78	51	51	69	42	28
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage						
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	78	51	51	69	42	28
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners						
Great Salt Pond	76	49	49	68	40	26
Great Salt Pond						
Hay West Harbor						
Hay West Harbor	54	27	27	46	19	4
Pawcatuck River						
Pawcatuck River	62	35	35	54	27	12
Little Narragansett Bay - Entrance Channel						
Little Narragansett Bay - Entrance Channel	61	34	34	54	26	11
Little Narragansett Bay - Inner Bay Channel						
Little Narragansett Bay - Inner Bay Channel	61	34	34	54	26	11
Watch Hill Cove						
Watch Hill Cove	62	35	35	54	27	12
Stonington Harbor						
Stonington Harbor	60	32	32	52	25	9
Mystic Harbor - Maintenance						
Mystic Harbor - Maintenance	56	29	29	49	22	7
Mystic Harbor - Improvement						
Mystic Harbor - Improvement	56	29	29	49	22	7
New London Harbor - Main Channel and Anchorage, 23-Foot Channel						
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	51	24	24	43	17	4
New London Harbor - 15-foot Shaws Cove						
New London Harbor - 15-foot Shaws Cove	51	24	24	43	17	4
Thames River - Lower Channels, Navy Base to Harbor						
Thames River - Lower Channels, Navy Base to Harbor	51	24	24	44	18	6
Thames River - Upper Channel, to Norwich						
Thames River - Upper Channel, to Norwich	52	25	25	60	33	18
U.S. Navy New London - Maintenance - Suitable						
U.S. Navy New London - Maintenance - Suitable	51	24	24	44	18	8
U.S. Navy New London - Maintenance - Unsuitable						

Table G-5A. Distance Data for Project and Alternative Pairings.

		Alternative Screening ID															
Project Name	**Dewatering_Site_ID**	**Beach-111**	**Beach-121**	**Beach-170**	**Beach-171**	**Beach-173**	**Beach-177**	**Beach-178**	**Beach-179**	**Beach-180**	**Beach-181**	**Beach-320**	**Beach-323**	**Beach-325**	**Beach-327**	**Beach-329**	**Beach-330**
U.S. Navy New London - Maintenance - Unsuitable	Direct Placement	26	22	69	47	25	25	25	25	20	96	71	60	46	46	45	46
U.S. Navy New London - Improvement	CT_54																
U.S. Navy New London - Improvement	Direct Placement	26	22	69	47	25	25	25	25	20	96	71	60	46	46	45	46
U.S. Coast Guard Station, New London	CT_54																
U.S. Coast Guard Station, New London	Direct Placement	24	20	68	45	23	23	23	22	17	95	70	59	45	45	44	45
U.S. Coast Guard Academy	CT_54																
U.S. Coast Guard Academy	Direct Placement	25	22	68	46	24	25	25	24	19	95	70	60	45	46	44	45
Niantic Bay and Harbor - Entrance Channel	CT_54																
Niantic Bay and Harbor - Entrance Channel	Direct Placement	20	22	63	41	23	24	25	24	14	90	65	54	40	41	39	40
Niantic Bay and Harbor - Upper Channel	CT_54																
Niantic Bay and Harbor - Upper Channel	Direct Placement	20	22	63	41	23	24	25	24	14	90	65	54	40	41	39	40
North Cove	Direct Placement	15	27	53	32	25	29	30	30	12	80	56	45	31	31	30	31
North Cove	Patchogue Marina																
Essex Cove	Direct Placement	19	30	55	34	29	32	34	33	16	81	56	45	30	31	29	30
Essex Cove	Patchogue Marina																
Eightmile River	Direct Placement	21	30	57	37	30	33	34	34	18	83	58	47	32	32	31	32
Eightmile River	Patchogue Marina																
Connecticut River Main Channels - Entrance Bars	Direct Placement	13	25	54	32	23	27	29	29	10	81	56	45	32	32	31	32
Connecticut River Main Channels - Entrance Bars	Patchogue Marina																
Connecticut River Main Channels - Lower Bars	Direct Placement	13	25	54	32	23	27	29	29	10	81	56	45	32	32	31	32
Connecticut River Main Channels - Lower Bars	Patchogue Marina																
Patchogue River - Entrance Channel	Direct Placement	15	31	48	27	29	33	35	35	15	75	50	39	25	25	24	25
Patchogue River - Entrance Channel	Patchogue Marina																
Patchogue River - Inner Harbor	Direct Placement	15	31	48	27	29	33	35	35	15	75	50	39	25	25	24	25
Patchogue River - Inner Harbor	Patchogue Marina																
Duck Island Harbor of Refuge	Direct Placement	14	31	47	26	28	33	35	35	14	74	49	38	25	25	24	25
Duck Island Harbor of Refuge	Patchogue Marina																
Clinton Harbor - Entrance Channel	Cedar Island Marina																
Clinton Harbor - Entrance Channel	Direct Placement	16	33	45	25	31	35	37	37	16	72	47	36	22	22	21	22
Clinton Harbor - Inner Harbor	Cedar Island Marina																
Clinton Harbor - Inner Harbor	Direct Placement	16	33	45	25	31	35	37	37	16	72	47	36	22	22	21	22
Guilford Harbor - Middle	Direct Placement	21	40	39	22	37	42	44	44	23	65	40	29	15	15	14	15
Guilford Harbor - Middle	Jacobs Beach																
Guilford Harbor - Entrance and Inner	Direct Placement	21	40	39	22	37	42	44	44	23	65	40	29	15	15	14	15
Guilford Harbor - Entrance and Inner	Jacobs Beach																
Stony Creek Harbor	Branford Harbor																
Stony Creek Harbor	Direct Placement	24	45	36	21	41	46	48	49	27	61	36	25	10	11	9	10
Branford Harbor	Branford Harbor																
Branford Harbor	Direct Placement	27	48	33	20	44	49	51	52	30	58	33	21	7	7	6	7
New Haven Harbor - Maintenance	CT_28																
New Haven Harbor - Maintenance	Direct Placement	32	53	30	21	49	54	57	57	35	53	28	17	2	2	1	2
New Haven Harbor - Improvement	CT_28																
New Haven Harbor - Improvement	Direct Placement	32	53	30	21	49	54	57	57	35	53	28	17	2	2	1	2

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Beach-331	Beach-332	Beach-333	Beach-337	Beach-339	Beach-343	Beach-344	Beach-345	Beach-348	Beach-364	Beach-365	Beach-367	Beach-368	Beach-381	Beach-382	Beach-384	Beach-433	Beach-434
U.S. Navy New London - Maintenance - Unsuitable	45	44	46	43	31	24	20	21	13	52	26	10	5	13	12	15	65	65
U.S. Navy New London - Improvement																		
U.S. Navy New London - Improvement	45	44	46	43	31	24	20	21	13	52	26	10	5	13	12	15	65	65
U.S. Coast Guard Station, New London																		
U.S. Coast Guard Station, New London	44	44	45	43	30	23	19	20	12	52	24	8	4	12	12	15	64	64
U.S. Coast Guard Academy																		
U.S. Coast Guard Academy	45	44	45	43	31	23	19	20	13	52	25	9	5	13	12	16	65	64
Niantic Bay and Harbor - Entrance Channel																		
Niantic Bay and Harbor - Entrance Channel	40	39	40	38	26	18	14	15	7	47	20	6	8	17	16	20	60	59
Niantic Bay and Harbor - Upper Channel																		
Niantic Bay and Harbor - Upper Channel	40	39	40	38	26	18	14	15	7	47	20	6	8	17	16	20	60	59
North Cove	30	29	31	28	16	8	4	5	3	37	10	6	17	26	25	29	50	49
North Cove																		
Essex Cove	30	29	30	28	16	9	6	7	6	37	11	8	18	27	27	30	50	49
Essex Cove																		
Eightmile River	32	31	32	30	18	12	8	9	8	39	13	8	17	26	26	29	52	51
Eightmile River																		
Connecticut River Main Channels - Entrance Bars	31	30	32	29	17	9	5	6	2	38	11	6	16	25	24	28	51	50
Connecticut River Main Channels - Entrance Bars																		
Connecticut River Main Channels - Lower Bars	31	30	32	29	17	9	5	6	2	38	11	6	16	25	24	28	51	50
Connecticut River Main Channels - Lower Bars																		
Patchogue River - Entrance Channel	24	24	25	23	10	3	2	0	9	31	4	12	23	32	31	35	44	43
Patchogue River - Entrance Channel																		
Patchogue River - Inner Harbor	24	24	25	23	10	3	2	0	9	31	4	12	23	32	31	35	44	43
Patchogue River - Inner Harbor																		
Duck Island Harbor of Refuge	24	23	25	22	10	2	2	1	9	31	4	13	23	32	32	35	44	43
Duck Island Harbor of Refuge																		
Clinton Harbor - Entrance Channel																		
Clinton Harbor - Entrance Channel	22	21	22	20	7	0	4	3	12	28	1	15	26	35	34	38	41	40
Clinton Harbor - Inner Harbor																		
Clinton Harbor - Inner Harbor	22	21	22	20	7	0	4	3	12	28	1	15	26	35	34	38	41	40
Guilford Harbor - Middle	14	14	15	12	0	8	12	11	19	21	6	22	33	42	41	45	34	33
Guilford Harbor - Middle																		
Guilford Harbor - Entrance and Inner	14	14	15	12	0	8	12	11	19	21	6	22	33	42	41	45	34	33
Guilford Harbor - Entrance and Inner																		
Stony Creek Harbor																		
Stony Creek Harbor	10	9	10	8	4	12	16	15	23	17	11	27	38	47	46	50	30	29
Branford Harbor																		
Branford Harbor	7	6	7	5	8	15	19	18	27	14	14	30	41	50	49	53	27	26
New Haven Harbor - Maintenance																		
New Haven Harbor - Maintenance	1	0	2	1	13	21	25	24	32	9	19	35	46	55	54	58	22	21
New Haven Harbor - Improvement																		
New Haven Harbor - Improvement	1	0	2	1	13	21	25	24	32	9	19	35	46	55	54	58	22	21

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Beach-436	Beach-437	Beach-438	Beach-440	Beach-441	Beach-442	Beach-444	Beach-445	Beach-446	Beach-447	Beach-449	Beach-450	Beach-451	Beach-453	Beach-454 East	Beach-454 West	Beach-455/82	Beach-456
U.S. Navy New London - Maintenance - Unsuitable	62	15	67	69	77	78	51	38	23	47	67	55	48	23	25	29	35	82
U.S. Navy New London - Improvement																		
U.S. Navy New London - Improvement	62	15	67	69	77	78	51	38	23	47	67	55	48	23	25	29	35	82
U.S. Coast Guard Station, New London																		
U.S. Coast Guard Station, New London	61	13	66	68	76	77	50	36	20	46	66	54	47	20	23	27	33	81
U.S. Coast Guard Academy																		
U.S. Coast Guard Academy	61	14	66	68	77	78	51	37	22	46	67	55	48	22	25	28	34	81
Niantic Bay and Harbor - Entrance Channel																		
Niantic Bay and Harbor - Entrance Channel	56	10	61	63	71	72	46	32	22	41	61	50	43	21	19	23	29	76
Niantic Bay and Harbor - Upper Channel																		
Niantic Bay and Harbor - Upper Channel	56	10	61	63	71	72	46	32	22	41	61	50	43	21	19	23	29	76
North Cove	47	12	51	53	62	63	36	24	28	31	52	40	33	27	13	16	21	66
North Cove																		
Essex Cove	47	15	51	53	62	63	36	27	31	31	52	40	33	30	18	20	25	67
Essex Cove																		
Eightmile River	49	16	53	55	64	65	38	30	31	33	54	42	35	30	20	22	27	69
Eightmile River																		
Connecticut River Main Channels - Entrance Bars	47	10	52	54	62	63	37	23	26	32	52	41	34	25	12	15	21	67
Connecticut River Main Channels - Entrance Bars																		
Connecticut River Main Channels - Lower Bars	47	10	52	54	62	63	37	23	26	32	52	41	34	25	12	15	21	67
Connecticut River Main Channels - Lower Bars																		
Patchogue River - Entrance Channel	41	16	46	47	56	57	30	20	32	26	46	34	27	31	13	14	18	61
Patchogue River - Entrance Channel																		
Patchogue River - Inner Harbor	41	16	46	47	56	57	30	20	32	26	46	34	27	31	13	14	18	61
Patchogue River - Inner Harbor																		
Duck Island Harbor of Refuge	40	16	45	47	55	56	30	19	32	25	45	34	27	31	12	13	17	60
Duck Island Harbor of Refuge																		
Clinton Harbor - Entrance Channel																		
Clinton Harbor - Entrance Channel	38	18	43	45	53	54	27	19	34	23	43	31	24	33	13	14	17	58
Clinton Harbor - Inner Harbor																		
Clinton Harbor - Inner Harbor	38	18	43	45	53	54	27	19	34	23	43	31	24	33	13	14	17	58
Guilford Harbor - Middle	31	25	36	37	46	47	20	19	41	16	36	24	17	40	18	17	18	51
Guilford Harbor - Middle																		
Guilford Harbor - Entrance and Inner	31	25	36	37	46	47	20	19	41	16	36	24	17	40	18	17	18	51
Guilford Harbor - Entrance and Inner																		
Stony Creek Harbor																		
Stony Creek Harbor	26	30	31	33	42	43	16	20	46	11	32	20	12	44	22	20	20	47
Branford Harbor																		
Branford Harbor	23	33	28	30	39	40	13	22	49	8	29	17	9	47	25	23	22	45
New Haven Harbor - Maintenance																		
New Haven Harbor - Maintenance	18	38	23	25	34	35	8	25	54	3	24	12	4	53	30	27	26	40
New Haven Harbor - Improvement																		
New Haven Harbor - Improvement	18	38	23	25	34	35	8	25	54	3	24	12	4	53	30	27	26	40

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Beach-457	Beach-459	Beach-467	Beach-468	Beach-474	Beach-480	Beach-600	Beach-610	Beach-620	Beach-63	Beach-64	Beach-67	Beach-68	Beach-76	Beach-79	Berm-121/446	Berm-170	Berm-171	Berm-173
U.S. Navy New London - Maintenance - Unsuitable	27	43	57	56	64	10	31	29	11	74	75	76	78	26	23	22	69	46	25
U.S. Navy New London - Improvement																			
U.S. Navy New London - Improvement	27	43	57	56	64	10	31	29	11	74	75	76	78	26	23	22	69	46	25
U.S. Coast Guard Station, New London																			
U.S. Coast Guard Station, New London	26	42	56	55	63	10	30	28	11	72	74	75	77	24	21	20	68	45	22
U.S. Coast Guard Academy																			
U.S. Coast Guard Academy	27	43	57	55	64	10	31	29	11	73	75	75	77	26	22	22	68	45	24
Niantic Bay and Harbor - Entrance Channel																			
Niantic Bay and Harbor - Entrance Channel	22	38	51	50	58	14	34	32	15	67	69	70	72	20	17	22	63	40	22
Niantic Bay and Harbor - Upper Channel																			
Niantic Bay and Harbor - Upper Channel	22	38	51	50	58	14	34	32	15	67	69	70	72	20	17	22	63	40	22
North Cove	12	28	42	41	49	24	42	41	25	58	60	60	62	14	12	27	53	31	26
North Cove																			
Essex Cove	12	28	42	41	49	25	44	43	26	59	61	61	63	18	17	30	55	34	29
Essex Cove																			
Eightmile River	14	29	44	43	51	24	44	42	25	61	63	64	65	21	19	31	57	36	30
Eightmile River																			
Connecticut River Main Channels - Entrance Bars	13	29	42	41	49	23	41	40	24	58	60	61	62	13	11	25	53	31	24
Connecticut River Main Channels - Entrance Bars																			
Connecticut River Main Channels - Lower Bars	13	29	42	41	49	23	41	40	24	58	60	61	62	13	11	25	53	31	24
Connecticut River Main Channels - Lower Bars																			
Patchogue River - Entrance Channel	6	22	36	35	43	30	48	47	31	52	54	55	57	13	13	31	48	26	29
Patchogue River - Entrance Channel																			
Patchogue River - Inner Harbor	6	22	36	35	43	30	48	47	31	52	54	55	57	13	13	31	48	26	29
Patchogue River - Inner Harbor																			
Duck Island Harbor of Refuge	6	22	35	34	42	30	48	47	31	51	53	54	56	12	12	31	47	25	29
Duck Island Harbor of Refuge																			
Clinton Harbor - Entrance Channel																			
Clinton Harbor - Entrance Channel	3	20	33	32	40	33	50	49	34	49	51	52	54	13	14	34	45	24	31
Clinton Harbor - Inner Harbor																			
Clinton Harbor - Inner Harbor	3	20	33	32	40	33	50	49	34	49	51	52	54	13	14	34	45	24	31
Guilford Harbor - Middle	4	12	26	25	33	40	58	57	41	43	45	46	47	18	20	41	39	21	38
Guilford Harbor - Middle																			
Guilford Harbor - Entrance and Inner	4	12	26	25	33	40	58	57	41	43	45	46	47	18	20	41	39	21	38
Guilford Harbor - Entrance and Inner																			
Stony Creek Harbor																			
Stony Creek Harbor	9	8	22	21	29	44	62	61	45	39	41	42	44	21	24	45	35	20	42
Branford Harbor																			
Branford Harbor	12	5	19	18	26	47	65	64	49	37	38	39	41	24	26	48	33	20	45
New Haven Harbor - Maintenance																			
New Haven Harbor - Maintenance	17	1	14	13	21	53	71	70	54	33	34	35	37	29	31	53	30	21	50
New Haven Harbor - Improvement																			
New Haven Harbor - Improvement	17	1	14	13	21	53	71	70	54	33	34	35	37	29	31	53	30	21	50

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Berm-177	Berm-178	Berm-179	Berm-180	Berm-320	Berm-323	Berm-327/333/330	Berm-337	Berm-364b/364c	Berm-365	Berm-367	Berm-368	Berm-381/382	Berm-384	Berm-433	Berm-434	Berm-438	Berm-440	Berm-441
U.S. Navy New London - Maintenance - Unsuitable	26	25	24	19	70	60	45	44	53	26	10	5	12	15	65	65	67	68	77
U.S. Navy New London - Improvement																			
U.S. Navy New London - Improvement	26	25	24	19	70	60	45	44	53	26	10	5	12	15	65	65	67	68	77
U.S. Coast Guard Station, New London																			
U.S. Coast Guard Station, New London	23	23	22	16	69	59	45	43	52	25	8	3	12	15	64	64	66	67	76
U.S. Coast Guard Academy																			
U.S. Coast Guard Academy	25	25	23	18	70	60	45	43	52	26	9	5	12	16	65	64	66	68	76
Niantic Bay and Harbor - Entrance Channel																			
Niantic Bay and Harbor - Entrance Channel	24	25	24	13	64	54	40	38	47	20	4	7	16	20	60	59	61	63	71
Niantic Bay and Harbor - Upper Channel																			
Niantic Bay and Harbor - Upper Channel	24	25	24	13	64	54	40	38	47	20	4	7	16	20	60	59	61	63	71
North Cove	29	31	30	12	55	45	30	28	38	11	7	17	25	29	50	49	51	53	61
North Cove																			
Essex Cove	32	34	33	16	55	45	30	28	38	11	9	18	27	30	50	50	51	53	62
Essex Cove																			
Eightmile River	33	34	33	18	57	47	32	30	40	14	9	17	26	29	52	52	53	55	64
Eightmile River																			
Connecticut River Main Channels - Entrance Bars	27	29	28	10	55	45	31	29	38	12	6	16	25	28	51	50	52	54	62
Connecticut River Main Channels - Entrance Bars																			
Connecticut River Main Channels - Lower Bars	27	29	28	10	55	45	31	29	38	12	6	16	25	28	51	50	52	54	62
Connecticut River Main Channels - Lower Bars																			
Patchogue River - Entrance Channel	33	35	34	15	49	39	25	23	32	5	12	22	31	35	44	44	45	47	56
Patchogue River - Entrance Channel																			
Patchogue River - Inner Harbor	33	35	34	15	49	39	25	23	32	5	12	22	31	35	44	44	45	47	56
Patchogue River - Inner Harbor																			
Duck Island Harbor of Refuge	33	35	34	15	48	38	24	22	31	4	13	23	32	35	43	43	45	46	55
Duck Island Harbor of Refuge																			
Clinton Harbor - Entrance Channel																			
Clinton Harbor - Entrance Channel	35	37	37	17	46	36	22	20	29	2	15	25	34	38	41	41	43	44	53
Clinton Harbor - Inner Harbor																			
Clinton Harbor - Inner Harbor	35	37	37	17	46	36	22	20	29	2	15	25	34	38	41	41	43	44	53
Guilford Harbor - Middle	42	44	44	24	39	29	14	13	22	5	22	33	41	45	34	34	36	37	46
Guilford Harbor - Middle																			
Guilford Harbor - Entrance and Inner	42	44	44	24	39	29	14	13	22	5	22	33	41	45	34	34	36	37	46
Guilford Harbor - Entrance and Inner																			
Stony Creek Harbor																			
Stony Creek Harbor	46	49	48	28	35	25	10	8	17	10	27	37	46	50	30	29	31	33	42
Branford Harbor																			
Branford Harbor	49	52	51	31	32	22	7	5	14	13	30	40	49	53	27	26	28	30	39
New Haven Harbor - Maintenance																			
New Haven Harbor - Maintenance	54	57	57	36	27	17	2	1	10	18	35	46	54	58	22	21	23	25	34
New Haven Harbor - Improvement																			
New Haven Harbor - Improvement	54	57	57	36	27	17	2	1	10	18	35	46	54	58	22	21	23	25	34

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Berm-445	Berm-447	Berm-449	Berm-451	Berm-453	Berm-454A	Berm-454B	Berm-455/82	Berm-456	Berm-457	Berm-467	Berm-600	Berm-610	Berm-620	Berm-63	Berm-Grove Beach	BF-422/423	CAD-M_bse	CAD-M_cap
U.S. Navy New London - Maintenance - Unsuitable	38	47	67	48	22	26	29	35	82	27	58	31	29	11	73	22		43	43
U.S. Navy New London - Improvement																	114		
U.S. Navy New London - Improvement	38	47	67	48	22	26	29	35	82	27	58	31	29	11	73	22		43	43
U.S. Coast Guard Station, New London																	117		
U.S. Coast Guard Station, New London	36	46	66	47	20	24	27	33	81	26	57	30	28	10	72	21		42	42
U.S. Coast Guard Academy																	115		
U.S. Coast Guard Academy	37	46	66	47	22	25	28	34	82	27	57	31	29	11	73	21		42	42
Niantic Bay and Harbor - Entrance Channel																	119		
Niantic Bay and Harbor - Entrance Channel	32	41	61	42	21	20	23	29	76	22	52	34	32	15	67	16		38	38
Niantic Bay and Harbor - Upper Channel																	119		
Niantic Bay and Harbor - Upper Channel	32	41	61	42	21	20	23	29	76	22	52	34	32	15	67	16		38	38
North Cove	24	31	52	33	26	14	16	21	67	12	42	42	41	25	58	6		28	28
North Cove																	85		
Essex Cove	27	31	52	33	29	18	20	25	67	12	42	44	43	25	59	8		28	28
Essex Cove																	86		
Eightmile River	29	33	54	34	30	20	22	27	70	15	44	43	42	54	61	10		29	29
Eightmile River																	89		
Connecticut River Main Channels - Entrance Bars	23	32	52	34	24	12	15	20	67	13	43	41	40	24	58	7		29	29
Connecticut River Main Channels - Entrance Bars																	86		
Connecticut River Main Channels - Lower Bars	23	32	52	34	24	12	15	20	67	13	43	41	40	24	58	7		29	29
Connecticut River Main Channels - Lower Bars																	86		
Patchogue River - Entrance Channel	20	26	46	27	30	13	14	18	61	6	36	48	47	30	52	1		22	22
Patchogue River - Entrance Channel																	79		
Patchogue River - Inner Harbor	20	26	46	27	30	13	14	18	61	6	36	48	47	30	52	1		22	22
Patchogue River - Inner Harbor																	79		
Duck Island Harbor of Refuge	19	25	45	27	30	12	13	17	60	6	36	48	47	31	51	1		22	22
Duck Island Harbor of Refuge																	80		
Clinton Harbor - Entrance Channel																	76		
Clinton Harbor - Entrance Channel	19	23	43	24	33	13	13	17	58	3	33	50	49	33	49	2		19	19
Clinton Harbor - Inner Harbor																	76		
Clinton Harbor - Inner Harbor	19	23	43	24	33	13	13	17	58	3	33	50	49	33	49	2		19	19
Guilford Harbor - Middle	19	16	36	17	40	18	17	18	52	4	26	58	57	40	43	10		12	12
Guilford Harbor - Middle																	70		
Guilford Harbor - Entrance and Inner	19	16	36	17	40	18	17	18	52	4	26	58	57	40	43	10		12	12
Guilford Harbor - Entrance and Inner																	70		
Stony Creek Harbor																	66		
Stony Creek Harbor	20	11	32	12	44	22	20	20	48	8	22	62	61	45	39	14		8	8
Branford Harbor																	64		
Branford Harbor	21	8	29	9	47	24	22	21	45	12	19	65	64	48	37	17		4	4
New Haven Harbor - Maintenance																	67		
New Haven Harbor - Maintenance	25	3	24	4	52	29	27	25	40	17	15	71	70	53	33	23		1	1
New Haven Harbor - Improvement																	67		
New Haven Harbor - Improvement	25	3	24	4	52	29	27	25	40	17	15	71	70	53	33	23		1	1

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	COW-E_bse	COW-E_cap	Habitat-427	Habitat-429	IslandCDF-B_bse	IslandCDF-B_cap	IslandCDF-L_bse	IslandCDF-L_cap	IslandCDF-N_bse	IslandCDF-N_cap	IslandCDF-P_bse	IslandCDF-P_cap	IslandCDF-Q_bse	IslandCDF-Q_cap	IslandCDF-R_bse	IslandCDF-R_cap
U.S. Navy New London - Maintenance - Unsuitable	67	67			85	85	44	44	32	32	24	24	7	7	5	5
U.S. Navy New London - Improvement			125	122												
U.S. Navy New London - Improvement	67	67			85	85	44	44	32	32	24	24	7	7	5	5
U.S. Coast Guard Station, New London			128	125												
U.S. Coast Guard Station, New London	66	66			84	84	44	44	30	30	22	22	4	4	3	3
U.S. Coast Guard Academy			126	123												
U.S. Coast Guard Academy	66	66			84	84	44	44	31	31	23	23	6	6	4	4
Niantic Bay and Harbor - Entrance Channel			130	127												
Niantic Bay and Harbor - Entrance Channel	61	61			79	79	39	39	26	26	18	18	3	3	6	6
Niantic Bay and Harbor - Upper Channel			130	127												
Niantic Bay and Harbor - Upper Channel	61	61			79	79	39	39	26	26	18	18	3	3	6	6
North Cove	51	51			69	69	29	29	16	16	8	8	11	11	15	15
North Cove			95	92												
Essex Cove	52	52			70	70	29	29	17	17	9	9	12	12	16	16
Essex Cove			97	94												
Eightmile River	54	54			72	72	31	31	19	19	12	12	12	12	16	16
Eightmile River			99	96												
Connecticut River Main Channels - Entrance Bars	52	52			70	70	30	30	17	17	9	9	10	10	14	14
Connecticut River Main Channels - Entrance Bars			96	93												
Connecticut River Main Channels - Lower Bars	52	52			70	70	30	30	17	17	9	9	10	10	14	14
Connecticut River Main Channels - Lower Bars			96	93												
Patchogue River - Entrance Channel	46	46			64	64	24	24	10	10	2	2	17	17	21	21
Patchogue River - Entrance Channel			90	87												
Patchogue River - Inner Harbor	46	46			64	64	24	24	10	10	2	2	17	17	21	21
Patchogue River - Inner Harbor			90	87												
Duck Island Harbor of Refuge	45	45			63	63	23	23	10	10	1	1	17	17	21	21
Duck Island Harbor of Refuge			91	88												
Clinton Harbor - Entrance Channel			87	84												
Clinton Harbor - Entrance Channel	43	43			61	61	21	21	7	7	1	1	19	19	24	24
Clinton Harbor - Inner Harbor			87	84												
Clinton Harbor - Inner Harbor	43	43			61	61	21	21	7	7	1	1	19	19	24	24
Guilford Harbor - Middle	36	36			54	54	13	13	3	3	8	8	27	27	31	31
Guilford Harbor - Middle			81	78												
Guilford Harbor - Entrance and Inner	36	36			54	54	13	13	3	3	8	8	27	27	31	31
Guilford Harbor - Entrance and Inner			81	78												
Stony Creek Harbor			78	75												
Stony Creek Harbor	31	31			50	50	9	9	6	6	13	13	31	31	36	36
Branford Harbor			75	72												
Branford Harbor	28	28			47	47	6	6	8	8	16	16	34	34	39	39
New Haven Harbor - Maintenance			79	76												
New Haven Harbor - Maintenance	23	23			42	42	1	1	13	13	21	21	40	40	44	44
New Haven Harbor - Improvement			79	76												
New Haven Harbor - Improvement	23	23			42	42	1	1	13	13	21	21	40	40	44	44

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	LFCap-251	LFCap-61	LFPlace-59	ShoreCDF-A_bse	ShoreCDF-A_cap	ShoreCDF-C_bse	ShoreCDF-C_cap	ShoreCDF-D_bse	ShoreCDF-D_cap	ShoreCDF-F_bse	ShoreCDF-F_cap	ShoreCDF-I_bse	ShoreCDF-I_cap	ShoreCDF-J_bse	ShoreCDF-J_cap	ShoreCDF-K_bse
U.S. Navy New London - Maintenance - Unsuitable				90	90	72	72	72	72	61	61	58	58	55	55	51
U.S. Navy New London - Improvement	40	76	97													
U.S. Navy New London - Improvement				90	90	72	72	72	72	61	61	58	58	55	55	51
U.S. Coast Guard Station, New London	42	79	100													
U.S. Coast Guard Station, New London				89	89	71	71	71	71	61	61	57	57	54	54	51
U.S. Coast Guard Academy	41	77	98													
U.S. Coast Guard Academy				90	90	72	72	71	71	61	61	57	57	55	55	51
Niantic Bay and Harbor - Entrance Channel	45	81	102													
Niantic Bay and Harbor - Entrance Channel				84	84	66	66	66	66	56	56	52	52	50	50	46
Niantic Bay and Harbor - Upper Channel	45	81	102													
Niantic Bay and Harbor - Upper Channel				84	84	66	66	66	66	56	56	52	52	50	50	46
North Cove				74	74	57	57	56	56	46	46	43	43	40	40	36
North Cove	41	46	67													
Essex Cove				75	75	57	57	57	57	46	46	43	43	40	40	36
Essex Cove	42	48	68													
Eightmile River				78	78	59	59	59	59	48	48	45	45	42	42	38
Eightmile River	44	50	71													
Connecticut River Main Channels - Entrance Bars				75	75	57	57	57	57	47	47	44	44	41	41	37
Connecticut River Main Channels - Entrance Bars	42	47	68													
Connecticut River Main Channels - Lower Bars				75	75	57	57	57	57	47	47	44	44	41	41	37
Connecticut River Main Channels - Lower Bars	42	47	68													
Patchogue River - Entrance Channel				69	69	51	51	51	51	40	40	37	37	34	34	30
Patchogue River - Entrance Channel	35	41	61													
Patchogue River - Inner Harbor				69	69	51	51	51	51	40	40	37	37	34	34	30
Patchogue River - Inner Harbor	35	41	61													
Duck Island Harbor of Refuge				68	68	50	50	50	50	40	40	36	36	33	33	30
Duck Island Harbor of Refuge	36	42	62													
Clinton Harbor - Entrance Channel	36	39	59													
Clinton Harbor - Entrance Channel				66	66	48	48	48	48	37	37	34	34	31	31	27
Clinton Harbor - Inner Harbor	36	39	59													
Clinton Harbor - Inner Harbor				66	66	48	48	48	48	37	37	34	34	31	31	27
Guilford Harbor - Middle				60	60	41	41	41	41	30	30	27	27	24	24	20
Guilford Harbor - Middle	35	36	54													
Guilford Harbor - Entrance and Inner				60	60	41	41	41	41	30	30	27	27	24	24	20
Guilford Harbor - Entrance and Inner	35	36	54													
Stony Creek Harbor	40	36	51													
Stony Creek Harbor				56	56	37	37	37	37	26	26	22	22	20	20	16
Branford Harbor	38	33	48													
Branford Harbor				53	53	34	34	34	34	23	23	19	19	17	17	13
New Haven Harbor - Maintenance	40	41	53													
New Haven Harbor - Maintenance				49	49	29	29	29	29	18	18	14	14	12	12	8
New Haven Harbor - Improvement	40	41	53													
New Haven Harbor - Improvement				49	49	29	29	29	29	18	18	14	14	12	12	8

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	ShoreCDF-K_cap	ShoreCDF-O_bse	ShoreCDF-O_cap	UOW-CLDS	UOW-CSDS	UOW-NLDS
U.S. Navy New London - Maintenance - Unsuitable	51	24	24	44	18	8
U.S. Navy New London - Improvement						
U.S. Navy New London - Improvement	51	24	24	44	18	8
U.S. Coast Guard Station, New London						
U.S. Coast Guard Station, New London	51	23	23	43	17	5
U.S. Coast Guard Academy						
U.S. Coast Guard Academy	51	24	24	44	18	7
Niantic Bay and Harbor - Entrance Channel						
Niantic Bay and Harbor - Entrance Channel	46	19	19	38	12	7
Niantic Bay and Harbor - Upper Channel						
Niantic Bay and Harbor - Upper Channel	46	19	19	38	12	7
North Cove	36	9	9	29	5	15
North Cove						
Essex Cove	36	10	10	30	10	17
Essex Cove						
Eightmile River	38	12	12	32	14	25
Eightmile River						
Connecticut River Main Channels - Entrance Bars	37	10	10	29	4	14
Connecticut River Main Channels - Entrance Bars						
Connecticut River Main Channels - Lower Bars	37	10	10	29	4	14
Connecticut River Main Channels - Lower Bars						
Patchogue River - Entrance Channel	30	3	3	23	7	21
Patchogue River - Entrance Channel						
Patchogue River - Inner Harbor	30	3	3	23	7	21
Patchogue River - Inner Harbor						
Duck Island Harbor of Refuge	30	3	3	22	7	21
Duck Island Harbor of Refuge						
Clinton Harbor - Entrance Channel						
Clinton Harbor - Entrance Channel	27	0	0	20	9	23
Clinton Harbor - Inner Harbor						
Clinton Harbor - Inner Harbor	27	0	0	20	9	23
Guilford Harbor - Middle	20	7	7	14	16	31
Guilford Harbor - Middle						
Guilford Harbor - Entrance and Inner	20	7	7	14	16	31
Guilford Harbor - Entrance and Inner						
Stony Creek Harbor						
Stony Creek Harbor	16	11	11	10	21	35
Branford Harbor						
Branford Harbor	13	14	14	8	24	38
New Haven Harbor - Maintenance						
New Haven Harbor - Maintenance	8	20	20	8	29	44
New Haven Harbor - Improvement						
New Haven Harbor - Improvement	8	20	20	8	29	44

Table G-5A. Distance Data for Project and Alternative Pairings.

		Alternative Screening ID															
Project Name	**Dewatering_Site_ID**	**Beach-111**	**Beach-121**	**Beach-170**	**Beach-171**	**Beach-173**	**Beach-177**	**Beach-178**	**Beach-179**	**Beach-180**	**Beach-181**	**Beach-320**	**Beach-323**	**Beach-325**	**Beach-327**	**Beach-329**	**Beach-330**
West River	CT_28																
West River	Direct Placement	33	54	30	23	50	55	58	58	37	53	27	16	2	2	1	2
Mill River	CT_28																
Mill River	Direct Placement	32	53	33	24	49	54	57	57	35	55	30	18	4	4	3	4
Quinnipiac River	CT_28																
Quinnipiac River	Direct Placement	32	52	33	24	49	54	56	56	35	56	30	19	4	5	4	4
U.S. Coast Guard Sector Long Island Sound	CT_28																
U.S. Coast Guard Sector Long Island Sound	Direct Placement	31	52	31	22	49	54	56	56	35	54	29	17	3	3	2	3
Milford Harbor - Entrance Channel and Outer Anchorage	CT_41																
Milford Harbor - Entrance Channel and Outer Anchorage	Direct Placement	37	59	23	21	54	60	63	63	41	46	20	9	6	6	7	6
Milford Harbor - Inner Channels and Anchorages	CT_41																
Milford Harbor - Inner Channels and Anchorages	Direct Placement	37	59	23	21	54	60	63	63	41	46	20	9	6	6	7	6

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Beach-331	Beach-332	Beach-333	Beach-337	Beach-339	Beach-343	Beach-344	Beach-345	Beach-348	Beach-364	Beach-365	Beach-367	Beach-368	Beach-381	Beach-382	Beach-384	Beach-433	Beach-434
West River																		
West River	2	1	2	3	14	22	26	25	33	9	21	36	47	56	55	59	21	21
Mill River																		
Mill River	4	3	4	4	13	20	24	23	31	11	19	35	45	54	54	57	24	23
Quinnipiac River																		
Quinnipiac River	4	3	4	4	12	20	24	23	31	11	18	34	45	54	53	57	24	23
U.S. Coast Guard Sector Long Island Sound																		
U.S. Coast Guard Sector Long Island Sound	2	1	3	2	12	20	24	23	31	10	19	35	45	54	54	57	23	22
Milford Harbor - Entrance Channel and Outer Anchorage																		
Milford Harbor - Entrance Channel and Outer Anchorage	7	7	6	8	20	28	32	31	39	1	26	42	53	62	62	65	14	13
Milford Harbor - Inner Channels and Anchorages																		
Milford Harbor - Inner Channels and Anchorages	7	7	6	8	20	28	32	31	39	1	26	42	53	62	62	65	14	13

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Beach-436	Beach-437	Beach-438	Beach-440	Beach-441	Beach-442	Beach-444	Beach-445	Beach-446	Beach-447	Beach-449	Beach-450	Beach-451	Beach-453	Beach-454 East	Beach-454 West	Beach-455/82	Beach-456
West River																		
West River	18	39	23	25	33	35	7	27	55	3	23	12	4	54	31	29	27	40
Mill River																		
Mill River	20	38	25	27	36	37	10	27	54	5	26	15	7	53	30	28	27	42
Quinnipiac River																		
Quinnipiac River	21	37	26	28	36	37	10	26	53	5	26	15	7	52	30	28	27	43
U.S. Coast Guard Sector Long Island Sound																		
U.S. Coast Guard Sector Long Island Sound	19	37	24	26	35	36	9	25	53	4	25	13	5	52	29	27	25	41
Milford Harbor - Entrance Channel and Outer Anchorage																		
Milford Harbor - Entrance Channel and Outer Anchorage	11	45	16	17	26	27	0	28	60	5	16	5	3	59	35	32	29	33
Milford Harbor - Inner Channels and Anchorages																		
Milford Harbor - Inner Channels and Anchorages	11	45	16	17	26	27	0	28	60	5	16	5	3	59	35	32	29	33

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Beach-457	Beach-459	Beach-467	Beach-468	Beach-474	Beach-480	Beach-600	Beach-610	Beach-620	Beach-63	Beach-64	Beach-67	Beach-68	Beach-76	Beach-79	Berm-121/446	Berm-170	Berm-171	Berm-173
West River																			
West River	18	2	14	13	21	54	72	71	55	33	34	35	37	30	33	55	30	22	51
Mill River																			
Mill River	17	2	16	15	23	52	70	69	53	35	37	38	39	30	32	54	32	23	50
Quinnipiac River																			
Quinnipiac River	16	2	17	16	23	51	70	69	52	35	37	38	40	29	31	53	32	23	49
U.S. Coast Guard Sector Long Island Sound																			
U.S. Coast Guard Sector Long Island Sound	16	0	15	14	22	52	70	69	53	34	35	36	38	29	31	53	31	21	49
Milford Harbor - Entrance Channel and Outer Anchorage																			
Milford Harbor - Entrance Channel and Outer Anchorage	24	9	6	6	13	60	77	77	61	25	27	28	30	34	37	59	23	21	55
Milford Harbor - Inner Channels and Anchorages																			
Milford Harbor - Inner Channels and Anchorages	24	9	6	6	13	60	77	77	61	25	27	28	30	34	37	59	23	21	55

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Berm-177	Berm-178	Berm-179	Berm-180	Berm-320	Berm-323	Berm-327/333/330	Berm-337	Berm-364b/364c	Berm-365	Berm-367	Berm-368	Berm-381/382	Berm-384	Berm-433	Berm-434	Berm-438	Berm-440	Berm-441
West River																			
West River	56	58	58	38	27	16	3	3	9	20	37	47	55	59	22	21	23	25	33
Mill River																			
Mill River	54	57	57	37	29	19	5	4	12	18	35	45	54	57	24	23	25	27	36
Quinnipiac River																			
Quinnipiac River	54	56	56	36	29	19	5	4	12	17	34	44	53	57	24	24	26	27	36
U.S. Coast Guard Sector Long Island Sound																			
U.S. Coast Guard Sector Long Island Sound	54	56	56	36	28	18	3	2	10	18	35	45	54	57	23	22	24	26	35
Milford Harbor - Entrance Channel and Outer Anchorage																			
Milford Harbor - Entrance Channel and Outer Anchorage	60	63	63	43	19	9	6	8	2	25	43	53	62	65	14	14	16	17	26
Milford Harbor - Inner Channels and Anchorages																			
Milford Harbor - Inner Channels and Anchorages	60	63	63	43	19	9	6	8	2	25	43	53	62	65	14	14	16	17	26

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	Berm-445	Berm-447	Berm-449	Berm-451	Berm-453	Berm-454A	Berm-454B	Berm-455/82	Berm-456	Berm-457	Berm-467	Berm-600	Berm-610	Berm-620	Berm-63	Berm-Grove Beach	BF-422/423	CAD-M_bse	CAD-M_cap
West River																	66		
West River	26	3	23	4	54	31	28	27	40	18	14	72	71	54	33	24		2	2
Mill River																	64		
Mill River	26	5	26	7	52	30	28	27	43	17	17	70	69	53	35	22		3	3
Quinnipiac River																	64		
Quinnipiac River	26	5	26	7	52	29	27	26	43	16	17	70	69	52	35	22		3	3
U.S. Coast Guard Sector Long Island Sound																	66		
U.S. Coast Guard Sector Long Island Sound	25	4	25	5	52	29	26	25	41	16	15	70	69	53	34	22		0	0
Milford Harbor - Entrance Channel and Outer Anchorage																	64		
Milford Harbor - Entrance Channel and Outer Anchorage	28	5	16	3	58	34	32	29	33	24	7	77	77	61	25	30		8	8
Milford Harbor - Inner Channels and Anchorages																	64		
Milford Harbor - Inner Channels and Anchorages	28	5	16	3	58	34	32	29	33	24	7	77	77	61	25	30		8	8

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	COW-E_bse	COW-E_cap	Habitat-427	Habitat-429	IslandCDF-B_bse	IslandCDF-B_cap	IslandCDF-L_bse	IslandCDF-L_cap	IslandCDF-N_bse	IslandCDF-N_cap	IslandCDF-P_bse	IslandCDF-P_cap	IslandCDF-Q_bse	IslandCDF-Q_cap	IslandCDF-R_bse	IslandCDF-R_cap
West River			78	75												
West River	23	23			41	41	3	3	15	15	22	22	41	41	45	45
Mill River			76	73												
Mill River	25	25			44	44	4	4	14	14	21	21	39	39	43	43
Quinnipiac River			76	73												
Quinnipiac River	26	26			44	44	4	4	13	13	20	20	38	38	43	43
U.S. Coast Guard Sector Long Island Sound			78	75												
U.S. Coast Guard Sector Long Island Sound	24	24			43	43	2	2	13	13	20	20	39	39	43	43
Milford Harbor - Entrance Channel and Outer Anchorage			77	74												
Milford Harbor - Entrance Channel and Outer Anchorage	16	16			34	34	5	5	20	20	28	28	47	47	51	51
Milford Harbor - Inner Channels and Anchorages			77	74												
Milford Harbor - Inner Channels and Anchorages	16	16			34	34	5	5	20	20	28	28	47	47	51	51

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	LFCap-251	LFCap-61	LFPlace-59	ShoreCDF-A_bse	ShoreCDF-A_cap	ShoreCDF-C_bse	ShoreCDF-C_cap	ShoreCDF-D_bse	ShoreCDF-D_cap	ShoreCDF-F_bse	ShoreCDF-F_cap	ShoreCDF-I_bse	ShoreCDF-I_cap	ShoreCDF-J_bse	ShoreCDF-J_cap	ShoreCDF-K_bse
West River	39	41	52													
West River				49	49	29	29	29	29	18	18	14	14	12	12	8
Mill River	37	38	50													
Mill River				51	51	31	31	31	31	20	20	16	16	15	15	10
Quinnipiac River	37	38	50													
Quinnipiac River				51	51	31	31	31	31	20	20	17	17	15	15	10
U.S. Coast Guard Sector Long Island Sound	39	40	52													
U.S. Coast Guard Sector Long Island Sound				50	50	30	30	30	30	19	19	15	15	13	13	9
Milford Harbor - Entrance Channel and Outer Anchorage	49	47	53													
Milford Harbor - Entrance Channel and Outer Anchorage				41	41	21	21	21	21	10	10	7	7	5	5	0
Milford Harbor - Inner Channels and Anchorages	49	47	53													
Milford Harbor - Inner Channels and Anchorages				41	41	21	21	21	21	10	10	7	7	5	5	0

Table G-5A. Distance Data for Project and Alternative Pairings.

Project Name	ShoreCDF-K_cap	ShoreCDF-O_bse	ShoreCDF-O_cap	UOW-CLDS	UOW-CSDS	UOW-NLDS
West River						
West River	8	21	21	10	31	45
Mill River						
Mill River	10	19	19	11	29	43
Quinnipiac River						
Quinnipiac River	10	19	19	11	29	43
U.S. Coast Guard Sector Long Island Sound						
U.S. Coast Guard Sector Long Island Sound	9	19	19	9	29	43
Milford Harbor - Entrance Channel and Outer Anchorage						
Milford Harbor - Entrance Channel and Outer Anchorage	0	27	27	10	36	51
Milford Harbor - Inner Channels and Anchorages						
Milford Harbor - Inner Channels and Anchorages	0	27	27	10	36	51

Table G-5B. Distance Scoring for Project and Alternative Pairings.

	Alternative Screening ID																		
Project Name	**Beach-111**	**Beach-121**	**Beach-170**	**Beach-171**	**Beach-173**	**Beach-177**	**Beach-178**	**Beach-179**	**Beach-180**	**Beach-181**	**Beach-320**	**Beach-323**	**Beach-325**	**Beach-327**	**Beach-329**	**Beach-330**	**Beach-331**	**Beach-332**	**Beach-333**
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Great Salt Pond	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Hay West Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Pawcatuck River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Little Narragansett Bay - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Little Narragansett Bay - Inner Bay Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Watch Hill Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stonington Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - 15-foot Shaws Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Lower Channels, Navy Base to Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Upper Channel, to Norwich	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Station, New London	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Niantic Bay and Harbor - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Niantic Bay and Harbor - Upper Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
North Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Essex Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eightmile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Entrance Bars	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Lower Bars	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Patchogue River - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Patchogue River - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Duck Island Harbor of Refuge	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Clinton Harbor - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Clinton Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Middle	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Entrance and Inner	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stony Creek Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Branford Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	50	100	100	100	100	100
New Haven Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	50	100	100	100	100	100

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Beach-337	Beach-339	Beach-343	Beach-344	Beach-345	Beach-348	Beach-364	Beach-365	Beach-367	Beach-368	Beach-381	Beach-382	Beach-384	Beach-433	Beach-434	Beach-436	Beach-437	Beach-438	Beach-440
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Great Salt Pond	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Hay West Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1
Pawcatuck River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	100	50	-1	-1	-1	-1	-1	-1
Little Narragansett Bay - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	100	-1	-1	-1	-1	-1	-1	-1
Little Narragansett Bay - Inner Bay Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	100	-1	-1	-1	-1	-1	-1	-1
Watch Hill Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	100	-1	-1	-1	-1	-1	-1	-1
Stonington Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	50	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - 15-foot Shaws Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Lower Channels, Navy Base to Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Upper Channel, to Norwich	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Station, New London	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1
Niantic Bay and Harbor - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Niantic Bay and Harbor - Upper Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
North Cove	-1	-1	-1	50	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Essex Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eightmile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Entrance Bars	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Lower Bars	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Patchogue River - Entrance Channel	-1	-1	50	100	100	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Patchogue River - Inner Harbor	-1	-1	50	100	100	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Duck Island Harbor of Refuge	-1	-1	50	50	100	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Clinton Harbor - Entrance Channel	-1	-1	100	50	50	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Clinton Harbor - Inner Harbor	-1	-1	100	50	50	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Middle	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Guilford Harbor - Entrance and Inner	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stony Creek Harbor	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Branford Harbor	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Maintenance	100	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Haven Harbor - Improvement	100	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Beach-441	Beach-442	Beach-444	Beach-445	Beach-446	Beach-447	Beach-449	Beach-450	Beach-451	Beach-453	Beach-454 East	Beach-454 West	Beach-455/82	Beach-456	Beach-457	Beach-459	Beach-467	Beach-468	Beach-474
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Great Salt Pond	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Hay West Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Pawcatuck River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Little Narragansett Bay - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Little Narragansett Bay - Inner Bay Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Watch Hill Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stonington Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mystic Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New London Harbor - 15-foot Shaws Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Lower Channels, Navy Base to Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Thames River - Upper Channel, to Norwich	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Maintenance - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Navy New London - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Station, New London	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Niantic Bay and Harbor - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Niantic Bay and Harbor - Upper Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
North Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Essex Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eightmile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Entrance Bars	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Connecticut River Main Channels - Lower Bars	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Patchogue River - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Patchogue River - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Duck Island Harbor of Refuge	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Clinton Harbor - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1
Clinton Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1
Guilford Harbor - Middle	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1
Guilford Harbor - Entrance and Inner	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1
Stony Creek Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Branford Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1
New Haven Harbor - Maintenance	-1	-1	-1	-1	-1	50	-1	-1	50	-1	-1	-1	-1	-1	-1	100	-1	-1	-1
New Haven Harbor - Improvement	-1	-1	-1	-1	-1	50	-1	-1	50	-1	-1	-1	-1	-1	-1	100	-1	-1	-1

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Beach-480	Beach-600	Beach-610	Beach-620	Beach-63	Beach-64	Beach-67	Beach-68	Beach-76	Beach-79	Berm-121/446	Berm-170	Berm-171	Berm-173	Berm-177	Berm-178	Berm-179	Berm-180	Berm-320
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Great Salt Pond	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Hay West Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Pawcatuck River	50	-1	-1	100	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Little Narragansett Bay - Entrance Channel	100	-1	-1	100	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Little Narragansett Bay - Inner Bay Channel	100	-1	-1	100	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Watch Hill Cove	50	-1	-1	100	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Stonington Harbor	100	-1	-1	100	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Mystic Harbor - Maintenance	50	-1	-1	50	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Mystic Harbor - Improvement	50	-1	-1	50	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
New London Harbor - 15-foot Shaws Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Thames River - Lower Channels, Navy Base to Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Thames River - Upper Channel, to Norwich	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
U.S. Navy New London - Maintenance - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
U.S. Navy New London - Maintenance - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
U.S. Navy New London - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
U.S. Coast Guard Station, New London	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
U.S. Coast Guard Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Niantic Bay and Harbor - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Niantic Bay and Harbor - Upper Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
North Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Essex Cove	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Eightmile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Connecticut River Main Channels - Entrance Bars	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Connecticut River Main Channels - Lower Bars	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Patchogue River - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Patchogue River - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Duck Island Harbor of Refuge	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Clinton Harbor - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Clinton Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Guilford Harbor - Middle	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Guilford Harbor - Entrance and Inner	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Stony Creek Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Branford Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
New Haven Harbor - Maintenance	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
New Haven Harbor - Improvement	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Berm-323	Berm-327/333/330	Berm-337	Berm-364b/364c	Berm-365	Berm-367	Berm-368	Berm-381/382	Berm-384	Berm-433	Berm-434	Berm-438	Berm-440	Berm-441	Berm-445	Berm-447	Berm-449	Berm-451	Berm-453
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Great Salt Pond	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hay West Harbor	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0
Pawcatuck River	0	0	0	0	0	0	50	100	50	0	0	0	0	0	0	0	0	0	0
Little Narragansett Bay - Entrance Channel	0	0	0	0	0	0	50	100	50	0	0	0	0	0	0	0	0	0	0
Little Narragansett Bay - Inner Bay Channel	0	0	0	0	0	0	50	100	50	0	0	0	0	0	0	0	0	0	0
Watch Hill Cove	0	0	0	0	0	0	50	100	50	0	0	0	0	0	0	0	0	0	0
Stonington Harbor	0	0	0	0	0	0	50	50	50	0	0	0	0	0	0	0	0	0	0
Mystic Harbor - Maintenance	0	0	0	0	0	0	50	50	50	0	0	0	0	0	0	0	0	0	0
Mystic Harbor - Improvement	0	0	0	0	0	0	50	50	50	0	0	0	0	0	0	0	0	0	0
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0
New London Harbor - 15-foot Shaws Cove	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0
Thames River - Lower Channels, Navy Base to Harbor	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0
Thames River - Upper Channel, to Norwich	0	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0
U.S. Navy New London - Maintenance - Suitable	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0
U.S. Navy New London - Maintenance - Unsuitable	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0
U.S. Navy New London - Improvement	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0
U.S. Coast Guard Station, New London	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0
U.S. Coast Guard Academy	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0
Niantic Bay and Harbor - Entrance Channel	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0
Niantic Bay and Harbor - Upper Channel	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0
North Cove	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0
Essex Cove	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0
Eightmile River	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0
Connecticut River Main Channels - Entrance Bars	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0
Connecticut River Main Channels - Lower Bars	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0
Patchogue River - Entrance Channel	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Patchogue River - Inner Harbor	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Duck Island Harbor of Refuge	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clinton Harbor - Entrance Channel	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clinton Harbor - Inner Harbor	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Guilford Harbor - Middle	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Guilford Harbor - Entrance and Inner	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Stony Creek Harbor	0	50	50	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Branford Harbor	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	50	0	50	0
New Haven Harbor - Maintenance	0	50	100	50	0	0	0	0	0	0	0	0	0	0	0	50	0	50	0
New Haven Harbor - Improvement	0	50	100	50	0	0	0	0	0	0	0	0	0	0	0	50	0	50	0

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Berm-454A	Berm-454B	Berm-455/82	Berm-456	Berm-457	Berm-467	Berm-600	Berm-610	Berm-620	Berm-63	Berm-Grove Beach	BF-422/423	CAD-M_bse	CAD-M_cap	COW-E_bse	COW-E_cap	Habitat-427	Habitat-429	IslandCDF-B_bse
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	0	0	0	0	0	0	100	50	0	0	0	0	0	0	0	0	0	0	0
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	0	0	0	0	0	0	100	50	0	0	0	0	0	0	0	0	0	0	0
Great Salt Pond	0	0	0	0	0	0	50	100	0	0	0	0	0	0	0	0	0	0	0
Hay West Harbor	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0
Pawcatuck River	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0
Little Narragansett Bay - Entrance Channel	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0
Little Narragansett Bay - Inner Bay Channel	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0
Watch Hill Cove	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0
Stonington Harbor	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0
Mystic Harbor - Maintenance	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0
Mystic Harbor - Improvement	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0
New London Harbor - 15-foot Shaws Cove	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0
Thames River - Lower Channels, Navy Base to Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thames River - Upper Channel, to Norwich	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U.S. Navy New London - Maintenance - Suitable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U.S. Navy New London - Maintenance - Unsuitable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U.S. Navy New London - Improvement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U.S. Coast Guard Station, New London	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U.S. Coast Guard Academy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Niantic Bay and Harbor - Entrance Channel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Niantic Bay and Harbor - Upper Channel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Cove	0	0	0	0	0	0	0	0	0	0	50	0	50	50	0	0	0	0	0
Essex Cove	0	0	0	0	0	0	0	0	0	0	50	0	50	50	0	0	0	0	0
Eightmile River	0	0	0	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0
Connecticut River Main Channels - Entrance Bars	0	0	0	0	0	0	0	0	0	0	50	0	50	50	0	0	0	0	0
Connecticut River Main Channels - Lower Bars	0	0	0	0	0	0	0	0	0	0	50	0	50	50	0	0	0	0	0
Patchogue River - Entrance Channel	0	0	0	0	50	0	0	0	0	0	100	0	50	50	0	0	0	0	0
Patchogue River - Inner Harbor	0	0	0	0	50	0	0	0	0	0	100	0	50	50	0	0	0	0	0
Duck Island Harbor of Refuge	0	0	0	0	50	0	0	0	0	0	100	0	50	50	0	0	0	0	0
Clinton Harbor - Entrance Channel	0	0	0	0	50	0	0	0	0	0	50	0	100	100	0	0	0	0	0
Clinton Harbor - Inner Harbor	0	0	0	0	50	0	0	0	0	0	50	0	100	100	0	0	0	0	0
Guilford Harbor - Middle	0	0	0	0	50	0	0	0	0	0	50	0	100	100	0	0	0	0	0
Guilford Harbor - Entrance and Inner	0	0	0	0	50	0	0	0	0	0	50	0	100	100	0	0	0	0	0
Stony Creek Harbor	0	0	0	0	50	0	0	0	0	0	0	0	100	100	0	0	0	0	0
Branford Harbor	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50	50	0	0	0
New Haven Harbor - Maintenance	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50	50	0	0	0
New Haven Harbor - Improvement	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50	50	0	0	0

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	IslandCDF-B_cap	IslandCDF-L_bse	IslandCDF-L_cap	IslandCDF-N_bse	IslandCDF-N_cap	IslandCDF-P_bse	IslandCDF-P_cap	IslandCDF-Q_bse	IslandCDF-Q_cap	IslandCDF-R_bse	IslandCDF-R_cap	LFCap-251	LFCap-61	LFPlace-59	ShoreCDF-A_bse	ShoreCDF-A_cap	ShoreCDF-C_bse	ShoreCDF-C_cap
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0
Great Salt Pond	0	0	0	0	0	0	0	50	50	50	50	0	0	0	0	0	0	0
Hay West Harbor	0	0	0	0	0	50	50	100	100	100	100	0	0	0	0	0	0	0
Pawcatuck River	0	0	0	0	0	0	0	100	100	100	100	0	0	0	0	0	0	0
Little Narragansett Bay - Entrance Channel	0	0	0	0	0	0	0	100	100	100	100	0	0	0	0	0	0	0
Little Narragansett Bay - Inner Bay Channel	0	0	0	0	0	0	0	100	100	100	100	0	0	0	0	0	0	0
Watch Hill Cove	0	0	0	0	0	0	0	100	100	100	100	0	0	0	0	0	0	0
Stonington Harbor	0	0	0	0	0	0	0	100	100	100	100	0	0	0	0	0	0	0
Mystic Harbor - Maintenance	0	0	0	0	0	50	50	100	100	100	100	0	0	0	0	0	0	0
Mystic Harbor - Improvement	0	0	0	0	0	50	50	100	100	100	100	0	0	0	0	0	0	0
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	0	0	0	0	0	50	50	100	100	100	100	0	0	0	0	0	0	0
New London Harbor - 15-foot Shaws Cove	0	0	0	0	0	50	50	100	100	100	100	0	0	0	0	0	0	0
Thames River - Lower Channels, Navy Base to Harbor	0	0	0	0	0	50	50	100	100	100	100	0	0	0	0	0	0	0
Thames River - Upper Channel, to Norwich	0	0	0	0	0	50	50	100	100	100	100	0	0	0	0	0	0	0
U.S. Navy New London - Maintenance - Suitable	0	0	0	0	0	50	50	100	100	100	100	0	0	0	0	0	0	0
U.S. Navy New London - Maintenance - Unsuitable	0	0	0	0	0	50	50	100	100	100	100	0	0	0	0	0	0	0
U.S. Navy New London - Improvement	0	0	0	0	0	50	50	100	100	100	100	0	0	0	0	0	0	0
U.S. Coast Guard Station, New London	0	0	0	0	0	50	50	100	100	100	100	0	0	0	0	0	0	0
U.S. Coast Guard Academy	0	0	0	0	0	50	50	100	100	100	100	0	0	0	0	0	0	0
Niantic Bay and Harbor - Entrance Channel	0	0	0	50	50	100	100	100	100	100	100	0	0	0	0	0	0	0
Niantic Bay and Harbor - Upper Channel	0	0	0	50	50	100	100	100	100	100	100	0	0	0	0	0	0	0
North Cove	0	50	50	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0
Essex Cove	0	50	50	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0
Eightmile River	0	0	0	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0
Connecticut River Main Channels - Entrance Bars	0	0	0	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0
Connecticut River Main Channels - Lower Bars	0	0	0	100	100	100	100	100	100	100	100	0	0	0	0	0	0	0
Patchogue River - Entrance Channel	0	50	50	100	100	100	100	100	100	50	50	0	0	0	0	0	0	0
Patchogue River - Inner Harbor	0	50	50	100	100	100	100	100	100	50	50	0	0	0	0	0	0	0
Duck Island Harbor of Refuge	0	50	50	100	100	100	100	100	100	50	50	0	0	0	0	0	0	0
Clinton Harbor - Entrance Channel	0	50	50	100	100	100	100	100	100	50	50	0	0	0	0	0	0	0
Clinton Harbor - Inner Harbor	0	50	50	100	100	100	100	100	100	50	50	0	0	0	0	0	0	0
Guilford Harbor - Middle	0	100	100	100	100	100	100	50	50	0	0	0	0	0	0	0	0	0
Guilford Harbor - Entrance and Inner	0	100	100	100	100	100	100	50	50	0	0	0	0	0	0	0	0	0
Stony Creek Harbor	0	100	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0
Branford Harbor	0	100	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0
New Haven Harbor - Maintenance	0	100	100	100	100	50	50	0	0	0	0	0	0	0	0	0	50	50
New Haven Harbor - Improvement	0	100	100	100	100	50	50	0	0	0	0	0	0	0	0	0	50	50

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	ShoreCDF-D_bse	ShoreCDF-D_cap	ShoreCDF-F_bse	ShoreCDF-F_cap	ShoreCDF-I_bse	ShoreCDF-I_cap	ShoreCDF-J_bse	ShoreCDF-J_cap	ShoreCDF-K_bse	ShoreCDF-K_cap	ShoreCDF-O_bse	ShoreCDF-O_cap	UOW-CLDS	UOW-CSDS	UOW-NLDS	UOW-WLDS
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0
Great Salt Pond	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0
Hay West Harbor	0	0	0	0	0	0	0	0	0	0	50	50	0	100	100	0
Pawcatuck River	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	0
Little Narragansett Bay - Entrance Channel	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	0
Little Narragansett Bay - Inner Bay Channel	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	0
Watch Hill Cove	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	0
Stonington Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	0
Mystic Harbor - Maintenance	0	0	0	0	0	0	0	0	0	0	50	50	0	50	100	0
Mystic Harbor - Improvement	0	0	0	0	0	0	0	0	0	0	50	50	0	50	100	0
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	0	0	0	0	0	0	0	0	0	0	50	50	0	100	100	0
New London Harbor - 15-foot Shaws Cove	0	0	0	0	0	0	0	0	0	0	50	50	0	100	100	0
Thames River - Lower Channels, Navy Base to Harbor	0	0	0	0	0	0	0	0	0	0	50	50	0	100	100	0
Thames River - Upper Channel, to Norwich	0	0	0	0	0	0	0	0	0	0	50	50	0	0	100	0
U.S. Navy New London - Maintenance - Suitable	0	0	0	0	0	0	0	0	0	0	50	50	0	100	100	0
U.S. Navy New London - Maintenance - Unsuitable	0	0	0	0	0	0	0	0	0	0	50	50	0	100	100	0
U.S. Navy New London - Improvement	0	0	0	0	0	0	0	0	0	0	50	50	0	100	100	0
U.S. Coast Guard Station, New London	0	0	0	0	0	0	0	0	0	0	50	50	0	100	100	0
U.S. Coast Guard Academy	0	0	0	0	0	0	0	0	0	0	50	50	0	100	100	0
Niantic Bay and Harbor - Entrance Channel	0	0	0	0	0	0	0	0	0	0	100	100	0	100	100	0
Niantic Bay and Harbor - Upper Channel	0	0	0	0	0	0	0	0	0	0	100	100	0	100	100	0
North Cove	0	0	0	0	0	0	0	0	0	0	100	100	50	100	100	0
Essex Cove	0	0	0	0	0	0	0	0	0	0	100	100	50	100	100	0
Eightmile River	0	0	0	0	0	0	0	0	0	0	100	100	0	100	50	0
Connecticut River Main Channels - Entrance Bars	0	0	0	0	0	0	0	0	0	0	100	100	50	100	100	0
Connecticut River Main Channels - Lower Bars	0	0	0	0	0	0	0	0	0	0	100	100	50	100	100	0
Patchogue River - Entrance Channel	0	0	0	0	0	0	0	0	0	0	100	100	50	100	50	0
Patchogue River - Inner Harbor	0	0	0	0	0	0	0	0	0	0	100	100	50	100	50	0
Duck Island Harbor of Refuge	0	0	0	0	0	0	0	0	50	50	100	100	50	100	50	0
Clinton Harbor - Entrance Channel	0	0	0	0	0	0	0	0	50	50	100	100	50	100	50	0
Clinton Harbor - Inner Harbor	0	0	0	0	0	0	0	0	50	50	100	100	50	100	50	0
Guilford Harbor - Middle	0	0	0	0	50	50	50	50	50	50	100	100	100	100	0	0
Guilford Harbor - Entrance and Inner	0	0	0	0	50	50	50	50	50	50	100	100	100	100	0	0
Stony Creek Harbor	0	0	50	50	50	50	100	100	100	100	100	100	100	50	0	0
Branford Harbor	0	0	50	50	100	100	100	100	100	100	100	100	100	50	0	0
New Haven Harbor - Maintenance	50	50	100	100	100	100	100	100	100	100	100	100	100	50	0	0
New Haven Harbor - Improvement	50	50	100	100	100	100	100	100	100	100	100	100	100	50	0	0

Table G-5B. Distance Scoring for Project and Alternative Pairings.

	Alternative Screening ID																		
Project Name	**Beach-111**	**Beach-121**	**Beach-170**	**Beach-171**	**Beach-173**	**Beach-177**	**Beach-178**	**Beach-179**	**Beach-180**	**Beach-181**	**Beach-320**	**Beach-323**	**Beach-325**	**Beach-327**	**Beach-329**	**Beach-330**	**Beach-331**	**Beach-332**	**Beach-333**
West River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	50	100	100	100	100	50
Mill River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	50	50	50	50	50	50
Quinnipiac River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	50	50	50	50	50	50
U.S. Coast Guard Sector Long Island Sound	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	50	100	50	50	100	50
Milford Harbor - Entrance Channel and Outer Anchorage	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milford Harbor - Inner Channels and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Housatonic River downstream of Pope's Island	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1
Housatonic River upstream of Pope's Island	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Johnsons Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1
Black Rock Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	-1	-1	-1	-1	-1	-1	-1
Southport Harbor - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1
Southport Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1
Westport Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor-West Branch I-95 Area	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	-1
Wilson Point	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1
Fivemile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Sand	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Fines	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - 12-Foot East Branch Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mianus River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenwich Harbor - Entrance Channel - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Chester Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milton Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mamaroneck Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Echo Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Rochelle Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eastchester Creek - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eastchester Creek - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	-1
Little Neck Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Yocum Sailing Center, US Merchant Marine Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1
Hempstead Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Glen Cove Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Huntington Harbor - Sand	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Huntington Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Northport Harbor - Sand	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Beach-337	Beach-339	Beach-343	Beach-344	Beach-345	Beach-348	Beach-364	Beach-365	Beach-367	Beach-368	Beach-381	Beach-382	Beach-384	Beach-433	Beach-434	Beach-436	Beach-437	Beach-438	Beach-440
West River	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mill River	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Quinnipiac River	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Sector Long Island Sound	100	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milford Harbor - Entrance Channel and Outer Anchorage	-1	-1	-1	-1	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milford Harbor - Inner Channels and Anchorages	-1	-1	-1	-1	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Housatonic River downstream of Pope's Island	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Housatonic River upstream of Pope's Island	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Johnsons Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1
Black Rock Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	50	100	-1	-1	-1
Southport Harbor - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	100	50	-1	100	50
Southport Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	100	50	-1	100	50
Westport Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	50	-1	-1	50	50
Norwalk Harbor - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	50
Norwalk Harbor-West Branch I-95 Area	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	50
Wilson Point	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Fivemile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Sand	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Fines	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - 12-Foot East Branch Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mianus River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenwich Harbor - Entrance Channel - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Chester Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milton Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mamaroneck Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Echo Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Rochelle Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eastchester Creek - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eastchester Creek - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Little Neck Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Yocum Sailing Center, US Merchant Marine Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Hempstead Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Glen Cove Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Huntington Harbor - Sand	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Huntington Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Northport Harbor - Sand	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Beach-441	Beach-442	Beach-444	Beach-445	Beach-446	Beach-447	Beach-449	Beach-450	Beach-451	Beach-453	Beach-454 East	Beach-454 West	Beach-455/82	Beach-456	Beach-457	Beach-459	Beach-467	Beach-468	Beach-474
West River	-1	-1	-1	-1	-1	50	-1	-1	50	-1	-1	-1	-1	-1	-1	50	-1	-1	-1
Mill River	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1
Quinnipiac River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1
U.S. Coast Guard Sector Long Island Sound	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	-1	-1	-1
Milford Harbor - Entrance Channel and Outer Anchorage	-1	-1	100	-1	-1	-1	-1	50	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milford Harbor - Inner Channels and Anchorages	-1	-1	100	-1	-1	-1	-1	50	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Housatonic River downstream of Pope's Island	-1	-1	50	-1	-1	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	50	50	-1
Housatonic River upstream of Pope's Island	-1	-1	50	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Johnsons Creek	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	100	50	-1
Black Rock Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	50
Southport Harbor - Entrance Channel	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100
Southport Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100
Westport Harbor	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50
Norwalk Harbor - Suitable	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Norwalk Harbor-West Branch I-95 Area	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Wilson Point	50	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Fivemile River	50	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Sand	100	100	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Westcott Cove - Fines	100	100	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	50	100	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Stamford Harbor - 12-Foot East Branch Channel	50	100	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mianus River	50	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenwich Harbor - Entrance Channel - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Chester Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Milton Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mamaroneck Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Echo Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
New Rochelle Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eastchester Creek - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Eastchester Creek - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Little Neck Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Yocum Sailing Center, US Merchant Marine Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Hempstead Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Glen Cove Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Huntington Harbor - Sand	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Huntington Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Northport Harbor - Sand	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Beach-480	Beach-600	Beach-610	Beach-620	Beach-63	Beach-64	Beach-67	Beach-68	Beach-76	Beach-79	Berm-121/446	Berm-170	Berm-171	Berm-173	Berm-177	Berm-178	Berm-179	Berm-180	Berm-320
West River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Mill River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Quinnipiac River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
U.S. Coast Guard Sector Long Island Sound	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Milford Harbor - Entrance Channel and Outer Anchorage	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Milford Harbor - Inner Channels and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Housatonic River downstream of Pope's Island	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Housatonic River upstream of Pope's Island	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Johnsons Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Black Rock Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	50
Southport Harbor - Entrance Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	50
Southport Harbor - Inner Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	50
Westport Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	50
Norwalk Harbor - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	100
Norwalk Harbor-West Branch I-95 Area	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	100
Wilson Point	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	50
Fivemile River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	50
Westcott Cove - Sand	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	50
Westcott Cove - Fines	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	50
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	50
Stamford Harbor - 12-Foot East Branch Channel	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	50
Mianus River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Greenwich Harbor - Entrance Channel - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Port Chester Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Milton Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Mamaroneck Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Echo Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
New Rochelle Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Eastchester Creek - Suitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Eastchester Creek - Unsuitable	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Little Neck Bay	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Yocum Sailing Center, US Merchant Marine Academy	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Hempstead Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Glen Cove Creek	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Huntington Harbor - Sand	-1	-1	-1	-1	50	50	100	100	-1	-1	0	50	0	0	0	0	0	0	0
Huntington Harbor - Silt	-1	-1	-1	-1	50	50	100	100	-1	-1	0	50	0	0	0	0	0	0	0
Northport Harbor - Sand	-1	-1	-1	-1	50	50	50	50	-1	-1	0	50	0	0	0	0	0	0	0

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Berm-323	Berm-327/333/330	Berm-337	Berm-364b/364c	Berm-365	Berm-367	Berm-368	Berm-381/382	Berm-384	Berm-433	Berm-434	Berm-438	Berm-440	Berm-441	Berm-445	Berm-447	Berm-449	Berm-451	Berm-453
West River	0	50	50	50	0	0	0	0	0	0	0	0	0	0	0	50	0	50	0
Mill River	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	50	0	50	0
Quinnipiac River	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	50	0	50	0
U.S. Coast Guard Sector Long Island Sound	0	50	100	0	0	0	0	0	0	0	0	0	0	0	0	50	0	50	0
Milford Harbor - Entrance Channel and Outer Anchorage	50	50	50	100	0	0	0	0	0	0	0	0	0	0	0	50	0	50	0
Milford Harbor - Inner Channels and Anchorages	50	50	50	100	0	0	0	0	0	0	0	0	0	0	0	50	0	50	0
Housatonic River downstream of Pope's Island	50	0	0	50	0	0	0	0	0	50	50	0	0	0	0	50	0	50	0
Housatonic River upstream of Pope's Island	50	50	0	50	0	0	0	0	0	0	0	0	0	0	0	50	0	50	0
Johnsons Creek	50	0	0	50	0	0	0	0	0	50	50	50	0	0	0	0	50	0	0
Black Rock Harbor	100	0	0	50	0	0	0	0	0	50	50	50	50	0	0	0	50	0	0
Southport Harbor - Entrance Channel	50	0	0	0	0	0	0	0	0	100	100	100	50	0	0	0	50	0	0
Southport Harbor - Inner Harbor	50	0	0	0	0	0	0	0	0	100	100	100	50	0	0	0	50	0	0
Westport Harbor	50	0	0	0	0	0	0	0	0	50	50	50	50	50	0	0	50	0	0
Norwalk Harbor - Suitable	0	0	0	0	0	0	0	0	0	50	50	50	50	50	0	0	50	0	0
Norwalk Harbor-West Branch I-95 Area	0	0	0	0	0	0	0	0	0	50	50	50	50	50	0	0	50	0	0
Wilson Point	0	0	0	0	0	0	0	0	0	50	50	50	50	50	0	0	50	0	0
Fivemile River	0	0	0	0	0	0	0	0	0	50	50	50	50	50	0	0	50	0	0
Westcott Cove - Sand	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0
Westcott Cove - Fines	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0
Stamford Harbor - 12-Foot East Branch Channel	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0
Mianus River	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0
Greenwich Harbor - Entrance Channel - Suitable	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0
Port Chester Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0
Milton Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mamaroneck Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Echo Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Rochelle Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eastchester Creek - Suitable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eastchester Creek - Unsuitable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Little Neck Bay	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yocum Sailing Center, US Merchant Marine Academy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hempstead Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glen Cove Creek	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Huntington Harbor - Sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Huntington Harbor - Silt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northport Harbor - Sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Berm-454A	Berm-454B	Berm-455/82	Berm-456	Berm-457	Berm-467	Berm-600	Berm-610	Berm-620	Berm-63	Berm-Grove Beach	BF-422/423	CAD-M_bse	CAD-M_cap	COW-E_bse	COW-E_cap	Habitat-427	Habitat-429	IslandCDF-B_bse
West River	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50	50	0	0	0
Mill River	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50	50	0	0	0
Quinnipiac River	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50	50	0	0	0
U.S. Coast Guard Sector Long Island Sound	0	0	0	0	0	0	0	0	0	0	0	0	100	100	50	50	0	0	0
Milford Harbor - Entrance Channel and Outer Anchorage	0	0	0	0	0	50	0	0	0	0	0	0	100	100	100	100	0	0	0
Milford Harbor - Inner Channels and Anchorages	0	0	0	0	0	50	0	0	0	0	0	0	100	100	100	100	0	0	0
Housatonic River downstream of Pope's Island	0	0	0	0	0	50	0	0	0	0	0	0	100	100	100	100	0	0	50
Housatonic River upstream of Pope's Island	0	0	0	0	0	50	0	0	0	0	0	0	100	100	100	100	0	0	0
Johnsons Creek	0	0	0	0	0	50	0	0	0	0	0	0	100	100	100	100	0	0	50
Black Rock Harbor	0	0	0	0	0	50	0	0	0	0	0	0	100	100	100	100	0	0	50
Southport Harbor - Entrance Channel	0	0	0	0	0	50	0	0	0	0	0	0	50	50	100	100	0	0	50
Southport Harbor - Inner Harbor	0	0	0	0	0	50	0	0	0	0	0	0	50	50	100	100	0	0	50
Westport Harbor	0	0	0	0	0	0	0	0	0	0	0	0	50	50	100	100	0	0	100
Norwalk Harbor - Suitable	0	0	0	0	0	0	0	0	0	0	0	0	50	50	100	100	0	0	100
Norwalk Harbor-West Branch I-95 Area	0	0	0	0	0	0	0	0	0	0	0	0	50	50	100	100	0	0	100
Wilson Point	0	0	0	0	0	0	0	0	0	50	0	0	0	0	100	100	0	0	100
Fivemile River	0	0	0	0	0	0	0	0	0	50	0	0	0	0	100	100	0	0	100
Westcott Cove - Sand	0	0	0	50	0	0	0	0	0	0	0	0	0	0	100	100	0	0	100
Westcott Cove - Fines	0	0	0	50	0	0	0	0	0	0	0	0	0	0	100	100	0	0	100
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	0	0	0	50	0	0	0	0	0	0	0	0	0	0	100	100	0	0	100
Stamford Harbor - 12-Foot East Branch Channel	0	0	0	50	0	0	0	0	0	0	0	0	0	0	100	100	0	0	100
Mianus River	0	0	0	50	0	0	0	0	0	0	0	0	0	0	100	100	0	0	100
Greenwich Harbor - Entrance Channel - Suitable	0	0	0	50	0	0	0	0	0	0	0	50	0	0	100	100	50	50	100
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	0	0	0	50	0	0	0	0	0	0	0	50	0	0	100	100	50	50	100
Port Chester Harbor	0	0	0	50	0	0	0	0	0	0	0	50	0	0	100	100	50	50	100
Milton Harbor	0	0	0	50	0	0	0	0	0	0	0	50	0	0	50	50	50	50	100
Mamaroneck Harbor	0	0	0	50	0	0	0	0	0	0	0	50	0	0	50	50	50	50	100
Echo Bay	0	0	0	0	0	0	0	0	0	0	0	100	0	0	50	50	50	50	100
New Rochelle Harbor	0	0	0	0	0	0	0	0	0	0	0	100	0	0	50	50	50	50	100
Eastchester Creek - Suitable	0	0	0	0	0	0	0	0	0	0	0	100	0	0	50	50	50	50	100
Eastchester Creek - Unsuitable	0	0	0	0	0	0	0	0	0	0	0	100	0	0	50	50	50	50	100
Little Neck Bay	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	50	50	100
Yocum Sailing Center, US Merchant Marine Academy	0	0	0	0	0	0	0	0	0	0	0	100	0	0	50	50	50	50	100
Hempstead Harbor	0	0	0	50	0	0	0	0	0	0	0	50	0	0	50	50	50	50	100
Glen Cove Creek	0	0	0	50	0	0	0	0	0	0	0	50	0	0	50	50	50	50	100
Huntington Harbor - Sand	0	0	0	50	0	0	0	0	0	50	0	0	0	0	100	100	0	0	100
Huntington Harbor - Silt	0	0	0	50	0	0	0	0	0	50	0	0	0	0	100	100	0	0	100
Northport Harbor - Sand	0	0	0	50	0	0	0	0	0	50	0	0	0	0	100	100	0	0	100

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	IslandCDF-B_cap	IslandCDF-L_bse	IslandCDF-L_cap	IslandCDF-N_bse	IslandCDF-N_cap	IslandCDF-P_bse	IslandCDF-P_cap	IslandCDF-Q_bse	IslandCDF-Q_cap	IslandCDF-R_bse	IslandCDF-R_cap	LFCap-251	LFCap-61	LFPlace-59	ShoreCDF-A_bse	ShoreCDF-A_cap	ShoreCDF-C_bse	ShoreCDF-C_cap
West River	0	100	100	100	100	50	50	0	0	0	0	0	0	0	0	0	50	50
Mill River	0	100	100	100	100	50	50	0	0	0	0	0	0	0	0	0	0	0
Quinnipiac River	0	100	100	100	100	50	50	0	0	0	0	0	0	0	0	0	0	0
U.S. Coast Guard Sector Long Island Sound	0	100	100	100	100	50	50	0	0	0	0	0	0	0	0	0	50	50
Milford Harbor - Entrance Channel and Outer Anchorage	0	100	100	100	100	50	50	0	0	0	0	0	0	0	0	0	50	50
Milford Harbor - Inner Channels and Anchorages	0	100	100	100	100	50	50	0	0	0	0	0	0	0	0	0	50	50
Housatonic River downstream of Pope's Island	50	100	100	50	50	0	0	0	0	0	0	0	0	0	0	0	100	100
Housatonic River upstream of Pope's Island	0	100	100	50	50	0	0	0	0	0	0	0	0	0	0	0	100	100
Johnsons Creek	50	100	100	50	50	0	0	0	0	0	0	0	0	0	0	0	100	100
Black Rock Harbor	50	100	100	50	50	0	0	0	0	0	0	0	0	0	0	0	100	100
Southport Harbor - Entrance Channel	50	100	100	0	0	0	0	0	0	0	0	0	0	0	50	50	100	100
Southport Harbor - Inner Harbor	50	100	100	0	0	0	0	0	0	0	0	0	0	0	50	50	100	100
Westport Harbor	100	50	50	0	0	0	0	0	0	0	0	0	0	50	50	50	100	100
Norwalk Harbor - Suitable	100	50	50	0	0	0	0	0	0	0	0	0	0	50	50	50	100	100
Norwalk Harbor-West Branch I-95 Area	100	50	50	0	0	0	0	0	0	0	0	0	0	50	50	50	100	100
Wilson Point	100	50	50	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Fivemile River	100	50	50	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Westcott Cove - Sand	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Westcott Cove - Fines	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Stamford Harbor - 12-Foot East Branch Channel	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Mianus River	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Greenwich Harbor - Entrance Channel - Suitable	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Port Chester Harbor	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Milton Harbor	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Mamaroneck Harbor	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Echo Bay	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	50	50
New Rochelle Harbor	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	50	50
Eastchester Creek - Suitable	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	50	50
Eastchester Creek - Unsuitable	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	50	50
Little Neck Bay	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	50	50
Yocum Sailing Center, US Merchant Marine Academy	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	50	50
Hempstead Harbor	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Glen Cove Creek	100	0	0	0	0	0	0	0	0	0	0	0	0	50	100	100	100	100
Huntington Harbor - Sand	100	0	0	0	0	0	0	0	0	0	0	0	50	50	100	100	100	100
Huntington Harbor - Silt	100	0	0	0	0	0	0	0	0	0	0	0	50	50	100	100	100	100
Northport Harbor - Sand	100	0	0	0	0	0	0	0	0	0	0	0	50	50	100	100	100	100

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	ShoreCDF-D_bse	ShoreCDF-D_cap	ShoreCDF-F_bse	ShoreCDF-F_cap	ShoreCDF-I_bse	ShoreCDF-I_cap	ShoreCDF-J_bse	ShoreCDF-J_cap	ShoreCDF-K_bse	ShoreCDF-K_cap	ShoreCDF-O_bse	ShoreCDF-O_cap	UOW-CLDS	UOW-CSDS	UOW-NLDS	UOW-WLDS
West River	50	50	100	100	100	100	100	100	100	100	50	50	100	0	0	0
Mill River	0	0	50	50	100	100	100	100	100	100	100	100	100	50	0	0
Quinnipiac River	0	0	50	50	100	100	100	100	100	100	100	100	100	50	0	0
U.S. Coast Guard Sector Long Island Sound	50	50	100	100	100	100	100	100	100	100	100	100	100	50	0	0
Milford Harbor - Entrance Channel and Outer Anchorage	50	50	100	100	100	100	100	100	100	100	50	50	100	0	0	50
Milford Harbor - Inner Channels and Anchorages	50	50	100	100	100	100	100	100	100	100	50	50	100	0	0	50
Housatonic River downstream of Pope's Island	100	100	100	100	100	100	100	100	100	100	0	0	100	0	0	50
Housatonic River upstream of Pope's Island	100	100	100	100	100	100	100	100	100	100	50	50	100	0	0	50
Johnsons Creek	100	100	100	100	100	100	100	100	100	100	0	0	100	0	0	50
Black Rock Harbor	100	100	100	100	100	100	100	100	100	100	0	0	100	0	0	100
Southport Harbor - Entrance Channel	100	100	100	100	100	100	100	100	100	100	0	0	50	0	0	100
Southport Harbor - Inner Harbor	100	100	100	100	100	100	100	100	100	100	0	0	50	0	0	100
Westport Harbor	100	100	100	100	100	100	100	100	100	100	0	0	50	0	0	100
Norwalk Harbor - Suitable	100	100	100	100	100	100	100	100	50	50	0	0	50	0	0	100
Norwalk Harbor-West Branch I-95 Area	100	100	100	100	100	100	100	100	50	50	0	0	50	0	0	100
Wilson Point	100	100	100	100	100	100	100	100	50	50	0	0	50	0	0	100
Fivemile River	100	100	100	100	100	100	100	100	50	50	0	0	0	0	0	100
Westcott Cove - Sand	100	100	100	100	50	50	50	50	50	50	0	0	0	0	0	100
Westcott Cove - Fines	100	100	100	100	50	50	50	50	50	50	0	0	0	0	0	100
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	100	100	100	100	50	50	50	50	50	50	0	0	0	0	0	100
Stamford Harbor - 12-Foot East Branch Channel	100	100	100	100	50	50	50	50	50	50	0	0	0	0	0	100
Mianus River	100	100	100	100	50	50	50	50	0	0	0	0	0	0	0	100
Greenwich Harbor - Entrance Channel - Suitable	100	100	50	50	50	50	50	50	0	0	0	0	0	0	0	100
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	100	100	50	50	50	50	50	50	0	0	0	0	0	0	0	100
Port Chester Harbor	100	100	50	50	50	50	50	50	0	0	0	0	0	0	0	100
Milton Harbor	100	100	50	50	0	0	0	0	0	0	0	0	0	0	0	100
Mamaroneck Harbor	100	100	50	50	0	0	0	0	0	0	0	0	0	0	0	100
Echo Bay	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	100
New Rochelle Harbor	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Eastchester Creek - Suitable	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Eastchester Creek - Unsuitable	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Little Neck Bay	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	50
Yocum Sailing Center, US Merchant Marine Academy	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Hempstead Harbor	50	50	50	50	0	0	0	0	0	0	0	0	0	0	0	100
Glen Cove Creek	100	100	50	50	0	0	0	0	0	0	0	0	0	0	0	100
Huntington Harbor - Sand	100	100	100	100	50	50	50	50	50	50	0	0	0	0	0	100
Huntington Harbor - Silt	100	100	100	100	50	50	50	50	50	50	0	0	0	0	0	100
Northport Harbor - Sand	100	100	100	100	50	50	100	100	50	50	0	0	0	0	0	100

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Alternative Screening ID

Project Name	Beach-111	Beach-121	Beach-170	Beach-171	Beach-173	Beach-177	Beach-178	Beach-179	Beach-180	Beach-181	Beach-320	Beach-323	Beach-325	Beach-327	Beach-329	Beach-330	Beach-331	Beach-332	Beach-333
Northport Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard, Station Eatons Neck	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Jefferson Harbor - Sand	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Jefferson Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mattituck Harbor and Inlet	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mattituck Harbor and Inlet - Silt - Example	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Peconic River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Peconic River - Sand - Example	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenport Harbor	50	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
US DHS Plum Gut Harbor and Orient Point	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lake Montauk Harbor	-1	100	-1	-1	-1	50	50	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Station	-1	100	-1	-1	-1	50	50	50	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Beach-337	Beach-339	Beach-343	Beach-344	Beach-345	Beach-348	Beach-364	Beach-365	Beach-367	Beach-368	Beach-381	Beach-382	Beach-384	Beach-433	Beach-434	Beach-436	Beach-437	Beach-438	Beach-440
Northport Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard, Station Eatons Neck	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Jefferson Harbor - Sand	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Jefferson Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mattituck Harbor and Inlet	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mattituck Harbor and Inlet - Silt - Example	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Peconic River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Peconic River - Sand - Example	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenport Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
US DHS Plum Gut Harbor and Orient Point	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	-1	-1
Lake Montauk Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Station	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Beach-441	Beach-442	Beach-444	Beach-445	Beach-446	Beach-447	Beach-449	Beach-450	Beach-451	Beach-453	Beach-454 East	Beach-454 West	Beach-455/82	Beach-456	Beach-457	Beach-459	Beach-467	Beach-468	Beach-474
Northport Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard, Station Eatons Neck	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Jefferson Harbor - Sand	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Port Jefferson Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Mattituck Harbor and Inlet	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	100	-1	-1	-1	-1	-1	-1
Mattituck Harbor and Inlet - Silt - Example	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1	100	-1	-1	-1	-1	-1	-1
Peconic River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Peconic River - Sand - Example	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Greenport Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	50	-1	-1	-1	-1	-1	-1	-1	-1
US DHS Plum Gut Harbor and Orient Point	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lake Montauk Harbor	-1	-1	-1	-1	100	-1	-1	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	-1
U.S. Coast Guard Station	-1	-1	-1	-1	100	-1	-1	-1	-1	100	-1	-1	-1	-1	-1	-1	-1	-1	-1

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Beach-480	Beach-600	Beach-610	Beach-620	Beach-63	Beach-64	Beach-67	Beach-68	Beach-76	Beach-79	Berm-121/446	Berm-170	Berm-171	Berm-173	Berm-177	Berm-178	Berm-179	Berm-180	Berm-320
Northport Harbor - Silt	-1	-1	-1	-1	50	50	50	50	-1	-1	0	50	0	0	0	0	0	0	0
U.S. Coast Guard, Station Eatons Neck	-1	-1	-1	-1	50	100	50	50	-1	-1	0	50	0	0	0	0	0	0	50
Port Jefferson Harbor - Sand	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	50	0	0	0	0	0	0	0
Port Jefferson Harbor - Silt	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	50	0	0	0	0	0	0	0
Mattituck Harbor and Inlet	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Mattituck Harbor and Inlet - Silt - Example	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	0	0
Peconic River	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	50	0	0	0	0	0	0
Peconic River - Sand - Example	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	50	0	0	0	0	0	0
Greenport Harbor	-1	-1	-1	-1	-1	-1	-1	-1	50	100	0	0	0	0	0	0	0	50	0
US DHS Plum Gut Harbor and Orient Point	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	50	0
Lake Montauk Harbor	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	0	0	50	50	50	50	0	0
U.S. Coast Guard Station	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	0	0	50	50	50	50	0	0

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Berm-323	Berm-327/333/330	Berm-337	Berm-364b/364c	Berm-365	Berm-367	Berm-368	Berm-381/382	Berm-384	Berm-433	Berm-434	Berm-438	Berm-440	Berm-441	Berm-445	Berm-447	Berm-449	Berm-451	Berm-453
Northport Harbor - Silt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U.S. Coast Guard, Station Eatons Neck	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0
Port Jefferson Harbor - Sand	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Port Jefferson Harbor - Silt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mattituck Harbor and Inlet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0
Mattituck Harbor and Inlet - Silt - Example	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0
Peconic River	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0
Peconic River - Sand - Example	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0
Greenport Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
US DHS Plum Gut Harbor and Orient Point	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0
Lake Montauk Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
U.S. Coast Guard Station	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	Berm-454A	Berm-454B	Berm-455/82	Berm-456	Berm-457	Berm-467	Berm-600	Berm-610	Berm-620	Berm-63	Berm-Grove Beach	BF-422/423	CAD-M_bse	CAD-M_cap	COW-E_bse	COW-E_cap	Habitat-427	Habitat-429	IslandCDF-B_bse
Northport Harbor - Silt	0	0	0	50	0	0	0	0	0	50	0	0	0	0	100	100	0	0	100
U.S. Coast Guard, Station Eatons Neck	0	0	0	50	0	0	0	0	0	50	0	0	0	0	100	100	0	0	100
Port Jefferson Harbor - Sand	0	0	0	0	0	0	0	0	0	0	0	0	50	50	100	100	0	0	50
Port Jefferson Harbor - Silt	0	0	0	0	0	0	0	0	0	0	0	0	50	50	100	100	0	0	50
Mattituck Harbor and Inlet	50	50	100	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0
Mattituck Harbor and Inlet - Silt - Example	50	50	100	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0
Peconic River	0	0	50	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0
Peconic River - Sand - Example	0	0	50	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0
Greenport Harbor	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
US DHS Plum Gut Harbor and Orient Point	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lake Montauk Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U.S. Coast Guard Station	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	IslandCDF-B_cap	IslandCDF-L_bse	IslandCDF-L_cap	IslandCDF-N_bse	IslandCDF-N_cap	IslandCDF-P_bse	IslandCDF-P_cap	IslandCDF-Q_bse	IslandCDF-Q_cap	IslandCDF-R_bse	IslandCDF-R_cap	LFCap-251	LFCap-61	LFPlace-59	ShoreCDF-A_bse	ShoreCDF-A_cap	ShoreCDF-C_bse	ShoreCDF-C_cap
Northport Harbor - Silt	100	0	0	0	0	0	0	0	0	0	0	0	50	50	100	100	100	100
U.S. Coast Guard, Station Eatons Neck	100	50	50	0	0	0	0	0	0	0	0	0	50	50	100	100	100	100
Port Jefferson Harbor - Sand	50	100	100	50	50	0	0	0	0	0	0	0	50	0	0	0	100	100
Port Jefferson Harbor - Silt	50	100	100	50	50	0	0	0	0	0	0	0	50	0	0	0	100	100
Mattituck Harbor and Inlet	0	50	50	100	100	100	100	50	50	0	0	0	0	0	0	0	0	0
Mattituck Harbor and Inlet - Silt - Example	0	50	50	100	100	100	100	50	50	0	0	0	0	0	0	0	0	0
Peconic River	0	50	50	50	50	50	50	0	0	0	0	0	50	0	0	0	0	0
Peconic River - Sand - Example	0	50	50	50	50	50	50	0	0	0	0	0	50	0	0	0	0	0
Greenport Harbor	0	0	0	100	100	100	100	100	100	50	50	0	0	0	0	0	0	0
US DHS Plum Gut Harbor and Orient Point	0	0	0	50	50	100	100	100	100	100	100	0	0	0	0	0	0	0
Lake Montauk Harbor	0	0	0	0	0	0	0	100	100	100	100	0	0	0	0	0	0	0
U.S. Coast Guard Station	0	0	0	0	0	0	0	100	100	100	100	0	0	0	0	0	0	0

Table G-5B. Distance Scoring for Project and Alternative Pairings.

Project Name	ShoreCDF-D_bse	ShoreCDF-D_cap	ShoreCDF-F_bse	ShoreCDF-F_cap	ShoreCDF-I_bse	ShoreCDF-I_cap	ShoreCDF-J_bse	ShoreCDF-J_cap	ShoreCDF-K_bse	ShoreCDF-K_cap	ShoreCDF-O_bse	ShoreCDF-O_cap	UOW-CLDS	UOW-CSDS	UOW-NLDS	UOW-WLDS
Northport Harbor - Silt	100	100	100	100	50	50	100	100	50	50	0	0	0	0	0	100
U.S. Coast Guard, Station Eatons Neck	100	100	100	100	100	100	100	100	50	50	0	0	0	0	0	100
Port Jefferson Harbor - Sand	100	100	100	100	100	100	100	100	100	100	0	0	100	0	0	50
Port Jefferson Harbor - Silt	100	100	100	100	100	100	100	100	100	100	0	0	100	0	0	50
Mattituck Harbor and Inlet	0	0	0	0	0	0	0	0	50	50	100	100	100	100	0	0
Mattituck Harbor and Inlet - Silt - Example	0	0	0	0	0	0	0	0	50	50	100	100	100	100	0	0
Peconic River	0	0	0	0	0	0	50	50	50	50	50	50	0	0	0	0
Peconic River - Sand - Example	0	0	0	0	0	0	50	50	50	50	50	50	0	0	0	0
Greenport Harbor	0	0	0	0	0	0	0	0	0	0	100	100	50	100	100	0
US DHS Plum Gut Harbor and Orient Point	0	0	0	0	0	0	0	0	0	0	100	100	0	100	100	0
Lake Montauk Harbor	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	0
U.S. Coast Guard Station	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100	0

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-111	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-111	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-111	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-111	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-111	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-111	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-111	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-111	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-111	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-111	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-111	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-111	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-111	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-111	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-111	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-111	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-111	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-111	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-111	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-111	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-111	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-111	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-111	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-111	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-111	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-111	Environmental	Federally Managed Species	Burial	100	No
Beach-111	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-111	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-111	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-111	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-111	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-111	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-111	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-111	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-111	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-111	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-111	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-111	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-111	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-111	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-111	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-111	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-111	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-111	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-111	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-111	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-111	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-111	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-111	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-111	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-111	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-111	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-111	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-111	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-111	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-111	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-111	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-111	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-111	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-111	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-111	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-111	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-111	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-111	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-111	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-111	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-111	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-111	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-111	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-111	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-111	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-111	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-111	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-111	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-111	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-111	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-111	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-111	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-111	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-111	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-111	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-111	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-111	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-111	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-111	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-111	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-111	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-111	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-111	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-111	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-111	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-111	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-111	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-121	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource outside possible sedimentation/erosion zone
Beach-121	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is upland from site
Beach-121	Cultural	Archaeological Sites	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-121	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource outside possible sedimentation/erosion zone
Beach-121	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is upland from site
Beach-121	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-121	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-121	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-121	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-121	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-121	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-121	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-121	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-121	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-121	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-121	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-121	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-121	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-121	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-121	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-121	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-121	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-121	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-121	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-121	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-121	Environmental	Federally Managed Species	Burial	100	No
Beach-121	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-121	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-121	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-121	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-121	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-121	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-121	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-121	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-121	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-121	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-121	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-121	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-121	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-121	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-121	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-121	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-121	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-121	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-121	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-121	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-121	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-121	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-121	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-121	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-121	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-121	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-121	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-121	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-121	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-121	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-121	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-121	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-121	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-121	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-121	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-121	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-121	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-121	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-121	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-121	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-121	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-121	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-121	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-121	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-121	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-121	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-121	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-121	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-121	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-121	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-121	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-121	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-121	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-121	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-121	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-121	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-121	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-121	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-121	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-121	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-121	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-121	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-121	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-121	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-121	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-121	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-121	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-170	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-170	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-170	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-170	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource outside possible sedimentation/erosion zone
Beach-170	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is upland from site
Beach-170	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-170	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-170	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-170	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-170	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-170	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-170	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-170	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-170	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-170	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-170	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-170	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-170	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-170	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-170	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-170	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-170	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-170	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-170	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-170	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-170	Environmental	Federally Managed Species	Burial	100	No
Beach-170	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-170	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-170	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-170	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-170	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-170	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-170	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-170	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-170	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-170	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-170	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-170	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-170	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-170	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-170	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-170	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-170	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-170	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-170	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-170	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-170	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-170	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-170	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-170	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-170	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-170	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-170	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-170	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-170	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-170	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-170	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-170	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-170	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-170	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-170	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-170	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-170	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-170	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-170	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-170	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-170	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-170	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-170	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-170	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-170	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-170	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-170	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-170	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-170	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-170	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-170	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-170	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-170	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-170	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-170	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-170	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-170	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-170	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-170	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-170	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-170	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-170	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-170	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-170	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-170	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-170	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-170	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-171	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-171	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-171	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-171	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-171	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-171	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-171	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-171	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-171	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-171	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-171	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-171	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-171	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-171	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-171	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-171	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-171	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-171	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-171	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-171	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-171	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-171	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-171	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-171	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-171	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-171	Environmental	Federally Managed Species	Burial	100	No
Beach-171	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-171	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-171	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-171	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-171	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-171	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-171	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-171	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-171	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-171	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-171	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-171	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-171	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-171	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-171	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-171	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-171	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-171	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-171	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-171	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-171	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-171	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-171	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-171	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-171	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-171	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-171	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-171	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-171	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-171	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-171	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-171	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-171	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-171	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-171	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-171	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-171	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-171	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-171	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-171	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-171	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-171	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-171	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-171	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-171	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-171	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-171	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-171	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-171	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-171	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-171	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-171	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-171	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-171	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-171	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-171	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-171	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-171	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-171	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-171	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-171	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-171	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-171	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-171	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-171	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-171	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-171	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-173	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-173	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-173	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-173	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-173	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-173	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-173	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-173	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-173	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-173	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-173	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-173	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-173	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-173	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-173	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-173	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-173	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-173	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-173	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-173	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-173	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-173	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-173	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-173	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-173	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-173	Environmental	Federally Managed Species	Burial	100	No
Beach-173	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-173	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-173	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-173	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-173	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-173	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-173	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-173	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-173	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-173	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-173	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-173	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-173	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-173	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-173	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-173	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-173	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-173	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-173	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-173	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-173	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-173	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-173	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-173	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-173	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-173	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-173	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-173	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-173	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-173	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-173	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-173	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-173	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-173	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-173	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-173	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-173	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-173	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-173	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-173	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-173	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-173	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-173	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-173	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-173	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-173	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-173	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-173	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-173	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-173	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-173	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-173	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-173	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-173	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-173	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-173	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-173	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-173	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-173	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-173	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-173	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-173	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-173	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-173	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-173	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-173	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-173	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-177	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-177	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-177	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-177	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-177	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-177	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-177	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-177	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-177	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-177	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-177	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-177	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-177	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-177	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-177	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-177	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-177	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-177	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-177	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-177	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-177	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-177	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-177	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-177	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-177	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-177	Environmental	Federally Managed Species	Burial	100	No
Beach-177	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-177	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-177	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-177	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-177	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-177	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-177	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-177	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-177	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-177	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-177	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-177	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-177	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-177	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-177	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-177	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-177	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-177	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-177	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-177	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-177	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-177	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-177	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-177	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-177	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-177	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-177	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-177	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-177	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-177	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-177	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-177	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-177	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-177	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-177	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-177	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-177	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-177	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-177	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-177	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-177	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-177	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-177	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-177	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-177	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-177	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-177	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-177	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-177	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-177	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-177	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-177	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-177	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-177	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-177	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-177	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-177	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-177	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-177	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-177	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-177	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-177	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-177	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-177	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-177	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-177	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-177	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-178	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-178	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-178	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-178	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-178	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-178	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-178	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-178	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-178	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-178	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-178	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-178	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-178	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-178	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-178	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-178	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-178	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-178	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-178	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-178	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-178	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-178	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-178	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-178	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-178	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-178	Environmental	Federally Managed Species	Burial	100	No
Beach-178	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-178	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-178	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-178	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-178	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-178	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-178	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-178	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-178	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-178	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-178	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-178	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-178	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-178	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-178	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-178	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-178	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-178	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-178	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-178	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-178	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-178	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-178	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-178	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-178	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-178	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-178	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-178	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-178	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-178	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-178	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-178	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-178	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-178	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-178	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-178	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-178	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-178	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-178	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-178	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-178	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-178	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-178	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-178	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-178	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-178	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-178	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-178	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-178	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-178	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-178	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-178	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-178	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-178	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-178	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-178	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-178	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-178	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-178	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-178	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-178	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-178	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-178	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-178	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-178	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-178	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-178	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-179	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource outside possible sedimentation/erosion zone
Beach-179	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is upland from site
Beach-179	Cultural	Archaeological Sites	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-179	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-179	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-179	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-179	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-179	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-179	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-179	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-179	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-179	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-179	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-179	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-179	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-179	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-179	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-179	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-179	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-179	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-179	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-179	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-179	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-179	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-179	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-179	Environmental	Federally Managed Species	Burial	100	No
Beach-179	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-179	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-179	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-179	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-179	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-179	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-179	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-179	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-179	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-179	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-179	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-179	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-179	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-179	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-179	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-179	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-179	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-179	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-179	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-179	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-179	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-179	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-179	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-179	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-179	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-179	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-179	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-179	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-179	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-179	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-179	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-179	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-179	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-179	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-179	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-179	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-179	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-179	Infrastructure	Aquaculture	Undermining / Erosion	100	No

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-179	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-179	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-179	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-179	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-179	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-179	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-179	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-179	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-179	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-179	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-179	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-179	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-179	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-179	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-179	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-179	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-179	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-179	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-179	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-179	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-179	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-179	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-179	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-179	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-179	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-179	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-179	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-179	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-179	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-180	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-180	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-180	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-180	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-180	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-180	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-180	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-180	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-180	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-180	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-180	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-180	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-180	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-180	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-180	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-180	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-180	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-180	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-180	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-180	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-180	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-180	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-180	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-180	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-180	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-180	Environmental	Federally Managed Species	Burial	100	No
Beach-180	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-180	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-180	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-180	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-180	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-180	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-180	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-180	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-180	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-180	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-180	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-180	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-180	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-180	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-180	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-180	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-180	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-180	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-180	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-180	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-180	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-180	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-180	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-180	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-180	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-180	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-180	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-180	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-180	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-180	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-180	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-180	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-180	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-180	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-180	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-180	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-180	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-180	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-180	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-180	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-180	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-180	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-180	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-180	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-180	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-180	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-180	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-180	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-180	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-180	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-180	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-180	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-180	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-180	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-180	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-180	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-180	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-180	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-180	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-180	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-180	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-180	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-180	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-180	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-180	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-180	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-180	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-181	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-181	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-181	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-181	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-181	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-181	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-181	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-181	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-181	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-181	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-181	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-181	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-181	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-181	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-181	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-181	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-181	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-181	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-181	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-181	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-181	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-181	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-181	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-181	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-181	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-181	Environmental	Federally Managed Species	Burial	100	No
Beach-181	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-181	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-181	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-181	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-181	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-181	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-181	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-181	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-181	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-181	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-181	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-181	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-181	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-181	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-181	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-181	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-181	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-181	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-181	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-181	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-181	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-181	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-181	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-181	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-181	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-181	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-181	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-181	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-181	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-181	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-181	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-181	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-181	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-181	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-181	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-181	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-181	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-181	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-181	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-181	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-181	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-181	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-181	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-181	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-181	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-181	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-181	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-181	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-181	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-181	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-181	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-181	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-181	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-181	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-181	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-181	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-181	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-181	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-181	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-181	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-181	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-181	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-181	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-181	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-181	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-181	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-181	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-320	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-320	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-320	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-320	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-320	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-320	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-320	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-320	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-320	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-320	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-320	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-320	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-320	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-320	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-320	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-320	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-320	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-320	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-320	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-320	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-320	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-320	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-320	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-320	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-320	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-320	Environmental	Federally Managed Species	Burial	100	No
Beach-320	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-320	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-320	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-320	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-320	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-320	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-320	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-320	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-320	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-320	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-320	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-320	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-320	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-320	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-320	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-320	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-320	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-320	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-320	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-320	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-320	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-320	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-320	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-320	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-320	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-320	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-320	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-320	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-320	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-320	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-320	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-320	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-320	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-320	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-320	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-320	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-320	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-320	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-320	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-320	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-320	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-320	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-320	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-320	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-320	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-320	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-320	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-320	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-320	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-320	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-320	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-320	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-320	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-320	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-320	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-320	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-320	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-320	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-320	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-320	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-320	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-320	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-320	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-320	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-320	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-320	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-320	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-323	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-323	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-323	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-323	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-323	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-323	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-323	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-323	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-323	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-323	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-323	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-323	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-323	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-323	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-323	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-323	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-323	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-323	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-323	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-323	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-323	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-323	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-323	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-323	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-323	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-323	Environmental	Federally Managed Species	Burial	100	No
Beach-323	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-323	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-323	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-323	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-323	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-323	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-323	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-323	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-323	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-323	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-323	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-323	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-323	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-323	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-323	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-323	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-323	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-323	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-323	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-323	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-323	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-323	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-323	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-323	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-323	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-323	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-323	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-323	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-323	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-323	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-323	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-323	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-323	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-323	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-323	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-323	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-323	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-323	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-323	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-323	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-323	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-323	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-323	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-323	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-323	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-323	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-323	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-323	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-323	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-323	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-323	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-323	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-323	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-323	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-323	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-323	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-323	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-323	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-323	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-323	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-323	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-323	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-323	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-323	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-323	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-323	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-323	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-325	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-325	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-325	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-325	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-325	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-325	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-325	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-325	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-325	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-325	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-325	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-325	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-325	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-325	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-325	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-325	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-325	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-325	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-325	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-325	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-325	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-325	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-325	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-325	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-325	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-325	Environmental	Federally Managed Species	Burial	100	No
Beach-325	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-325	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-325	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-325	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-325	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-325	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-325	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-325	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-325	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-325	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-325	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-325	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-325	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-325	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-325	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-325	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-325	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-325	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-325	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-325	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-325	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-325	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-325	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-325	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-325	Environmental	Terrestrial Wildlife	Burial	100	No - resource is not present
Beach-325	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource is not present
Beach-325	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource is not present
Beach-325	Environmental	Terrestrial Wildlife	Harassment	100	No - resource is not present
Beach-325	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-325	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-325	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-325	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-325	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-325	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-325	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-325	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-325	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-325	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-325	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-325	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-325	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-325	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-325	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-325	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-325	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-325	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-325	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-325	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-325	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-325	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-325	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-325	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-325	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-325	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-325	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-325	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-325	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-325	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-325	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-325	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-325	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-325	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-325	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-325	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-325	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-325	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-325	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-327	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-327	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-327	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-327	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-327	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-327	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-327	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-327	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-327	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-327	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-327	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-327	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-327	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-327	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-327	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-327	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-327	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-327	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-327	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-327	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-327	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-327	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-327	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-327	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-327	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-327	Environmental	Federally Managed Species	Burial	100	No
Beach-327	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-327	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-327	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-327	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-327	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-327	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-327	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-327	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-327	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-327	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-327	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-327	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-327	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-327	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-327	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-327	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-327	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-327	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-327	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-327	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-327	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-327	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-327	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-327	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-327	Environmental	Terrestrial Wildlife	Burial	100	No - resource is not present
Beach-327	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource is not present
Beach-327	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource is not present
Beach-327	Environmental	Terrestrial Wildlife	Harassment	100	No - resource is not present
Beach-327	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-327	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-327	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-327	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-327	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-327	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-327	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-327	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-327	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-327	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-327	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-327	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-327	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-327	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-327	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-327	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-327	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-327	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-327	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-327	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-327	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-327	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-327	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-327	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-327	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-327	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-327	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-327	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-327	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-327	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-327	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-327	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-327	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-327	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-327	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-327	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-327	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-327	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-327	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-329	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-329	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-329	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-329	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-329	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-329	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-329	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-329	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-329	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-329	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-329	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-329	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-329	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-329	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-329	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-329	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-329	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-329	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-329	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-329	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-329	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-329	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-329	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-329	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-329	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-329	Environmental	Federally Managed Species	Burial	100	No
Beach-329	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-329	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-329	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-329	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-329	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-329	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-329	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-329	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-329	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-329	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-329	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-329	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-329	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-329	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-329	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-329	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-329	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-329	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-329	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-329	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-329	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-329	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-329	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-329	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-329	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-329	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-329	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-329	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-329	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-329	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-329	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-329	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-329	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-329	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-329	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-329	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-329	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-329	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-329	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-329	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-329	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-329	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-329	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-329	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-329	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-329	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-329	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-329	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-329	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-329	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-329	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-329	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-329	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-329	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-329	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-329	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-329	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-329	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-329	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-329	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-329	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-329	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-329	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-329	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-329	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-329	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-329	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-330	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-330	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-330	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-330	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-330	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-330	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-330	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-330	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-330	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-330	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-330	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-330	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-330	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-330	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-330	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-330	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-330	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-330	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-330	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-330	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-330	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-330	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-330	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-330	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-330	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-330	Environmental	Federally Managed Species	Burial	100	No
Beach-330	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-330	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-330	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-330	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-330	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-330	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-330	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-330	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-330	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-330	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-330	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-330	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-330	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-330	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-330	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-330	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-330	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-330	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-330	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-330	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-330	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-330	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-330	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-330	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-330	Environmental	Terrestrial Wildlife	Burial	100	No - resource is not present
Beach-330	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource is not present
Beach-330	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource is not present
Beach-330	Environmental	Terrestrial Wildlife	Harassment	100	No - resource is not present
Beach-330	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-330	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-330	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-330	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-330	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-330	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-330	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-330	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-330	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-330	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-330	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-330	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-330	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-330	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-330	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-330	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-330	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-330	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-330	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-330	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-330	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-330	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-330	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-330	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-330	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-330	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-330	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-330	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-330	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-330	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-330	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-330	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-330	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-330	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-330	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-330	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-330	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-330	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-330	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-331	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-331	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-331	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-331	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-331	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-331	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-331	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-331	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-331	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-331	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-331	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-331	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-331	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-331	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-331	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-331	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-331	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-331	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-331	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-331	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-331	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-331	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-331	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-331	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-331	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-331	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-331	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-331	Environmental	Federally Managed Species	Burial	100	No
Beach-331	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-331	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-331	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-331	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-331	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-331	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-331	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-331	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-331	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-331	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-331	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-331	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-331	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-331	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-331	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-331	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-331	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-331	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-331	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-331	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-331	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-331	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-331	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-331	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-331	Environmental	Terrestrial Wildlife	Burial	100	No - resource is not present
Beach-331	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource is not present
Beach-331	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource is not present
Beach-331	Environmental	Terrestrial Wildlife	Harassment	100	No - resource is not present
Beach-331	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-331	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-331	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-331	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-331	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-331	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-331	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-331	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-331	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-331	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-331	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-331	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-331	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-331	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-331	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-331	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-331	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-331	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-331	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-331	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-331	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-331	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-331	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-331	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-331	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-331	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-331	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-331	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-331	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-331	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-331	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-331	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-331	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-331	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-331	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-331	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-331	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-331	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-331	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-332	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-332	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-332	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-332	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-332	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-332	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-332	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-332	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-332	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-332	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-332	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-332	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-332	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-332	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-332	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-332	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-332	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-332	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-332	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-332	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-332	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-332	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-332	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-332	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-332	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-332	Environmental	Federally Managed Species	Burial	100	No
Beach-332	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-332	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-332	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-332	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-332	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-332	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-332	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-332	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-332	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-332	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-332	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-332	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-332	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-332	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-332	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-332	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-332	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-332	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-332	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-332	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-332	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-332	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-332	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-332	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-332	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-332	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-332	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-332	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-332	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-332	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-332	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-332	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-332	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-332	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-332	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-332	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-332	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-332	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-332	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-332	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-332	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-332	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-332	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-332	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-332	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-332	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-332	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-332	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-332	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-332	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-332	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-332	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-332	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-332	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-332	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-332	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-332	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-332	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-332	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-332	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-332	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-332	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-332	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-332	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-332	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-332	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-332	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-333	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-333	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-333	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-333	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-333	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-333	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-333	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-333	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-333	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-333	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-333	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-333	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-333	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-333	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-333	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-333	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-333	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-333	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-333	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-333	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-333	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-333	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-333	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-333	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-333	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-333	Environmental	Federally Managed Species	Burial	100	No
Beach-333	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-333	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-333	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-333	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-333	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-333	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-333	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-333	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-333	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-333	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-333	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-333	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-333	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-333	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-333	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-333	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-333	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-333	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-333	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-333	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-333	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-333	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-333	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-333	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-333	Environmental	Terrestrial Wildlife	Burial	100	No - resource is not present
Beach-333	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource is not present
Beach-333	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource is not present
Beach-333	Environmental	Terrestrial Wildlife	Harassment	100	No - resource is not present
Beach-333	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-333	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-333	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-333	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-333	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-333	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-333	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-333	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-333	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-333	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-333	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-333	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-333	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-333	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-333	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-333	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-333	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-333	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-333	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-333	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-333	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-333	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-333	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-333	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-333	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-333	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-333	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-333	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-333	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-333	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-333	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-333	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-333	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-333	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-333	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-333	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-333	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-333	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-333	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-333	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-333	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-337	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-337	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-337	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-337	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-337	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-337	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-337	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-337	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-337	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-337	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-337	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-337	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-337	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-337	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-337	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-337	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-337	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-337	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-337	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-337	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-337	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-337	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-337	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-337	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-337	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-337	Environmental	Federally Managed Species	Burial	100	No
Beach-337	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-337	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-337	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-337	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-337	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-337	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-337	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-337	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-337	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-337	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-337	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-337	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-337	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-337	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-337	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-337	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-337	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-337	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-337	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-337	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-337	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-337	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-337	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-337	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-337	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-337	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-337	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-337	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-337	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-337	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-337	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-337	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-337	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-337	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-337	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-337	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-337	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-337	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-337	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-337	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-337	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-337	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-337	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-337	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-337	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-337	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-337	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-337	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-337	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-337	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-337	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-337	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-337	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-337	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-337	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-337	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-337	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-337	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-337	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-337	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-337	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-337	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-337	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-337	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-337	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-337	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-337	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-339	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-339	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-339	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-339	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-339	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-339	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-339	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-339	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-339	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-339	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-339	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-339	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-339	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-339	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-339	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-339	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-339	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-339	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-339	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-339	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-339	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-339	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-339	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-339	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-339	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-339	Environmental	Federally Managed Species	Burial	100	No
Beach-339	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-339	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-339	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-339	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-339	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-339	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-339	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-339	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-339	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-339	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-339	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-339	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-339	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-339	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-339	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-339	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-339	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-339	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-339	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-339	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-339	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-339	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-339	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-339	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-339	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-339	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-339	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-339	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-339	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-339	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-339	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-339	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-339	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-339	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-339	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-339	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-339	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-339	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-339	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-339	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-339	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-339	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-339	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-339	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-339	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-339	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-339	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-339	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-339	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-339	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-339	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-339	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-339	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-339	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-339	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-339	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-339	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-339	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-339	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-339	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-339	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-339	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-339	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-339	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-339	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-339	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-339	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-343	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-343	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-343	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-343	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-343	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-343	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-343	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-343	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-343	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-343	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-343	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-343	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-343	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-343	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-343	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-343	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-343	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-343	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-343	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-343	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-343	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-343	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-343	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-343	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-343	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-343	Environmental	Federally Managed Species	Burial	100	No
Beach-343	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-343	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-343	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-343	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-343	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-343	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-343	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-343	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-343	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-343	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-343	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-343	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-343	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-343	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-343	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-343	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-343	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-343	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-343	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-343	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-343	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-343	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-343	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-343	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-343	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-343	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-343	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-343	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-343	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-343	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-343	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-343	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-343	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-343	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-343	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-343	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-343	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-343	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-343	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-343	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-343	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-343	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-343	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-343	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-343	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-343	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-343	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-343	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-343	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-343	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-343	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-343	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-343	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-343	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-343	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-343	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-343	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-343	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-343	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-343	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-343	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-343	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-343	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-343	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-343	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-343	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-343	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-344	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-344	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-344	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-344	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-344	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-344	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-344	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-344	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-344	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-344	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-344	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-344	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-344	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-344	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-344	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-344	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-344	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-344	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-344	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-344	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-344	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-344	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-344	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-344	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-344	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-344	Environmental	Federally Managed Species	Burial	100	No

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-344	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-344	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-344	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-344	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-344	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-344	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-344	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-344	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-344	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-344	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-344	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-344	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-344	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-344	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-344	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-344	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-344	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-344	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-344	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-344	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-344	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-344	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-344	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-344	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-344	Environmental	Terrestrial Wildlife	Burial	100	No - resource is not present
Beach-344	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource is not present
Beach-344	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource is not present
Beach-344	Environmental	Terrestrial Wildlife	Harassment	100	No - resource is not present
Beach-344	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-344	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-344	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-344	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-344	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-344	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-344	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-344	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-344	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-344	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-344	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-344	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-344	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-344	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-344	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-344	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-344	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-344	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-344	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-344	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-344	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-344	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-344	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-344	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-344	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-344	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-344	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-344	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-344	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-344	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-344	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-344	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-344	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-344	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-344	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-344	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-344	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-344	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-344	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-345	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-345	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-345	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-345	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-345	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-345	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-345	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-345	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-345	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-345	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-345	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-345	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-345	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-345	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-345	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-345	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-345	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-345	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-345	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-345	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-345	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-345	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-345	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-345	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-345	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-345	Environmental	Federally Managed Species	Burial	100	No
Beach-345	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-345	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-345	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-345	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-345	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-345	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-345	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-345	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-345	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-345	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-345	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-345	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-345	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-345	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-345	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-345	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-345	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-345	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-345	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-345	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-345	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-345	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-345	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-345	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-345	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-345	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-345	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-345	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-345	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-345	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-345	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-345	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-345	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-345	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-345	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-345	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-345	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-345	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-345	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-345	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-345	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-345	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-345	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-345	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-345	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-345	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-345	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-345	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-345	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-345	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-345	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-345	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-345	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-345	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-345	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-345	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-345	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-345	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-345	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-345	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-345	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-345	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-345	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-345	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-345	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-345	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-345	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-348	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-348	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-348	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-348	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-348	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-348	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-348	Cultural	Shipwrecks	Burial	100	Unlikely - resources outside suspended sediment plume generated during construction
Beach-348	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - renourishment material not likely to be transported offshore
Beach-348	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-348	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-348	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-348	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-348	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-348	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-348	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-348	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-348	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-348	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-348	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-348	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-348	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-348	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-348	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-348	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-348	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-348	Environmental	Federally Managed Species	Burial	100	No
Beach-348	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-348	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-348	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-348	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-348	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-348	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-348	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-348	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-348	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-348	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-348	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-348	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-348	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-348	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-348	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-348	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-348	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-348	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-348	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-348	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-348	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-348	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-348	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-348	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-348	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-348	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-348	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-348	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-348	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-348	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-348	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-348	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-348	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-348	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-348	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-348	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-348	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-348	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-348	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-348	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-348	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-348	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-348	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-348	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-348	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-348	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-348	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-348	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-348	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-348	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-348	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-348	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-348	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-348	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-348	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-348	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-348	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-348	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-348	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-348	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-348	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-348	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-348	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-348	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-348	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-348	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-348	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-364	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-364	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-364	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-364	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-364	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-364	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-364	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-364	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-364	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-364	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-364	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-364	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-364	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-364	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-364	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-364	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-364	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-364	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-364	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-364	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-364	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-364	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-364	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-364	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-364	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-364	Environmental	Federally Managed Species	Burial	100	No
Beach-364	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-364	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-364	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-364	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-364	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-364	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-364	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-364	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-364	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-364	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-364	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-364	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-364	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-364	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-364	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-364	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-364	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-364	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-364	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-364	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-364	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-364	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-364	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-364	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-364	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-364	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-364	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-364	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-364	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-364	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-364	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-364	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-364	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-364	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-364	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-364	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-364	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-364	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-364	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-364	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-364	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-364	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-364	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-364	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-364	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-364	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-364	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-364	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-364	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-364	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-364	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-364	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-364	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-364	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-364	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-364	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-364	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-364	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-364	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-364	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-364	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-364	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-364	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-364	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-364	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-364	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-364	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-365	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-365	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-365	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-365	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-365	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-365	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-365	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-365	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-365	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-365	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-365	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-365	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-365	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-365	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-365	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-365	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-365	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-365	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-365	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-365	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-365	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-365	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-365	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-365	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-365	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-365	Environmental	Federally Managed Species	Burial	100	No
Beach-365	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-365	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-365	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-365	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-365	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-365	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-365	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-365	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-365	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-365	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-365	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-365	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-365	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-365	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-365	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-365	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-365	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-365	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-365	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-365	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-365	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-365	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-365	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-365	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-365	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-365	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-365	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-365	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-365	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-365	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-365	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-365	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-365	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-365	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-365	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-365	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-365	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-365	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-365	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-365	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-365	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-365	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-365	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-365	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-365	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-365	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-365	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-365	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-365	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-365	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-365	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-365	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-365	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-365	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-365	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-365	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-365	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-365	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-365	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-365	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-365	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-365	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-365	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-365	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-365	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-365	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-365	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-365	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-367	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-367	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-367	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-367	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-367	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-367	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-367	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-367	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-367	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-367	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-367	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-367	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-367	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-367	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-367	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-367	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-367	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-367	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-367	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-367	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-367	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-367	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-367	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-367	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-367	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-367	Environmental	Federally Managed Species	Burial	100	No
Beach-367	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-367	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-367	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-367	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-367	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-367	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-367	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-367	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-367	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-367	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-367	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-367	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-367	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-367	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-367	Environmental	SAV (eelgrass)	Burial	50	Potential - where resource is located within renourishment area
Beach-367	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-367	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource will not be removed during construction

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-367	Environmental	SAV (eelgrass)	Habitat Impairment	50	Potential - shallower water depths associated with shoreline renourishment
Beach-367	Environmental	SAV (eelgrass)	Water Quality Impairment	100	Unlikely - temporary impacts to water quality during construction
Beach-367	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-367	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-367	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-367	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-367	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-367	Environmental	Terrestrial Wildlife	Burial	100	No - resource is not present
Beach-367	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource is not present
Beach-367	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource is not present
Beach-367	Environmental	Terrestrial Wildlife	Harassment	100	No - resource is not present
Beach-367	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-367	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-367	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-367	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-367	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-367	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-367	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-367	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-367	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-367	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-367	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-367	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-367	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-367	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-367	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-367	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-367	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-367	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-367	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-367	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-367	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-367	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-367	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-367	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-367	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-367	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-367	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-367	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-367	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-367	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-367	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-367	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-367	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-367	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-367	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-367	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-367	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-367	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-367	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-367	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-367	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-368	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-368	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-368	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-368	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-368	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-368	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-368	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-368	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-368	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-368	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-368	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-368	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-368	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-368	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-368	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-368	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-368	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-368	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-368	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-368	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-368	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-368	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-368	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-368	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-368	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-368	Environmental	Federally Managed Species	Burial	100	No
Beach-368	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-368	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-368	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-368	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-368	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-368	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-368	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-368	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-368	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-368	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-368	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-368	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-368	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-368	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-368	Environmental	SAV (eelgrass)	Burial	50	Potential - where resource is located within renourishment area
Beach-368	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-368	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-368	Environmental	SAV (eelgrass)	Habitat Impairment	50	Potential - shallower water depths associated with shoreline renourishment
Beach-368	Environmental	SAV (eelgrass)	Water Quality Impairment	100	Unlikely - temporary impacts to water quality during construction
Beach-368	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-368	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-368	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-368	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-368	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-368	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-368	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-368	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-368	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-368	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-368	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-368	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-368	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-368	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-368	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-368	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-368	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-368	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-368	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-368	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-368	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-368	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-368	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-368	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-368	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-368	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-368	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-368	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-368	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-368	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-368	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-368	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-368	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-368	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-368	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-368	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-368	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-368	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-368	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-368	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-368	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-368	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-368	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-368	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-368	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-368	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-368	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-368	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-381	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-381	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-381	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-381	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-381	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-381	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-381	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-381	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-381	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-381	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-381	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-381	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-381	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-381	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-381	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-381	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-381	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-381	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-381	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-381	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-381	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-381	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-381	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-381	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-381	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-381	Environmental	Federally Managed Species	Burial	100	No
Beach-381	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-381	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-381	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-381	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-381	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-381	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-381	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-381	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-381	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-381	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-381	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-381	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-381	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-381	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-381	Environmental	SAV (eelgrass)	Burial	50	Potential - where resource is located within renourishment area
Beach-381	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-381	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-381	Environmental	SAV (eelgrass)	Habitat Impairment	50	Potential - shallower water depths associated with shoreline renourishment
Beach-381	Environmental	SAV (eelgrass)	Water Quality Impairment	100	Unlikely - temporary impacts to water quality during construction
Beach-381	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-381	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-381	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-381	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-381	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-381	Environmental	Terrestrial Wildlife	Burial	100	No - resource is not present
Beach-381	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource is not present
Beach-381	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource is not present
Beach-381	Environmental	Terrestrial Wildlife	Harassment	100	No - resource is not present
Beach-381	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-381	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-381	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-381	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-381	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-381	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-381	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-381	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-381	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-381	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-381	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-381	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-381	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-381	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-381	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-381	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-381	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-381	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-381	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-381	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-381	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-381	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-381	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-381	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-381	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-381	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-381	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-381	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-381	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-381	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-381	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-381	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-381	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-381	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-381	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-381	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-381	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-381	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-381	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-382	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-382	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-382	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-382	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-382	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-382	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-382	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-382	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-382	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-382	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-382	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-382	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-382	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-382	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-382	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-382	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-382	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-382	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-382	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-382	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-382	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-382	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-382	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-382	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-382	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-382	Environmental	Federally Managed Species	Burial	100	No
Beach-382	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-382	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-382	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-382	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-382	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-382	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-382	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-382	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-382	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-382	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-382	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-382	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-382	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-382	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-382	Environmental	SAV (eelgrass)	Burial	50	Potential - where resource is located within renourishment area
Beach-382	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-382	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-382	Environmental	SAV (eelgrass)	Habitat Impairment	50	Potential - shallower water depths associated with shoreline renourishment
Beach-382	Environmental	SAV (eelgrass)	Water Quality Impairment	100	Unlikely - temporary impacts to water quality during construction
Beach-382	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-382	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-382	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-382	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-382	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-382	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-382	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-382	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-382	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-382	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-382	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-382	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-382	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-382	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-382	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-382	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-382	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-382	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-382	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-382	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-382	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-382	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-382	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-382	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-382	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-382	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-382	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-382	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-382	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-382	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-382	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-382	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-382	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-382	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-382	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-382	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-382	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-382	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-382	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-382	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-382	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-382	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-382	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-382	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-382	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-382	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-382	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-382	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-384	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-384	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-384	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-384	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-384	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-384	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-384	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-384	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-384	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-384	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-384	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-384	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-384	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-384	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-384	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-384	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-384	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-384	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-384	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-384	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-384	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-384	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-384	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-384	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-384	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-384	Environmental	Federally Managed Species	Burial	100	No
Beach-384	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-384	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-384	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-384	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-384	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-384	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-384	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-384	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-384	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-384	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-384	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-384	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-384	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-384	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-384	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-384	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-384	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-384	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-384	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-384	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-384	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-384	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-384	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-384	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-384	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-384	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-384	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-384	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-384	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-384	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-384	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-384	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-384	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-384	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-384	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-384	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-384	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-384	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-384	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-384	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-384	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-384	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-384	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-384	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-384	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-384	Infrastructure	Coastal Structures	Undermining / Erosion	100	No

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-384	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-384	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-384	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-384	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-384	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-384	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-384	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-384	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-384	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-384	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-384	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-384	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-384	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-384	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-384	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-384	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-384	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-384	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-384	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-384	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-384	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-433	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-433	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-433	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-433	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-433	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-433	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-433	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-433	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-433	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-433	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-433	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-433	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-433	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-433	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-433	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-433	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-433	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-433	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-433	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-433	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-433	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-433	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-433	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-433	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-433	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-433	Environmental	Federally Managed Species	Burial	100	No
Beach-433	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-433	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-433	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-433	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-433	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-433	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-433	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-433	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-433	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-433	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-433	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-433	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-433	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-433	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-433	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-433	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-433	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-433	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-433	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-433	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-433	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-433	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-433	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-433	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-433	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-433	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-433	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-433	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-433	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-433	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-433	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-433	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-433	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-433	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-433	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-433	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-433	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-433	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-433	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-433	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-433	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-433	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-433	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-433	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-433	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-433	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-433	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-433	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-433	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-433	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-433	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-433	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-433	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-433	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-433	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-433	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-433	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-433	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-433	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-433	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-433	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-433	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-433	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-433	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-433	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-433	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-433	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-433	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-433	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-433	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-434	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-434	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-434	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-434	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-434	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-434	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-434	Cultural	Shipwrecks	Burial	100	Unlikely - resources outside suspended sediment plume generated during construction
Beach-434	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - renourishment material not likely to be transported offshore
Beach-434	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-434	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-434	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-434	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-434	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-434	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-434	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-434	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-434	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-434	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-434	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-434	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-434	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-434	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-434	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-434	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-434	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-434	Environmental	Federally Managed Species	Burial	100	No
Beach-434	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-434	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-434	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-434	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-434	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-434	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-434	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-434	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-434	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-434	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-434	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-434	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-434	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-434	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-434	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-434	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-434	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-434	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-434	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-434	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-434	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-434	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-434	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-434	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-434	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-434	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-434	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-434	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-434	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-434	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-434	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-434	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-434	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-434	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-434	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-434	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-434	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-434	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-434	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-434	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-434	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-434	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-434	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-434	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-434	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-434	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-434	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-434	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-434	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-434	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-434	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-434	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-434	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-434	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-434	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-434	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-434	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-434	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-434	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-434	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-434	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-434	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-434	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-434	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-434	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-434	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-434	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-436	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-436	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-436	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-436	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-436	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-436	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-436	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-436	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-436	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-436	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-436	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-436	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-436	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-436	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-436	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-436	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-436	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-436	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-436	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-436	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-436	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-436	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-436	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-436	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-436	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-436	Environmental	Federally Managed Species	Burial	100	No
Beach-436	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-436	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-436	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-436	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-436	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-436	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-436	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-436	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-436	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-436	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-436	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-436	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-436	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-436	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-436	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-436	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-436	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-436	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-436	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-436	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-436	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-436	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-436	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-436	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-436	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-436	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-436	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-436	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-436	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-436	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-436	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-436	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-436	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-436	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-436	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-436	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-436	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-436	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-436	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-436	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-436	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-436	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-436	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-436	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-436	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-436	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-436	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-436	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-436	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-436	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-436	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-436	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-436	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-436	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-436	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-436	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-436	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-436	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-436	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-436	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-436	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-436	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-436	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-436	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-436	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-436	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-436	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-437	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-437	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-437	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-437	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-437	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-437	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-437	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-437	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-437	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-437	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-437	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-437	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-437	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-437	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-437	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-437	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-437	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-437	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-437	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-437	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-437	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-437	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-437	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-437	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-437	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-437	Environmental	Federally Managed Species	Burial	100	No
Beach-437	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-437	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-437	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-437	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-437	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-437	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-437	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-437	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-437	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-437	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-437	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-437	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-437	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-437	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-437	Environmental	SAV (eelgrass)	Burial	50	Potential - where resource is located within renourishment area
Beach-437	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-437	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-437	Environmental	SAV (eelgrass)	Habitat Impairment	50	Potential - shallower water depths associated with shoreline renourishment
Beach-437	Environmental	SAV (eelgrass)	Water Quality Impairment	100	Unlikely - temporary impacts to water quality during construction
Beach-437	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-437	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-437	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-437	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-437	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-437	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-437	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-437	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-437	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-437	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-437	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-437	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-437	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-437	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-437	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-437	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-437	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-437	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-437	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-437	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-437	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-437	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-437	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-437	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-437	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-437	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-437	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-437	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-437	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-437	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-437	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-437	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-437	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-437	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-437	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-437	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-437	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-437	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-437	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-437	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-437	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-437	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-437	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-437	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-437	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-437	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-437	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-437	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-438	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-438	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-438	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-438	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-438	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-438	Cultural	Historic Districts	Visual Impact	100	No - resource is not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-438	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-438	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-438	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-438	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-438	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-438	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-438	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-438	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-438	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-438	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-438	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-438	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-438	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-438	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-438	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-438	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-438	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-438	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-438	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-438	Environmental	Federally Managed Species	Burial	100	No
Beach-438	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-438	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-438	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-438	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-438	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-438	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-438	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-438	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-438	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-438	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-438	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-438	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-438	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-438	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-438	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-438	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-438	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-438	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-438	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-438	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-438	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-438	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-438	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-438	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-438	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-438	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-438	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-438	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-438	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-438	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-438	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-438	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-438	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-438	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-438	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-438	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-438	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-438	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-438	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-438	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-438	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-438	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-438	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-438	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-438	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-438	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-438	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-438	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-438	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-438	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-438	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-438	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-438	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-438	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-438	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-438	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-438	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-438	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-438	Infrastructure	Recreational Areas	Burial	0	Yes

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-438	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-438	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-438	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-438	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-438	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-438	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-438	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-438	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-440	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-440	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-440	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-440	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-440	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-440	Cultural	Historic Districts	Visual Impact	100	Unlikely - beach is not visible from site
Beach-440	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-440	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-440	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-440	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-440	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-440	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-440	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-440	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-440	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-440	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-440	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-440	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-440	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-440	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-440	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-440	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-440	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-440	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-440	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-440	Environmental	Federally Managed Species	Burial	100	No
Beach-440	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-440	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-440	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-440	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-440	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-440	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-440	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-440	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-440	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-440	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-440	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-440	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-440	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-440	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-440	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-440	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-440	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-440	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-440	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-440	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-440	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-440	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-440	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-440	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-440	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-440	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-440	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-440	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-440	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-440	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-440	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-440	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-440	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-440	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-440	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-440	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-440	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-440	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-440	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-440	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-440	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-440	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-440	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-440	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-440	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-440	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-440	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-440	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-440	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-440	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-440	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-440	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-440	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-440	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-440	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-440	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-440	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-440	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-440	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-440	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-440	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-440	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-440	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-440	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-440	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-440	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-440	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-441	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-441	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-441	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-441	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-441	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-441	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-441	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-441	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-441	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-441	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-441	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-441	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-441	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-441	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-441	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-441	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-441	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-441	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-441	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-441	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-441	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-441	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-441	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-441	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-441	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-441	Environmental	Federally Managed Species	Burial	100	No
Beach-441	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-441	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-441	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-441	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-441	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-441	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-441	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-441	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-441	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-441	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-441	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-441	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-441	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-441	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-441	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-441	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-441	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-441	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-441	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-441	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-441	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-441	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-441	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-441	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-441	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-441	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-441	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-441	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-441	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-441	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-441	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-441	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-441	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-441	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-441	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-441	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-441	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-441	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-441	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-441	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-441	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-441	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-441	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-441	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-441	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-441	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-441	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-441	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-441	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-441	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-441	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-441	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-441	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-441	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-441	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-441	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-441	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-441	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-441	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-441	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-441	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-441	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-441	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-441	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-441	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-441	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-441	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-442	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-442	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-442	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-442	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-442	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-442	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-442	Cultural	Shipwrecks	Burial	100	Unlikely - resources outside suspended sediment plume generated during construction
Beach-442	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - renourishment material not likely to be transported offshore
Beach-442	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-442	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-442	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-442	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-442	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-442	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-442	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-442	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-442	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-442	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-442	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-442	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-442	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-442	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-442	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-442	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-442	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-442	Environmental	Federally Managed Species	Burial	100	No
Beach-442	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-442	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-442	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-442	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-442	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-442	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-442	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-442	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-442	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-442	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-442	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-442	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-442	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-442	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-442	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-442	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-442	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-442	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-442	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-442	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-442	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-442	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-442	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-442	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-442	Environmental	Terrestrial Wildlife	Burial	100	No - resource is not present
Beach-442	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource is not present
Beach-442	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource is not present
Beach-442	Environmental	Terrestrial Wildlife	Harassment	100	No - resource is not present
Beach-442	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-442	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-442	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-442	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-442	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-442	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-442	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-442	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-442	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-442	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-442	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-442	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-442	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-442	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-442	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-442	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-442	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-442	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-442	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-442	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-442	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-442	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-442	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-442	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-442	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-442	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-442	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-442	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-442	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-442	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-442	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-442	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-442	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-442	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-442	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-442	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-442	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-442	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-442	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-444	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-444	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-444	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-444	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-444	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-444	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-444	Cultural	Shipwrecks	Burial	100	Unlikely - resources outside suspended sediment plume generated during construction
Beach-444	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - renourishment material not likely to be transported offshore
Beach-444	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-444	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-444	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-444	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-444	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-444	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-444	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-444	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-444	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-444	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-444	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-444	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-444	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-444	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-444	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-444	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-444	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-444	Environmental	Federally Managed Species	Burial	100	No
Beach-444	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-444	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-444	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-444	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-444	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-444	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-444	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-444	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-444	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-444	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-444	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-444	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-444	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-444	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-444	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-444	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-444	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-444	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-444	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-444	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-444	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-444	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-444	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-444	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-444	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-444	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-444	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-444	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-444	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-444	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-444	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-444	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-444	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-444	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-444	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-444	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-444	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-444	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-444	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-444	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-444	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-444	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-444	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-444	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-444	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-444	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-444	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-444	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-444	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-444	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-444	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-444	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-444	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-444	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-444	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-444	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-444	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-444	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-444	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-444	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-444	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-444	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-444	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-444	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-444	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-444	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-444	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-445	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-445	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-445	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-445	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-445	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-445	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-445	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-445	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-445	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-445	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-445	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-445	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-445	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-445	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-445	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-445	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-445	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-445	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-445	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-445	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-445	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-445	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-445	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-445	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-445	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-445	Environmental	Federally Managed Species	Burial	100	No
Beach-445	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-445	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-445	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-445	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-445	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-445	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-445	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-445	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-445	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-445	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-445	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-445	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-445	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-445	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-445	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-445	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-445	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-445	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-445	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-445	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-445	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-445	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-445	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-445	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-445	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-445	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-445	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-445	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-445	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-445	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-445	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-445	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-445	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-445	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-445	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-445	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-445	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-445	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-445	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-445	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-445	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-445	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-445	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-445	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-445	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-445	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-445	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-445	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-445	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-445	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-445	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-445	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-445	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-445	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-445	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-445	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-445	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-445	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-445	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-445	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-445	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-445	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-445	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-445	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-445	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-445	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-445	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-446	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-446	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-446	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-446	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-446	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-446	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-446	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-446	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-446	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-446	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-446	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-446	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-446	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-446	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-446	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-446	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-446	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-446	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-446	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-446	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-446	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-446	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-446	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-446	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-446	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-446	Environmental	Federally Managed Species	Burial	100	No
Beach-446	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-446	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-446	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-446	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-446	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-446	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-446	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-446	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-446	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-446	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-446	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-446	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-446	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-446	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-446	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-446	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-446	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-446	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-446	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-446	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-446	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-446	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-446	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-446	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-446	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-446	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-446	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-446	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-446	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-446	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-446	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-446	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-446	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-446	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-446	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-446	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-446	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-446	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-446	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-446	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-446	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-446	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-446	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-446	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-446	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-446	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-446	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-446	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-446	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-446	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-446	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-446	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-446	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-446	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-446	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-446	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-446	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-446	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-446	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-446	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-446	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-446	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-446	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-446	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-446	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-446	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-446	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-447	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-447	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-447	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-447	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-447	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-447	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-447	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-447	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-447	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-447	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-447	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-447	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-447	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-447	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-447	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-447	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-447	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-447	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-447	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-447	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-447	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-447	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-447	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-447	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-447	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-447	Environmental	Federally Managed Species	Burial	100	No
Beach-447	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-447	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-447	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-447	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-447	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-447	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-447	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-447	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-447	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-447	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-447	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-447	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-447	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-447	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-447	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-447	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-447	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-447	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-447	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-447	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-447	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-447	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-447	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-447	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-447	Environmental	Terrestrial Wildlife	Burial	100	No - resource is not present
Beach-447	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource is not present
Beach-447	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource is not present
Beach-447	Environmental	Terrestrial Wildlife	Harassment	100	No - resource is not present
Beach-447	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-447	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-447	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-447	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-447	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-447	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-447	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-447	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-447	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-447	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-447	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-447	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-447	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-447	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-447	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-447	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-447	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-447	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-447	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-447	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-447	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-447	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-447	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-447	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-447	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-447	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-447	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-447	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-447	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-447	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-447	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-447	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-447	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-447	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-447	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-447	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-447	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-447	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-447	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-449	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-449	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-449	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-449	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-449	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-449	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-449	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-449	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-449	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-449	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-449	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-449	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-449	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-449	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-449	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-449	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-449	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-449	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-449	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-449	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-449	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-449	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-449	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-449	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-449	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-449	Environmental	Federally Managed Species	Burial	100	No
Beach-449	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-449	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-449	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-449	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-449	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-449	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-449	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-449	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-449	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-449	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-449	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-449	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-449	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-449	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-449	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-449	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-449	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-449	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-449	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-449	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-449	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-449	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-449	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-449	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-449	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-449	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-449	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-449	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-449	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-449	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-449	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-449	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-449	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-449	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-449	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-449	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-449	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-449	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-449	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-449	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-449	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-449	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-449	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-449	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-449	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-449	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-449	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-449	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-449	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-449	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-449	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-449	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-449	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-449	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-449	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-449	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-449	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-449	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-449	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-449	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-449	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-449	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-449	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-449	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-449	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-449	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-449	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-450	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-450	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-450	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-450	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-450	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-450	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-450	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-450	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-450	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-450	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-450	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-450	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-450	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-450	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-450	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-450	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-450	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-450	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-450	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-450	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-450	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-450	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-450	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-450	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-450	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-450	Environmental	Federally Managed Species	Burial	100	No
Beach-450	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-450	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-450	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-450	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-450	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-450	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-450	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-450	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-450	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-450	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-450	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-450	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-450	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-450	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-450	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-450	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-450	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-450	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-450	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-450	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-450	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-450	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-450	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-450	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-450	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-450	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-450	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-450	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-450	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-450	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-450	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-450	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-450	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-450	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-450	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-450	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-450	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-450	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-450	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-450	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-450	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-450	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-450	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-450	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-450	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-450	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-450	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-450	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-450	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-450	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-450	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-450	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-450	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-450	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-450	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-450	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-450	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-450	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-450	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-450	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-450	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-450	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-450	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-450	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-450	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-450	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-450	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-451	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-451	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-451	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-451	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-451	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-451	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-451	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-451	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-451	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-451	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-451	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-451	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-451	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-451	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-451	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-451	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-451	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-451	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-451	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-451	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-451	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-451	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-451	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-451	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-451	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-451	Environmental	Federally Managed Species	Burial	100	No
Beach-451	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-451	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-451	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-451	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-451	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-451	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-451	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-451	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-451	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-451	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-451	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-451	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-451	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-451	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-451	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-451	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-451	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-451	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-451	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-451	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-451	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-451	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-451	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-451	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-451	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-451	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-451	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-451	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-451	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-451	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-451	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-451	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-451	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-451	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-451	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-451	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-451	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-451	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-451	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-451	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-451	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-451	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-451	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-451	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-451	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-451	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-451	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-451	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-451	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-451	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-451	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-451	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-451	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-451	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-451	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-451	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-451	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-451	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-451	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-451	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-451	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-451	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-451	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-451	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-451	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-451	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-451	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-453	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource outside possible sedimentation/erosion zone
Beach-453	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is upland from site
Beach-453	Cultural	Archaeological Sites	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-453	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-453	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-453	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-453	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-453	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-453	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-453	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-453	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-453	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-453	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-453	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-453	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-453	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-453	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-453	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-453	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-453	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-453	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-453	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-453	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-453	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-453	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-453	Environmental	Federally Managed Species	Burial	100	No
Beach-453	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-453	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-453	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-453	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-453	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-453	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-453	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-453	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-453	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-453	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-453	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-453	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-453	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-453	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-453	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-453	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-453	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-453	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-453	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-453	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-453	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-453	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-453	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-453	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-453	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-453	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-453	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-453	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-453	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-453	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-453	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-453	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-453	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-453	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-453	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-453	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-453	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-453	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-453	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-453	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-453	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-453	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-453	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-453	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-453	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-453	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-453	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-453	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-453	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-453	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-453	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-453	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-453	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-453	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-453	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-453	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-453	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-453	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-453	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-453	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-453	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-453	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-453	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-453	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-453	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-453	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-453	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-454 East	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-454 East	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-454 East	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-454 East	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-454 East	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-454 East	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-454 East	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-454 East	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-454 East	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-454 East	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-454 East	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-454 East	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-454 East	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-454 East	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-454 East	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-454 East	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-454 East	Environmental	Federally Managed Species	Burial	100	No
Beach-454 East	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-454 East	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-454 East	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-454 East	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-454 East	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-454 East	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-454 East	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-454 East	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-454 East	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-454 East	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-454 East	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-454 East	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-454 East	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-454 East	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-454 East	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-454 East	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-454 East	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-454 East	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-454 East	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-454 East	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-454 East	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-454 East	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-454 East	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-454 East	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-454 East	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-454 East	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-454 East	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-454 East	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-454 East	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-454 East	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-454 East	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-454 East	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-454 East	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-454 East	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-454 East	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-454 East	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-454 East	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-454 East	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-454 East	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-454 East	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-454 East	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-454 East	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-454 East	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-454 East	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-454 East	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-454 East	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-454 East	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-454 East	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-454 East	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-454 East	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-454 East	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-454 East	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-454 East	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-454 East	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-454 East	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-454 East	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-454 East	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-454 East	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-454 East	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-454 East	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-454 East	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-454 East	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-454 West	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-454 West	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-454 West	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-454 West	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-454 West	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-454 West	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-454 West	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-454 West	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-454 West	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-454 West	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-454 West	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-454 West	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-454 West	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-454 West	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-454 West	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-454 West	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-454 West	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-454 West	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-454 West	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-454 West	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-454 West	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-454 West	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-454 West	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-454 West	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-454 West	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-454 West	Environmental	Federally Managed Species	Burial	100	No
Beach-454 West	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-454 West	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-454 West	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-454 West	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-454 West	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-454 West	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-454 West	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-454 West	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-454 West	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-454 West	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-454 West	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-454 West	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-454 West	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-454 West	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-454 West	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-454 West	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-454 West	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-454 West	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-454 West	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-454 West	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-454 West	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-454 West	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-454 West	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-454 West	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-454 West	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-454 West	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-454 West	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-454 West	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-454 West	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-454 West	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-454 West	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-454 West	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-454 West	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-454 West	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-454 West	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-454 West	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-454 West	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-454 West	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-454 West	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-454 West	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-454 West	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-454 West	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-454 West	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-454 West	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-454 West	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-454 West	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-454 West	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-454 West	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-454 West	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-454 West	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-454 West	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-454 West	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-454 West	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-454 West	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-454 West	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-454 West	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-454 West	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-454 West	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-454 West	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-454 West	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-454 West	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-454 West	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-454 West	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-454 West	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-454 West	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-454 West	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-454 West	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-455/82	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-455/82	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-455/82	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-455/82	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-455/82	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-455/82	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-455/82	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-455/82	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-455/82	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-455/82	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-455/82	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-455/82	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-455/82	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-455/82	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-455/82	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-455/82	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-455/82	Environmental	Federally Managed Species	Burial	100	No
Beach-455/82	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-455/82	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-455/82	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-455/82	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-455/82	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-455/82	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-455/82	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-455/82	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-455/82	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-455/82	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-455/82	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-455/82	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-455/82	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-455/82	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-455/82	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-455/82	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-455/82	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-455/82	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-455/82	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-455/82	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-455/82	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-455/82	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-455/82	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-455/82	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-455/82	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-455/82	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-455/82	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-455/82	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-455/82	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-455/82	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-455/82	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-455/82	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-455/82	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-455/82	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-455/82	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-455/82	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-455/82	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-455/82	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-455/82	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-455/82	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-455/82	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-455/82	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-455/82	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-455/82	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-455/82	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-455/82	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-455/82	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-455/82	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-455/82	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-455/82	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-455/82	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-455/82	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-455/82	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-455/82	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-455/82	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-455/82	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-455/82	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-455/82	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-455/82	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-455/82	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-455/82	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-455/82	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-455/82	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-455/82	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-455/82	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-455/82	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-455/82	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-456	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-456	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-456	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-456	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-456	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-456	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-456	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-456	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-456	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-456	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-456	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-456	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-456	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-456	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-456	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-456	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-456	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-456	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-456	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-456	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-456	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-456	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-456	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-456	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-456	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-456	Environmental	Federally Managed Species	Burial	100	No
Beach-456	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-456	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-456	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-456	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-456	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-456	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-456	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-456	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-456	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-456	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-456	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-456	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-456	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-456	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-456	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-456	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-456	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-456	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-456	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-456	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-456	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-456	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-456	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-456	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-456	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-456	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-456	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-456	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-456	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-456	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-456	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-456	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-456	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-456	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-456	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-456	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-456	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-456	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-456	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-456	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-456	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-456	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-456	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-456	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-456	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-456	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-456	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-456	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-456	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-456	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-456	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-456	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-456	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-456	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-456	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-456	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-456	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-456	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-456	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-456	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-456	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-456	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-456	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-456	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-456	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-456	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-456	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-457	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-457	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-457	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-457	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-457	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-457	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-457	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-457	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-457	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-457	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-457	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-457	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-457	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-457	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-457	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-457	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-457	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-457	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-457	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-457	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-457	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-457	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-457	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-457	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-457	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-457	Environmental	Federally Managed Species	Burial	100	No
Beach-457	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-457	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-457	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-457	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-457	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-457	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-457	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-457	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-457	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-457	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-457	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-457	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-457	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-457	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-457	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-457	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-457	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-457	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-457	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-457	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-457	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-457	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-457	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-457	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-457	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-457	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-457	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-457	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-457	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-457	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-457	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-457	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-457	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-457	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-457	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-457	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-457	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-457	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-457	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-457	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-457	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-457	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-457	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-457	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-457	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-457	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-457	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-457	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-457	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-457	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-457	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-457	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-457	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-457	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-457	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-457	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-457	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-457	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-457	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-457	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-457	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-457	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-457	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-457	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-457	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-457	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-457	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-459	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-459	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-459	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-459	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-459	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-459	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-459	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-459	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-459	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-459	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-459	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-459	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-459	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-459	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-459	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-459	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-459	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-459	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-459	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-459	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-459	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-459	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-459	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-459	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-459	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-459	Environmental	Federally Managed Species	Burial	100	No
Beach-459	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-459	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-459	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-459	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-459	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-459	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-459	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-459	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-459	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-459	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-459	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-459	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-459	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-459	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-459	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-459	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-459	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-459	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-459	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-459	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-459	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-459	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-459	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-459	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-459	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-459	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-459	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-459	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-459	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-459	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-459	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-459	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-459	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-459	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-459	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-459	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-459	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-459	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-459	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-459	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-459	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-459	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-459	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-459	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-459	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-459	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-459	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-459	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-459	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-459	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-459	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-459	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-459	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-459	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-459	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-459	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-459	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-459	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-459	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-459	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-459	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-459	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-459	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-459	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-459	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-459	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-459	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-467	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-467	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-467	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-467	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-467	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-467	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-467	Cultural	Shipwrecks	Burial	100	Unlikely - resources outside suspended sediment plume generated during construction
Beach-467	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - renourishment material not likely to be transported offshore
Beach-467	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-467	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-467	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-467	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-467	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-467	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-467	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-467	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-467	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-467	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-467	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-467	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-467	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-467	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-467	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-467	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-467	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-467	Environmental	Federally Managed Species	Burial	100	No
Beach-467	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-467	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-467	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-467	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-467	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-467	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-467	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-467	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-467	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-467	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-467	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-467	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-467	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-467	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-467	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-467	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-467	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-467	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-467	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-467	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-467	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-467	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-467	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-467	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-467	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-467	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-467	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-467	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-467	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-467	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-467	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-467	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-467	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-467	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-467	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-467	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-467	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-467	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-467	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-467	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-467	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-467	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-467	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-467	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-467	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-467	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-467	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-467	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-467	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-467	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-467	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-467	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-467	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-467	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-467	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-467	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-467	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-467	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-467	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-467	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-467	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-467	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-467	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-467	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-467	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-467	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-467	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-468	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-468	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-468	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-468	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-468	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-468	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-468	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-468	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-468	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-468	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-468	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-468	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-468	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-468	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-468	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-468	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-468	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-468	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-468	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-468	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-468	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-468	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-468	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-468	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-468	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-468	Environmental	Federally Managed Species	Burial	100	No
Beach-468	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-468	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-468	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-468	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-468	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-468	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-468	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-468	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-468	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-468	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-468	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-468	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-468	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-468	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-468	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-468	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-468	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-468	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-468	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-468	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-468	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-468	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-468	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-468	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-468	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-468	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-468	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-468	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-468	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-468	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-468	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-468	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-468	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-468	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-468	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-468	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-468	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-468	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-468	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-468	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-468	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-468	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-468	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-468	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-468	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-468	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-468	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-468	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-468	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-468	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-468	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-468	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-468	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-468	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-468	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-468	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-468	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-468	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-468	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-468	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-468	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-468	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-468	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-468	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-468	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-468	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-468	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-474	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-474	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-474	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-474	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-474	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-474	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-474	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-474	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-474	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-474	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-474	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-474	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-474	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-474	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-474	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-474	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-474	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-474	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-474	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-474	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-474	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-474	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-474	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-474	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-474	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-474	Environmental	Federally Managed Species	Burial	100	No
Beach-474	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-474	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-474	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-474	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-474	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-474	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-474	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-474	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-474	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-474	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-474	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-474	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-474	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-474	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-474	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-474	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-474	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-474	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-474	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-474	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-474	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-474	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-474	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-474	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-474	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-474	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-474	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-474	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-474	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-474	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-474	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-474	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-474	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-474	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-474	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-474	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-474	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-474	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-474	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-474	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-474	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-474	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-474	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-474	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-474	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-474	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-474	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-474	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-474	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-474	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-474	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-474	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-474	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-474	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-474	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-474	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-474	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-474	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-474	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-474	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-474	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-474	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-474	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-474	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-474	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-474	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-474	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-480	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-480	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-480	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-480	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-480	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-480	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-480	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-480	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-480	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-480	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-480	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-480	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-480	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-480	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-480	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-480	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-480	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-480	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-480	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-480	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-480	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-480	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-480	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-480	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-480	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-480	Environmental	Federally Managed Species	Burial	100	No
Beach-480	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-480	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-480	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-480	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-480	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-480	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-480	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-480	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-480	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-480	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-480	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-480	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-480	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-480	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-480	Environmental	SAV (eelgrass)	Burial	50	Potential - where resource is located within renourishment area
Beach-480	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-480	Environmental	SAV (eelgrass)	Direct Destruction/Interference	50	Potential - where resource is located within renourishment area
Beach-480	Environmental	SAV (eelgrass)	Habitat Impairment	50	Potential - shallower water depths associated with shoreline renourishment
Beach-480	Environmental	SAV (eelgrass)	Water Quality Impairment	100	Unlikely - temporary impacts to water quality during construction
Beach-480	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-480	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-480	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-480	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-480	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-480	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-480	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-480	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-480	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-480	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-480	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-480	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-480	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-480	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-480	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-480	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-480	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-480	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-480	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-480	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-480	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-480	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-480	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-480	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-480	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-480	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-480	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-480	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-480	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-480	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-480	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-480	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-480	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-480	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-480	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-480	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-480	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-480	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-480	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-480	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-480	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-480	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-480	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-480	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-480	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-480	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-480	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-480	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-600	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource outside possible sedimentation/erosion zone
Beach-600	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is upland from site
Beach-600	Cultural	Archaeological Sites	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-600	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-600	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-600	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-600	Cultural	Shipwrecks	Burial	100	Unlikely - resources outside suspended sediment plume generated during construction
Beach-600	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - renourishment material not likely to be transported offshore
Beach-600	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-600	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-600	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-600	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-600	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-600	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-600	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-600	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-600	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-600	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-600	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-600	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-600	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-600	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-600	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-600	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-600	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-600	Environmental	Federally Managed Species	Burial	100	No
Beach-600	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-600	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-600	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-600	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-600	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-600	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-600	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-600	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-600	Environmental	Marine Protected Areas	Change in Direction, Rate, Amplitude, or Period	50	
Beach-600	Environmental	Marine Protected Areas	Change in Grain Size	50	
Beach-600	Environmental	Marine Protected Areas	Change in TOC	50	
Beach-600	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-600	Environmental	Marine Protected Areas	Changes in Sedimentation Patterns	50	
Beach-600	Environmental	Marine Protected Areas	Changes in Vessel Traffic Patterns	50	
Beach-600	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-600	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-600	Environmental	Marine Protected Areas	Harassment	50	
Beach-600	Environmental	Marine Protected Areas	Sediment Quality Impairment	50	
Beach-600	Environmental	Marine Protected Areas	Undermining / Erosion	50	
Beach-600	Environmental	Marine Protected Areas	Visual Impact	50	
Beach-600	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-600	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-600	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-600	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-600	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-600	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-600	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-600	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-600	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-600	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-600	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-600	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-600	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-600	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-600	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-600	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-600	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-600	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-600	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-600	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-600	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-600	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-600	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-600	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-600	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-600	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-600	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-600	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-600	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-600	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-600	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-600	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-600	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-600	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-600	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-600	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-600	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-600	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-600	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-600	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-600	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-600	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-610	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-610	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-610	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-610	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-610	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-610	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-610	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-610	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-610	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-610	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-610	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-610	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-610	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-610	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-610	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-610	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-610	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-610	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-610	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-610	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-610	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-610	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-610	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-610	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-610	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-610	Environmental	Federally Managed Species	Burial	100	No
Beach-610	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-610	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-610	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-610	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-610	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-610	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-610	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-610	Environmental	Marine Protected Areas	Burial	100	No - resource is not located in renourishment footprint
Beach-610	Environmental	Marine Protected Areas	Change in Direction, Rate, Amplitude, or Period	50	
Beach-610	Environmental	Marine Protected Areas	Change in Grain Size	50	
Beach-610	Environmental	Marine Protected Areas	Change in TOC	50	
Beach-610	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of beach material during storms;
Beach-610	Environmental	Marine Protected Areas	Changes in Sedimentation Patterns	50	
Beach-610	Environmental	Marine Protected Areas	Changes in Vessel Traffic Patterns	50	
Beach-610	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-610	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not located in renourishment footprint
Beach-610	Environmental	Marine Protected Areas	Harassment	50	
Beach-610	Environmental	Marine Protected Areas	Sediment Quality Impairment	50	
Beach-610	Environmental	Marine Protected Areas	Undermining / Erosion	50	
Beach-610	Environmental	Marine Protected Areas	Visual Impact	50	
Beach-610	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
Beach-610	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-610	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-610	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-610	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-610	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-610	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-610	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-610	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-610	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-610	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-610	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-610	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-610	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-610	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-610	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-610	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-610	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-610	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-610	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-610	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-610	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-610	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-610	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-610	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-610	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-610	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-610	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-610	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-610	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-610	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-610	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-610	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-610	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-610	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-610	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-610	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-610	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-610	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-610	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-610	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-610	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-63	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-63	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-63	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-63	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-63	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-63	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-63	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-63	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-63	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-63	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-63	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-63	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-63	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-63	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-63	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-63	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-63	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-63	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-63	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-63	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-63	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-63	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-63	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-63	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-63	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-63	Environmental	Federally Managed Species	Burial	100	No
Beach-63	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-63	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-63	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-63	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-63	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-63	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-63	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-63	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-63	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-63	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-63	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-63	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-63	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-63	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-63	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-63	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-63	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-63	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-63	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-63	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-63	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-63	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-63	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-63	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-63	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-63	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-63	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-63	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-63	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-63	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-63	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-63	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-63	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-63	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-63	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-63	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-63	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-63	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-63	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-63	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-63	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-63	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-63	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-63	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-63	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-63	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-63	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-63	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-63	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-63	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-63	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-63	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-63	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-63	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-63	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-63	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-63	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-63	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-63	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-63	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-63	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-63	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-63	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-63	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-63	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-63	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-63	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-64	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-64	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-64	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-64	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-64	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-64	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-64	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-64	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-64	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-64	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-64	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-64	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-64	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-64	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-64	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-64	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-64	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-64	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-64	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-64	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-64	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-64	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-64	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-64	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-64	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-64	Environmental	Federally Managed Species	Burial	100	No
Beach-64	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-64	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-64	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-64	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-64	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-64	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-64	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-64	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-64	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-64	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-64	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-64	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-64	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-64	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-64	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-64	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-64	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-64	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-64	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-64	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-64	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-64	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-64	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-64	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-64	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-64	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-64	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-64	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-64	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-64	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-64	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-64	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-64	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-64	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-64	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-64	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-64	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-64	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-64	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-64	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-64	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-64	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-64	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-64	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-64	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-64	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-64	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-64	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-64	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-64	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-64	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-64	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-64	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-64	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-64	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-64	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-64	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-64	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-64	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-64	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-64	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-64	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-64	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-64	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-64	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-64	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-64	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-67	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-67	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-67	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-67	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-67	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-67	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-67	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-67	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-67	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-67	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-67	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-67	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-67	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-67	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-67	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-67	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-67	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-67	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-67	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-67	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-67	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-67	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-67	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-67	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-67	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-67	Environmental	Federally Managed Species	Burial	100	No
Beach-67	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-67	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-67	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-67	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-67	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-67	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-67	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-67	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-67	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-67	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-67	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-67	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-67	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-67	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-67	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-67	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-67	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-67	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-67	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-67	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-67	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-67	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-67	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-67	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-67	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-67	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-67	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-67	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-67	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-67	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-67	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-67	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-67	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-67	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-67	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-67	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-67	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-67	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-67	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-67	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-67	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-67	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-67	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-67	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-67	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-67	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-67	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-67	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-67	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-67	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-67	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-67	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-67	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-67	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-67	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-67	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-67	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-67	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-67	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-67	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-67	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-67	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-67	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-67	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-67	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-67	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-67	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-68	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-68	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-68	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-68	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not located in renourishment footprint
Beach-68	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not located in renourishment footprint
Beach-68	Cultural	Historic Districts	Visual Impact	100	Unlikely - material is likely to be similar to existing beach material
Beach-68	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-68	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-68	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-68	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-68	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-68	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-68	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-68	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-68	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-68	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-68	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-68	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-68	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-68	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-68	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-68	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-68	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-68	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-68	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-68	Environmental	Federally Managed Species	Burial	100	No
Beach-68	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-68	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-68	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-68	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-68	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-68	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-68	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-68	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-68	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-68	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-68	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-68	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-68	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-68	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-68	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-68	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-68	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-68	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-68	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-68	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-68	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-68	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-68	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-68	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-68	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-68	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-68	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-68	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-68	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-68	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-68	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-68	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-68	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-68	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-68	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-68	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-68	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-68	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-68	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-68	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-68	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-68	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-68	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-68	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-68	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-68	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-68	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-68	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-68	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-68	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-68	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-68	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-68	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-68	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-68	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-68	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-68	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-68	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-68	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-68	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-68	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-68	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-68	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-68	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-68	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-68	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-68	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-76	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-76	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-76	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-76	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-76	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present
Beach-76	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-76	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-76	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-76	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-76	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-76	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-76	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-76	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-76	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-76	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-76	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-76	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-76	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-76	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-76	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-76	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-76	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-76	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-76	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-76	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-76	Environmental	Federally Managed Species	Burial	100	No
Beach-76	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-76	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-76	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-76	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-76	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-76	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-76	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-76	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-76	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-76	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-76	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-76	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-76	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-76	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-76	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-76	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-76	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-76	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-76	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-76	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-76	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-76	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-76	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-76	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-76	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-76	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-76	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-76	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-76	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-76	Environmental	Wetlands	Burial	100	No - resource is not present
Beach-76	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-76	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
Beach-76	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
Beach-76	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
Beach-76	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-76	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-76	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-76	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-76	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-76	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-76	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-76	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-76	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-76	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-76	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-76	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-76	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-76	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-76	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-76	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-76	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-76	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-76	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-76	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-76	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-76	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-76	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-76	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-76	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-76	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-76	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-76	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-76	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-76	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-76	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-76	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-76	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-79	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-79	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource is not present
Beach-79	Cultural	Archaeological Sites	Visual Impact	100	No - resource is not present
Beach-79	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-79	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource is not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-79	Cultural	Historic Districts	Visual Impact	100	No - resource is not present
Beach-79	Cultural	Shipwrecks	Burial	100	No - resource is not present
Beach-79	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-79	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource is not present
Beach-79	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-79	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Beach-79	Environmental	Benthic Invertebrates	Burial	0	Yes - Impacts from burial where benthic communities are located within the project footprint.
Beach-79	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No - resource is not being removed from site
Beach-79	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment type not likely to change
Beach-79	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - water quality impairment (suspended material will be temporary and localized).
Beach-79	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-79	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Beach-79	Environmental	Birds	Habitat Impairment	0	Yes - impacts to nesting and feeding habitats
Beach-79	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Beach-79	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Beach-79	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Beach-79	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Beach-79	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Beach-79	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Beach-79	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Beach-79	Environmental	Federally Managed Species	Burial	100	No
Beach-79	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No
Beach-79	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - changes in habitat from changes in sedimentation and erosion following disposal activities.
Beach-79	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-79	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential for strikes during placement
Beach-79	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Beach-79	Environmental	Marine Mammals	Harassment	50	Potential for harassment during placement
Beach-79	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Beach-79	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Beach-79	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-79	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Beach-79	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Beach-79	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Beach-79	Environmental	Plankton	Direct Destruction/Interference	50	Potential - impacts from small, short-term entrainment losses
Beach-79	Environmental	Plankton	Water Quality Impairment	50	Potential - short-term water quality impacts during placement of material
Beach-79	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Beach-79	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-79	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Beach-79	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Beach-79	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Beach-79	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for beach renourishment is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Beach-79	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Beach-79	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Beach-79	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Beach-79	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Beach-79	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present in renourishment footprint
Beach-79	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-79	Environmental	Terrestrial Wildlife	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-79	Environmental	Terrestrial Wildlife	Harassment	50	Potential - short-term impact to feeding and movement during construction
Beach-79	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term, localized impacts to water quality during placement of material.
Beach-79	Environmental	Wetlands	Burial	50	Potential impacts from burial where wetlands exist within or adjacent to project footprint.
Beach-79	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential for changes in local sedimentation/erosion due to change in wave action or migration of beach material
Beach-79	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Beach-79	Environmental	Wetlands	Habitat Impairment	100	Unlikely - material will be similar to existing beach material (coarse sand)
Beach-79	Environmental	Wetlands	Water Quality Impairment	50	Potential short-term water quality impacts during construction
Beach-79	Infrastructure	Aquaculture	Burial	100	No - resource not expected to be present in project area
Beach-79	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential
Beach-79	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not expected to be present in project area
Beach-79	Infrastructure	Aquaculture	Undermining / Erosion	100	No
Beach-79	Infrastructure	Cable/power/utility crossings	Burial	50	Potential
Beach-79	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential
Beach-79	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential
Beach-79	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No
Beach-79	Infrastructure	Coastal Structures	Burial	50	Potential
Beach-79	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential
Beach-79	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present in project footprint
Beach-79	Infrastructure	Coastal Structures	Undermining / Erosion	100	No
Beach-79	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Beach-79	Infrastructure	Dredged Material Disposal Sites	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Beach-79	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Beach-79	Infrastructure	Mooring Areas	Burial	100	No - resource not expected to be present in project area
Beach-79	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	50	Potential
Beach-79	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	Unlikely
Beach-79	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Beach-79	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Beach-79	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Beach-79	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Beach-79	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Beach-79	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Beach-79	Infrastructure	Recreational Areas	Burial	0	Yes
Beach-79	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Beach-79	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Beach-79	Infrastructure	Recreational Areas	Visual Impact	100	No - dredged material likely to be similar to native material
Beach-79	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-79	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Beach-79	Physical	Sediments	Change in Grain Size	100	Unlikely - existing material is generally coarse sand
Beach-79	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Beach-79	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Berm-121/446	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-121/446	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-121/446	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-121/446	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-121/446	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-121/446	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-121/446	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-121/446	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-121/446	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-121/446	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-121/446	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-121/446	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-121/446	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-121/446	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-121/446	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-121/446	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-121/446	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-121/446	Environmental	Birds	Habitat Impairment	100	Unlikely - loss of coastline areas for shore dependent species not expected due to wave sheltering
Berm-121/446	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-121/446	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-121/446	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Berm-121/446	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Berm-121/446	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Berm-121/446	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species include marine mammals that could be affected during construction
Berm-121/446	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-121/446	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-121/446	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-121/446	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-121/446	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-121/446	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-121/446	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-121/446	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-121/446	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-121/446	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-121/446	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-121/446	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-121/446	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-121/446	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-121/446	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-121/446	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-121/446	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-121/446	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-121/446	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-121/446	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-121/446	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-121/446	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-121/446	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-121/446	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-121/446	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-121/446	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-121/446	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-121/446	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-121/446	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-121/446	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-121/446	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-121/446	Environmental	Wetlands	Burial	100	No - resource is not within berm footprint
Berm-121/446	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - reduction in net littoral transport rate could affect wetland by changing sedimentation rate
Berm-121/446	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not within berm footprint
Berm-121/446	Environmental	Wetlands	Habitat Impairment	100	Unlikely - berm and nearshore area mapped as sand so no change in sediment structure
Berm-121/446	Environmental	Wetlands	Water Quality Impairment	100	Unlikely - except for short term impact in mixing zone during construction
Berm-121/446	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-121/446	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-121/446	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-121/446	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-121/446	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-121/446	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-121/446	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-121/446	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-121/446	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-121/446	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - onshore sediment transport during higher energy wave events; net littoral drift is toward resource; increased sedimentation caused by settling of suspended material generated during construction
Berm-121/446	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-121/446	Infrastructure	Coastal Structures	Undermining / Erosion	100	Unlikely - reduced wave energy along shoreline during larger wave events
Berm-121/446	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-121/446	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-121/446	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-121/446	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-121/446	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-121/446	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-121/446	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within berm footprint
Berm-121/446	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-121/446	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - berm does not compromise navigation
Berm-121/446	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-121/446	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-121/446	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-121/446	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-121/446	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - stable berm may move onshore during storm events
Berm-121/446	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-121/446	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-121/446	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - reduced wave energy along shoreline during larger wave events
Berm-121/446	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect on ambient tidal currents
Berm-121/446	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-121/446	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore area mapped as sand
Berm-121/446	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-121/446	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduced wave energy along shoreline during larger wave events
Berm-170	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-170	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-170	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-170	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-170	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-170	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-170	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-170	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-170	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-170	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-170	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-170	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-170	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-170	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-170	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-170	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-170	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-170	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-170	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-170	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-170	Environmental	Federal & State Listed Species	Burial	100	No - resource in the upland
Berm-170	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-170	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-170	Environmental	Federal & State Listed Species	Harassment	100	No - resource in the upland
Berm-170	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No - resource in the upland
Berm-170	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-170	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-170	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-170	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-170	Environmental	Marine Mammals	Direct Destruction/Interference	100	Unlikely - whales not documented at site; other marine mammals not susceptible to strikes
Berm-170	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-170	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-170	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-170	Environmental	Marine Protected Areas	Burial	100	No - resource not within berm footprint
Berm-170	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation from berm material during storms; reduction/ increase in the rate of littoral drift due to wave changes
Berm-170	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-170	Environmental	Marine Protected Areas	Habitat Impairment	50	Potential - increased erosion of shoreline at resource caused by potential wave focusing
Berm-170	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resouce is in the upland
Berm-170	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-170	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-170	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-170	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-170	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-170	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-170	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-170	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-170	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-170	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-170	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-170	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-170	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-170	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-170	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-170	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-170	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-170	Environmental	Wetlands	Burial	100	No - resource is not within berm footprint
Berm-170	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - reduced littoral transport rate could affect wetland
Berm-170	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not within berm footprint
Berm-170	Environmental	Wetlands	Habitat Impairment	100	Unlikely - no major change in sediment structure
Berm-170	Environmental	Wetlands	Water Quality Impairment	100	Unlikely - except for short term impact in mixing zone during construction
Berm-170	Infrastructure	Aquaculture	Burial	100	No - resource not within berm footprint
Berm-170	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource is seaward of berm
Berm-170	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-170	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource is seaward of berm
Berm-170	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-170	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-170	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-170	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-170	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-170	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate caused by wave energy reduction may cause accumulation around groin at park boardwalk
Berm-170	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-170	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in wave energy along shoreline west of berm during larger wave events
Berm-170	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-170	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-170	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-170	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-170	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-170	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-170	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within berm footprint
Berm-170	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - reduction in net littoral transport rate towards channel caused by wave energy reduction; stable berm may migrate toward channel during storm events
Berm-170	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - berm does not compromise navigation
Berm-170	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-170	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-170	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-170	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-170	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate caused by wave energy reduction may cause accumulation at receiving beach
Berm-170	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-170	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-170	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increase in wave energy along shoreline of Callahans Beach during larger wave events
Berm-170	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-170	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate causedby wave energy reduction
Berm-170	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint mapped as sand/silt/clay, silt-clay/sand, and sand; nearshore area mapped as gravel-sand and gravel
Berm-170	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-170	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-171	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-171	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-171	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-171	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-171	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-171	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-171	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-171	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-171	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-171	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-171	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-171	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-171	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-171	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-171	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-171	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-171	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-171	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-171	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-171	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-171	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Berm-171	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Berm-171	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-171	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary
Berm-171	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact if species are sedentary
Berm-171	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-171	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-171	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-171	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-171	Environmental	Marine Mammals	Direct Destruction/Interference	100	Unlikely - whales not documented at site; other marine mammals not susceptible to strikes
Berm-171	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-171	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-171	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-171	Environmental	Marine Protected Areas	Burial	100	No - resource not within berm footprint
Berm-171	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation from berm material during storms; reduction/ increase in the rate of littoral drift due to wave changes
Berm-171	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-171	Environmental	Marine Protected Areas	Habitat Impairment	50	Potential - increased erosion of shoreline at resource caused by potential wave focusing
Berm-171	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resouce is in the upland
Berm-171	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-171	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-171	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-171	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-171	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-171	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-171	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-171	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-171	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-171	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-171	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-171	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-171	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-171	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-171	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-171	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-171	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-171	Environmental	Wetlands	Burial	100	No - resource is not within berm footprint
Berm-171	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - reduced littoral transport rate could affect wetland
Berm-171	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not within berm footprint
Berm-171	Environmental	Wetlands	Habitat Impairment	100	Unlikely - no major change in sediment structure
Berm-171	Environmental	Wetlands	Water Quality Impairment	100	Unlikely - except for short term impact in mixing zone during construction
Berm-171	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-171	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-171	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-171	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-171	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-171	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-171	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-171	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-171	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-171	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate caused by wave energy reduction may cause accumulation around concession stand infrastructure
Berm-171	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-171	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in wave energy along shoreline west and east ofberm during larger wave events; wave focusing at park concession stand
Berm-171	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-171	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-171	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-171	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-171	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-171	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-171	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-171	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-171	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-171	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-171	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-171	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-171	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-171	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate caused by wave energy reduction may cause accumulation at beach
Berm-171	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-171	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-171	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increase in wave energy along shoreline of Iron Pier Beach and boatramp during larger wave events
Berm-171	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-171	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate causedby wave energy reduction
Berm-171	Physical	Sediments	Change in Grain Size	100	No - berm footprint mapped as sand; nearshore area mapped as gravel-sand
Berm-171	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-171	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-173	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-173	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-173	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-173	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-173	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-173	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-173	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-173	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-173	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-173	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-173	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-173	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-173	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-173	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-173	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-173	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-173	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-173	Environmental	Birds	Habitat Impairment	100	Unlikely - loss of coastline areas for shore dependent species not expected due to wave sheltering
Berm-173	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-173	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-173	Environmental	Federal & State Listed Species	Burial	100	No - resource in the upland
Berm-173	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-173	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing
Berm-173	Environmental	Federal & State Listed Species	Harassment	100	No - resource in the upland
Berm-173	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No - resource in the upland
Berm-173	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-173	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-173	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-173	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-173	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-173	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-173	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-173	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-173	Environmental	Marine Protected Areas	Burial	100	No - resource not within berm footprint
Berm-173	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms or reduction in the rate of littoral drift due to wave changes
Berm-173	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-173	Environmental	Marine Protected Areas	Habitat Impairment	100	Unlikely - berm will provide wave sheltering and reduced wave energy at shoreline along resource
Berm-173	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resouce is in the upland
Berm-173	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-173	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-173	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-173	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-173	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-173	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-173	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-173	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-173	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-173	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-173	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-173	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-173	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-173	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-173	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-173	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-173	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-173	Environmental	Wetlands	Burial	100	No - resource is not within berm footprint
Berm-173	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - reduced littoral transport rate could affect wetland
Berm-173	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not within berm footprint
Berm-173	Environmental	Wetlands	Habitat Impairment	50	Potential - change to substrate could affect habitat type and structure
Berm-173	Environmental	Wetlands	Water Quality Impairment	100	Unlikely - except for short term impact in mixing zone during construction
Berm-173	Infrastructure	Aquaculture	Burial	100	No - resource not within berm footprint
Berm-173	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential - increased sedimentation caused by settling of suspended material generated during construction; increased sedimentation caused by diffusion of berm material during storm events
Berm-173	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-173	Infrastructure	Aquaculture	Undermining / Erosion	100	Unlikely - berm would attenuate wave impactsto resource
Berm-173	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-173	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-173	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-173	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-173	Infrastructure	Coastal Structures	Burial	100	No - resource not present
Berm-173	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - resource not present
Berm-173	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present
Berm-173	Infrastructure	Coastal Structures	Undermining / Erosion	100	No - resource not present
Berm-173	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-173	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-173	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-173	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-173	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-173	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-173	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within berm footprint
Berm-173	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - reduction in net littoral transport rate from east to west caused by wave energy reduction; channel is far from berm
Berm-173	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - berm does not compromise navigation
Berm-173	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-173	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-173	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-173	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-173	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - shoreline accretion caused by reduction in wave energy
Berm-173	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-173	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-173	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - berm would attenuate wave impactsto resource
Berm-173	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-173	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-173	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint and nearshore area mapped as silt-clay/sand, sand, and gravel
Berm-173	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-173	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduced wave energy along shoreline during larger wave events
Berm-177	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource outside possible shoreline erosion zone caused by wave focusing
Berm-177	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-177	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-177	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource outside possible shoreline erosion zone caused by wave focusing. Potential positive impact from beach accretion by shoreward transport of active berm.
Berm-177	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-177	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-177	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-177	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-177	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-177	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-177	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-177	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-177	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-177	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-177	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-177	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-177	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-177	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-177	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-177	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-177	Environmental	Federal & State Listed Species	Burial	100	No - resource in the upland
Berm-177	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-177	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing
Berm-177	Environmental	Federal & State Listed Species	Harassment	100	No - resource in the upland
Berm-177	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No - resource in the upland
Berm-177	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-177	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-177	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-177	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-177	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-177	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project
Berm-177	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-177	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project
Berm-177	Environmental	Marine Protected Areas	Burial	100	No - resource not within berm footprint
Berm-177	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-177	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-177	Environmental	Marine Protected Areas	Habitat Impairment	50	Potential - increased erosion of shoreline at resource caused by potential wave focusing
Berm-177	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resouce is in the upland
Berm-177	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-177	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-177	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-177	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-177	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-177	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-177	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-177	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-177	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-177	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-177	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-177	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-177	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-177	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-177	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-177	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-177	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-177	Environmental	Wetlands	Burial	100	No - resource not present
Berm-177	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-177	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-177	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-177	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-177	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-177	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-177	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-177	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-177	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-177	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-177	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-177	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-177	Infrastructure	Coastal Structures	Burial	100	No - resource not present
Berm-177	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - resource not present
Berm-177	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present
Berm-177	Infrastructure	Coastal Structures	Undermining / Erosion	100	No - resource not present
Berm-177	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-177	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-177	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-177	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-177	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-177	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-177	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within berm footprint
Berm-177	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - active berm is likely to migrate shoreward
Berm-177	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - berm does not compromise navigation
Berm-177	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-177	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-177	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-177	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-177	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	0	Yes - active berm will migrate shoreward to receiving beach
Berm-177	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-177	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-177	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - reduced wave energy along shoreline during larger wave events
Berm-177	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-177	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - temporary increase in rate as berm migrates onshore
Berm-177	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore area contain modern day sand deposits
Berm-177	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-177	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-178	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource outside possible shoreline erosion zone caused by wave focusing
Berm-178	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-178	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-178	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-178	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-178	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-178	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-178	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-178	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-178	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-178	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-178	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-178	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-178	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-178	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-178	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-178	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-178	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-178	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-178	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-178	Environmental	Federal & State Listed Species	Burial	0	Likely - resource mapped within berm footprint
Berm-178	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - resource mapped within berm footprint
Berm-178	Environmental	Federal & State Listed Species	Habitat Impairment	0	Likely - resource mapped within berm footprint
Berm-178	Environmental	Federal & State Listed Species	Harassment	50	Potential - resource mapped within berm footprint
Berm-178	Environmental	Federal & State Listed Species	Water Quality Impairment	0	Likely - resource mapped within berm footprint
Berm-178	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-178	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-178	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-178	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-178	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-178	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-178	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-178	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-178	Environmental	Marine Protected Areas	Burial	100	No - resource not within berm footprint
Berm-178	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-178	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-178	Environmental	Marine Protected Areas	Habitat Impairment	50	Potential - increased erosion of shoreline at resource caused by potential wave focusing
Berm-178	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resouce is in the upland
Berm-178	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-178	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-178	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-178	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-178	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-178	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-178	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-178	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-178	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-178	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-178	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-178	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-178	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-178	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-178	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-178	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-178	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-178	Environmental	Wetlands	Burial	100	No - resource not present
Berm-178	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-178	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-178	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-178	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-178	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-178	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-178	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-178	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-178	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not within berm footprint
Berm-178	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	Unlikely - temporary increase in rate of littoral drift as berm migrates onshore but resource is far from berm
Berm-178	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-178	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	Unlikely - resource outsidearea of shoreline erosion caused by wave focusing
Berm-178	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-178	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	Unlikely - temporary increase in rate of littoral drift as berm migrates onshore but resource is far from berm
Berm-178	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-178	Infrastructure	Coastal Structures	Undermining / Erosion	100	Unlikely - resource outsidearea of shoreline erosion caused by wave focusing
Berm-178	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-178	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-178	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-178	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-178	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-178	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-178	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within berm footprint
Berm-178	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - active berm is likely to migrate shoreward
Berm-178	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - berm does not compromise navigation
Berm-178	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-178	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-178	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-178	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-178	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	0	Yes - active berm will migrate shoreward to receiving beach
Berm-178	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-178	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-178	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - shoreline erosion caused by wave focusing
Berm-178	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-178	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - temporary increase in rate as berm migrates onshore
Berm-178	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore area contain modern day sand deposits
Berm-178	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-178	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-179	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource outside possible shoreline erosion zone caused by wave focusing
Berm-179	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-179	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-179	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-179	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-179	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-179	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentation caused by settling of suspended material generated during construction
Berm-179	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-179	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - berm construction would not remove or disturb objects on the seafloor
Berm-179	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-179	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-179	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-179	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-179	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-179	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-179	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-179	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-179	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-179	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-179	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat large relative to zone of increased suspended sediment during construction
Berm-179	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Berm-179	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Berm-179	Environmental	Federal & State Listed Species	Habitat Impairment	0	Likely - berm placement or migration would reduce structure by changing substrate from gravel to sand
Berm-179	Environmental	Federal & State Listed Species	Harassment	50	Potential - if species include marine mammals that can be struck during construction
Berm-179	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-179	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-179	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-179	Environmental	Federally Managed Species	Habitat Impairment	0	Likely - physical change in sediment characteristics from gravel to sand, and reduction in water depth
Berm-179	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-179	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-179	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-179	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-179	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-179	Environmental	Marine Protected Areas	Burial	100	No - resource not within berm footprint
Berm-179	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	Unlikely - sedimentation/erosion goverened by high energy wave events that would not be affected by berm
Berm-179	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-179	Environmental	Marine Protected Areas	Habitat Impairment	100	Unlikely - shoreline erosion goverened by high energy wave events that would not be affected by berm
Berm-179	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resouce is in the upland
Berm-179	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-179	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-179	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-179	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-179	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-179	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-179	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-179	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-179	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-179	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-179	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-179	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-179	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-179	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-179	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-179	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-179	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-179	Environmental	Wetlands	Burial	0	Yes - resource will be covered with berm material
Berm-179	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	Unlikely - sedimentation/erosion goverened by high energy wave events that would not be affected by berm
Berm-179	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource will not be removed during construction
Berm-179	Environmental	Wetlands	Habitat Impairment	0	Likely - berm placement or migration would reduce structure by changing substrate from gravel to sand
Berm-179	Environmental	Wetlands	Water Quality Impairment	50	Potential - short term impact during construction
Berm-179	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-179	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-179	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-179	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-179	Infrastructure	Cable/power/utility crossings	Burial	0	Yes - resource within berm footprint
Berm-179	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	0	Yes - increased sedimentation caused by settling of suspended material generated during construction
Berm-179	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential - resource is within berm footprint
Berm-179	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	50	Potential - increase in wave energy along shoreline during larger wave events
Berm-179	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-179	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in wave energy along shoreline during larger wave events
Berm-179	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-179	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in wave energy along shoreline during larger wave events
Berm-179	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-179	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-179	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-179	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-179	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-179	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-179	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within berm footprint
Berm-179	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - stable berm is not likely to migrate seaward

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-179	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - berm does not compromise navigation
Berm-179	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-179	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-179	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-179	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-179	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	Unlikely - littoral drift dominated by high energy wave events and not influenced by berm
Berm-179	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-179	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-179	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increase in wave energy along shoreline during larger wave events
Berm-179	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - channalization of ambient tidal currents past headland at MontaukPoint
Berm-179	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - littoral drift dominated by high energy wave events and not influenced by berm
Berm-179	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint and nearshore area mapped as gravel and gravel-sand
Berm-179	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by coarse, granular material typically low in TOC
Berm-179	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-180	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-180	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-180	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-180	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-180	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-180	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-180	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-180	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-180	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-180	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-180	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-180	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-180	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-180	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-180	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-180	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-180	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-180	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-180	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-180	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-180	Environmental	Federal & State Listed Species	Burial	100	No - resource in the upland
Berm-180	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-180	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing
Berm-180	Environmental	Federal & State Listed Species	Harassment	100	No - resource in the upland
Berm-180	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No - resource in the upland
Berm-180	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-180	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-180	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-180	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-180	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-180	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-180	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-180	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-180	Environmental	Marine Protected Areas	Burial	100	No - resource not within berm footprint
Berm-180	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms; reduction/increase in the rate of littoral drift due to wave changes
Berm-180	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-180	Environmental	Marine Protected Areas	Habitat Impairment	50	Potential - increased erosion of shoreline at resource caused by potential wave focusing
Berm-180	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resouce is in the upland
Berm-180	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-180	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-180	Environmental	SAV (eelgrass)	Burial	100	No - resource not within berm footprint
Berm-180	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms; reduction/increase in the rate of littoral drift due to wave changes
Berm-180	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	Unlikely - suspended sediment generated during construction not likely to move far from berm area due to granular nature of material
Berm-180	Environmental	SAV (eelgrass)	Habitat Impairment	50	Potential - shallower water depths associated with shoreline accretion caused by wave sheltering
Berm-180	Environmental	SAV (eelgrass)	Water Quality Impairment	100	Unlikely - temporary impacts to water quality during construction
Berm-180	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-180	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-180	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-180	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-180	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-180	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-180	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-180	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-180	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-180	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-180	Environmental	Wetlands	Burial	100	No - resource is not within berm footprint
Berm-180	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - reduction in net littoral transport rate could affect wetland by changing sedimentation rate
Berm-180	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not within berm footprint
Berm-180	Environmental	Wetlands	Habitat Impairment	50	Potential - berm and nearshore area mapped as silt-clay/sand, sand, and gravel so change to sand substrate could affect habitat type and structure
Berm-180	Environmental	Wetlands	Water Quality Impairment	100	Unlikely - except for short term impact in mixing zone during construction
Berm-180	Infrastructure	Aquaculture	Burial	50	Potential - precise location of resource not evident on chart
Berm-180	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	50	Potential - increased sedimentation caused by settling of suspended material generated during construction; increased sedimentation caused by diffusion of berm material during storm events

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-180	Infrastructure	Aquaculture	Direct Destruction/Interference	50	Potential - precise location of resource not evident on chart
Berm-180	Infrastructure	Aquaculture	Undermining / Erosion	100	Unlikely - berm would attenuate wave impactsto resource
Berm-180	Infrastructure	Cable/power/utility crossings	Burial	100	No - resources not within berm footprint
Berm-180	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	Unlikely - onshore sediment transport only during higher energy wave events; net littoral drift is away from resource; resource is outside zone of influence of particle settling during construction
Berm-180	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-180	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	Unlikely - resource outsidepossible shoreline erosion zone caused by wave focusing
Berm-180	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-180	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - shoreline accretion caused by reduction in wave energy
Berm-180	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-180	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - shoreline erosion caused by wave focusing
Berm-180	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-180	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-180	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-180	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-180	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-180	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-180	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within berm footprint
Berm-180	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - onshore sediment transport only during higher energy wave events; net littoral drift is away from resource; resource is outside zone of influence of particle settling during construction
Berm-180	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - berm does not compromise navigation
Berm-180	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-180	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-180	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-180	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-180	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - shoreline accretion caused by reduction in wave energy
Berm-180	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-180	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-180	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - shoreline erosion caused by wave focusing
Berm-180	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - modification of clockwise currents directed towards Orient Point
Berm-180	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-180	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint and nearshore area mapped as silt-clay/sand and sand
Berm-180	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-180	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-320	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-320	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-320	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-320	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-320	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-320	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-320	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentationcaused by settling of suspended material generated during construction
Berm-320	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-320	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-320	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-320	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-320	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-320	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-320	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-320	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-320	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-320	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-320	Environmental	Birds	Habitat Impairment	100	No - interaction of berm with incident waves will not result in loss of coastline habitat for shore dependent species
Berm-320	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-320	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-320	Environmental	Federal & State Listed Species	Burial	100	No - resource on the adjacent islands
Berm-320	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-320	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - resource is not proximal to project footprint and little or no expected change in erosion along shorelines
Berm-320	Environmental	Federal & State Listed Species	Harassment	100	Unlikely - resource on the adjacent islands
Berm-320	Environmental	Federal & State Listed Species	Water Quality Impairment	100	Unlikely - resource on the adjacent islands
Berm-320	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-320	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-320	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-320	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-320	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-320	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-320	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-320	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-320	Environmental	Marine Protected Areas	Burial	100	No - resource on the adjacent islands
Berm-320	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - wave impact zone from berm would not reach resource seaward and west of site
Berm-320	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-320	Environmental	Marine Protected Areas	Habitat Impairment	100	No - wave impact zone from berm would not reach resource seaward and west of site
Berm-320	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resouce is in the upland
Berm-320	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-320	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-320	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-320	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-320	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-320	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-320	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-320	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-320	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-320	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-320	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-320	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-320	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-320	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-320	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-320	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-320	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-320	Environmental	Wetlands	Burial	100	No - resource is not within berm footprint
Berm-320	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	Unlikely - minimal increase/reduction in erosion along shorelines due to wave interaction with berm
Berm-320	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not within berm footprint
Berm-320	Environmental	Wetlands	Habitat Impairment	100	Unlikely - berm footprint mapped as silt-clay/sand; nearshore areas mapped as gravel-sand and sand, so no major change in sediment structure
Berm-320	Environmental	Wetlands	Water Quality Impairment	100	Unlikely - except for short term impact in mixing zone during construction
Berm-320	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-320	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-320	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-320	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-320	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-320	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-320	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-320	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-320	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-320	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-320	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-320	Infrastructure	Coastal Structures	Undermining / Erosion	100	Unlikely - minimal increase/reduction in wave energy along shoreline due to wave interaction with berm
Berm-320	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-320	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-320	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-320	Infrastructure	Mooring Areas	Burial	100	No - resource not within berm footprint
Berm-320	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - no change expected with stable berm
Berm-320	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - post-construction water depths will not affect boat traffic to mooring areas
Berm-320	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not within berm footprint
Berm-320	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-320	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - post-construction water depths will not affect boat traffic to channel
Berm-320	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-320	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-320	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-320	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-320	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-320	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - minimal increase/reduction in wave energy along shoreline due to wave interaction with berm
Berm-320	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-320	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-320	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-320	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - existing littoral transport minimal due to closed transport system; no change expected withstable berm
Berm-320	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint mapped as silt-clay/sand; nearshore areas mapped as gravel-sand and sand
Berm-320	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-320	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minimal increase/reduction in wave energy along shoreline due to wave interaction withberm
Berm-323	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-323	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-323	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-323	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	50	Potential - resources inside possible shoreline erosion zone caused by wave focusing. Potential positive impact from beach accretion caused by diffusion of berm material during storms or reduction in the rate of littoral drift shoreward of the berm
Berm-323	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-323	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-323	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentationcaused by settling of suspended material generated during construction
Berm-323	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-323	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-323	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-323	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-323	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-323	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-323	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-323	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-323	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-323	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-323	Environmental	Birds	Habitat Impairment	100	Unlikely - loss of coastline areas for shore dependent species not expected due to wave sheltering
Berm-323	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-323	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-323	Environmental	Federal & State Listed Species	Burial	100	No - resource not within berm footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-323	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-323	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-323	Environmental	Federal & State Listed Species	Harassment	50	Potential - if species are sedentary
Berm-323	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short-term impact if species are sedentary
Berm-323	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-323	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-323	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-323	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-323	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-323	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-323	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-323	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-323	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-323	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-323	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-323	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-323	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-323	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-323	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-323	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-323	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-323	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-323	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-323	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-323	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-323	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-323	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-323	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-323	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-323	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-323	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-323	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-323	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-323	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-323	Environmental	Wetlands	Burial	100	No - resource not present
Berm-323	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-323	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-323	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-323	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-323	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-323	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-323	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-323	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-323	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not within berm footprint
Berm-323	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	Unlikely - reduction in net littoral transport rate from east to west at Fayerweather Island northwest of berm caused by wave energy reduction
Berm-323	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-323	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	Unlilkely - Fayerweather Island would attenuate any deflected waves from berm
Berm-323	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-323	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction may result in accumulation along armoring at Fayerweather Island
Berm-323	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-323	Infrastructure	Coastal Structures	Undermining / Erosion	100	Unlikely - reduced wave energy along seawall duringlarger wave events
Berm-323	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-323	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-323	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-323	Infrastructure	Mooring Areas	Burial	100	No - resource not within berm footprint
Berm-323	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - harbor isolated from harbor by Fayerweather Island and Seaside Beach
Berm-323	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - boat traffic to moorings does not overlap berm
Berm-323	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not within berm footprint
Berm-323	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - reduction in net littoral transport rate from east to west at Fayerweather Island northwest of berm caused by wave energy reduction
Berm-323	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	Unlikely - current vessel patterns do not impinge on proposed berm footprint
Berm-323	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - net littoral transport is away from resource
Berm-323	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	Unlikely - current vessel patterns do not impinge on proposed berm footprint
Berm-323	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-323	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-323	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west at receiving beach caused by wave energy reduction
Berm-323	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-323	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-323	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - reduced wave energy along shoreline during larger wave events
Berm-323	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - channalization of tidal flow to/from Bridgeport Harbor
Berm-323	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reductionin net littoral transport rate from east to west caused by wave energy reduction
Berm-323	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint and nearshore areas mapped as sand, gravel-sand, and silt-clay/sand
Berm-323	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-323	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduced wave energy along shoreline during larger wave events
Berm-327/333/330	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-327/333/330	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-327/333/330	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-327/333/330	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-327/333/330	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-327/333/330	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-327/333/330	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-327/333/330	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-327/333/330	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-327/333/330	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-327/333/330	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-327/333/330	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-327/333/330	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-327/333/330	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-327/333/330	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-327/333/330	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-327/333/330	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-327/333/330	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-327/333/330	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-327/333/330	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-327/333/330	Environmental	Federal & State Listed Species	Burial	100	No - resource not present
Berm-327/333/330	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not present
Berm-327/333/330	Environmental	Federal & State Listed Species	Habitat Impairment	100	No - resource not present
Berm-327/333/330	Environmental	Federal & State Listed Species	Harassment	100	No - resource not present
Berm-327/333/330	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No - resource not present
Berm-327/333/330	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-327/333/330	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-327/333/330	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-327/333/330	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-327/333/330	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-327/333/330	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-327/333/330	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-327/333/330	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-327/333/330	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-327/333/330	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-327/333/330	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-327/333/330	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-327/333/330	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-327/333/330	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-327/333/330	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-327/333/330	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-327/333/330	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-327/333/330	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-327/333/330	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-327/333/330	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-327/333/330	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-327/333/330	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-327/333/330	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-327/333/330	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-327/333/330	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-327/333/330	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-327/333/330	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-327/333/330	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-327/333/330	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-327/333/330	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-327/333/330	Environmental	Wetlands	Burial	100	No - resource not present
Berm-327/333/330	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-327/333/330	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-327/333/330	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-327/333/330	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-327/333/330	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-327/333/330	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-327/333/330	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-327/333/330	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-327/333/330	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-327/333/330	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	Unlikely - no change to area expected with stable berm
Berm-327/333/330	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-327/333/330	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	Unlikely - cable area is below a navigation channel
Berm-327/333/330	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-327/333/330	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from southwest to northeast caused by wave energy reduction may result in accumulation at groins shoreward of berm
Berm-327/333/330	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-327/333/330	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increased waveenergy at adjacent groins during larger wave events

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-327/333/330	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-327/333/330	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-327/333/330	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-327/333/330	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-327/333/330	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-327/333/330	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-327/333/330	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-327/333/330	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - no change to channel expected with stable berm
Berm-327/333/330	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	Unlikely - current vessel patterns only overlap with proposed berm in small light density traffic area
Berm-327/333/330	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-327/333/330	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-327/333/330	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-327/333/330	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-327/333/330	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from southwest to northeast caused by wave energy reduction may result in accumulation at receiving beach
Berm-327/333/330	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-327/333/330	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-327/333/330	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increased waveenergy at adjacent beaches during larger wave events
Berm-327/333/330	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - channalization of tidal flow to/from New Haven Harbor
Berm-327/333/330	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from southwest to northeast caused by wave energy reduction
Berm-327/333/330	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore areas mapped as sand
Berm-327/333/330	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-327/333/330	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction inwave energy along shoreline during larger wave events
Berm-337	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-337	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-337	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-337	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-337	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-337	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-337	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentationcaused by settling of suspended material generated during construction
Berm-337	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - diffusion during storms not likely to transport berm material offshore or around headland
Berm-337	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-337	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-337	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-337	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-337	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-337	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-337	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-337	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-337	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-337	Environmental	Birds	Habitat Impairment	100	Unlikely - loss of coastline areas for shore dependent species not expected due to limited littoral drift
Berm-337	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-337	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-337	Environmental	Federal & State Listed Species	Burial	100	No - resource not within berm footprint
Berm-337	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-337	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - distance to resource beyond the area of impact from berm expected
Berm-337	Environmental	Federal & State Listed Species	Harassment	100	Unlikely - distance to resource greater than that where local effect of berm expected
Berm-337	Environmental	Federal & State Listed Species	Water Quality Impairment	100	Unlikely - distance to resource greater than that where local effect of berm expected
Berm-337	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-337	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-337	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-337	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-337	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-337	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-337	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-337	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-337	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-337	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-337	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-337	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-337	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-337	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-337	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-337	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-337	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-337	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-337	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-337	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-337	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-337	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-337	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-337	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-337	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-337	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-337	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-337	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-337	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-337	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-337	Environmental	Wetlands	Burial	100	No - resource not present
Berm-337	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-337	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-337	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-337	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-337	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-337	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-337	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-337	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-337	Infrastructure	Cable/power/utility crossings	Burial	100	No - resources not within berm footprint
Berm-337	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-337	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-337	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	Unlikely - minor, localized effect of berm on ambienttidal currents
Berm-337	Infrastructure	Coastal Structures	Burial	100	No - resources not within berm footprint
Berm-337	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-337	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-337	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - wave focusing may contribute to erosion at groins; increase in waveenergy due to deflection east of berm during larger wave events may impact armoring
Berm-337	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-337	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-337	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - disposal site is sheltered by Morris Cove
Berm-337	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-337	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-337	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-337	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within berm footprint
Berm-337	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-337	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - berm does not compromise navigation
Berm-337	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-337	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-337	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-337	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-337	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-337	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-337	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-337	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - wave focusing may contribute to erosion at beach
Berm-337	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - channalization of tidal flow to/from New Haven Harbor
Berm-337	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - existing littoral transport minimal due to closed transport system; no change expected withstable berm
Berm-337	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint and nearshore areas mapped as sand-clay/silt, sand, gravel-sand, and gravel
Berm-337	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-337	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-364b/364c	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-364b/364c	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-364b/364c	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-364b/364c	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-364b/364c	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-364b/364c	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-364b/364c	Cultural	Shipwrecks	Burial	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-364b/364c	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-364b/364c	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-364b/364c	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-364b/364c	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-364b/364c	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-364b/364c	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-364b/364c	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-364b/364c	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-364b/364c	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-364b/364c	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-364b/364c	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-364b/364c	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-364b/364c	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-364b/364c	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and present within footprint area
Berm-364b/364c	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and present within footprint area
Berm-364b/364c	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource habitat inside berm footprint, and mapped shoreline habitat subject to possible shoreline erosion caused by wave focusing during larger wave events
Berm-364b/364c	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary
Berm-364b/364c	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact if species are sedentary
Berm-364b/364c	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-364b/364c	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-364b/364c	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-364b/364c	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-364b/364c	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-364b/364c	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-364b/364c	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-364b/364c	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-364b/364c	Environmental	Marine Protected Areas	Burial	100	No - resource not within berm footprint
Berm-364b/364c	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms; reduction/increase in the rate of littoral drift due to wave changes
Berm-364b/364c	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-364b/364c	Environmental	Marine Protected Areas	Habitat Impairment	50	Potential - increased erosion of shoreline at resource caused by potential wave focusing
Berm-364b/364c	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resouce is in the upland
Berm-364b/364c	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-364b/364c	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-364b/364c	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-364b/364c	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-364b/364c	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-364b/364c	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-364b/364c	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-364b/364c	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-364b/364c	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-364b/364c	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-364b/364c	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-364b/364c	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-364b/364c	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-364b/364c	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-364b/364c	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-364b/364c	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-364b/364c	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-364b/364c	Environmental	Wetlands	Burial	100	No - resource not present
Berm-364b/364c	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-364b/364c	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-364b/364c	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-364b/364c	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-364b/364c	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-364b/364c	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-364b/364c	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-364b/364c	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-364b/364c	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not within berm footprint
Berm-364b/364c	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - net littoral transport is away from resource
Berm-364b/364c	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-364b/364c	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	Unlikely - wave deflection not likely to produce scour
Berm-364b/364c	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-364b/364c	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction may result in accumulation at groins shoreward of berm
Berm-364b/364c	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-364b/364c	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increased wave energy at adjacent groins during larger wave events
Berm-364b/364c	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-364b/364c	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-364b/364c	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-364b/364c	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-364b/364c	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-364b/364c	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-364b/364c	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-364b/364c	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-364b/364c	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-364b/364c	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-364b/364c	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-364b/364c	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-364b/364c	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-364b/364c	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction may result in accumulation at receiving beach
Berm-364b/364c	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-364b/364c	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-364b/364c	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increased waveenergy at adjacent beaches during larger wave events
Berm-364b/364c	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-364b/364c	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in littoral transport rate caused by wave energy reduction
Berm-364b/364c	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore areas mapped as sand and gravel-sand
Berm-364b/364c	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-364b/364c	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction inwave energy along shoreline during larger wave events
Berm-365	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-365	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-365	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-365	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-365	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-365	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-365	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-365	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-365	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-365	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-365	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-365	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-365	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-365	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-365	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-365	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-365	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-365	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-365	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-365	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-365	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and present within footprint area
Berm-365	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and present within footprint area
Berm-365	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource habitat inside berm footprint, and mapped shoreline habitat subject to possible shoreline erosion caused by wave focusing during larger wave events
Berm-365	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary
Berm-365	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact if species are sedentary
Berm-365	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-365	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-365	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-365	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-365	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-365	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-365	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-365	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-365	Environmental	Marine Protected Areas	Burial	100	No - resource not within berm footprint
Berm-365	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms; reduction/increase in the rate of littoral drift due to wave changes
Berm-365	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-365	Environmental	Marine Protected Areas	Habitat Impairment	100	Unlikely - berm will provide wave sheltering and reduced wave energy at shoreline along resource
Berm-365	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resouce is in the upland
Berm-365	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-365	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-365	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-365	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-365	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-365	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-365	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-365	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-365	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-365	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-365	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-365	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-365	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-365	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-365	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-365	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-365	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-365	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-365	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-365	Environmental	Wetlands	Burial	100	No - resource not present
Berm-365	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-365	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-365	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-365	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-365	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-365	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-365	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-365	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-365	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-365	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-365	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-365	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-365	Infrastructure	Coastal Structures	Burial	100	No - resources not within berm footprint
Berm-365	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from west to east caused by wave energy reduction may result in accumulation at eastern groin
Berm-365	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-365	Infrastructure	Coastal Structures	Undermining / Erosion	100	Unlikely - reduction in wave energy along shoreline at western groinduring larger wave events
Berm-365	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-365	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	50	Potential - increased sedimentation caused by settling of suspended material generated during construction
Berm-365	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	Unlikely - resource is seaward of berm and not expected to experience deflected waves
Berm-365	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-365	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-365	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-365	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-365	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-365	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-365	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-365	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-365	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-365	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-365	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from west to east caused by wave energy reduction may result in accumulation at receiving beach
Berm-365	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-365	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-365	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - reduction in wave energy along shoreline during larger wave events
Berm-365	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-365	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from west to east caused by wave energy reduction
Berm-365	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint and nearshore areas mapped as gravel-sand, silt-clay/sand, and sand
Berm-365	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-365	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in wave energy alongshoreline during larger wave events
Berm-367	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-367	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-367	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-367	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-367	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-367	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-367	Cultural	Shipwrecks	Burial	100	Unlikely - resources outside suspended sediment plume generated during construction
Berm-367	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - diffusion during storms not likely to transport berm material offshore
Berm-367	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-367	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-367	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-367	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-367	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-367	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-367	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-367	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-367	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-367	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-367	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-367	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-367	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and present within footprint area
Berm-367	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and present within footprint area
Berm-367	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource habitat inside berm footprint; erosion of shoreline habitat caused by wave focusing during larger wave events
Berm-367	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary
Berm-367	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact if species are sedentary
Berm-367	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-367	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-367	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-367	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-367	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-367	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-367	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-367	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-367	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-367	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-367	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-367	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-367	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-367	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-367	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-367	Environmental	SAV (eelgrass)	Burial	100	No - resource not within berm footprint
Berm-367	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms; reduction/increase in the rate of littoral drift due to wave changes
Berm-367	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	Unlikely - suspended sediment generated during construction not likely to move far from berm area due to granular nature of material
Berm-367	Environmental	SAV (eelgrass)	Habitat Impairment	50	Potential - shallower water depths associated with shoreline accretion caused by wave sheltering
Berm-367	Environmental	SAV (eelgrass)	Water Quality Impairment	100	Unlikely - temporary impacts to water quality during construction
Berm-367	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-367	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-367	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-367	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-367	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-367	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-367	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-367	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-367	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-367	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-367	Environmental	Wetlands	Burial	100	No - resource not present
Berm-367	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-367	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-367	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-367	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-367	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-367	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-367	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-367	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-367	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-367	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-367	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-367	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-367	Infrastructure	Coastal Structures	Burial	100	No - resources not within berm footprint
Berm-367	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-367	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-367	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in wave energy along shoreline during larger wave events
Berm-367	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-367	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-367	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-367	Infrastructure	Mooring Areas	Burial	100	No - resources not within berm footprint
Berm-367	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-367	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - proposed berm does not constrict vessel access to anchorage
Berm-367	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-367	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-367	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-367	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-367	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-367	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-367	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-367	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-367	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-367	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-367	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increase in wave energy along shoreline during larger wave events
Berm-367	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-367	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - existing littoral transport minimal due to closed transport system; no change expected withstable berm
Berm-367	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint mapped as silt-clay/sand; nearshore areas mapped as sand
Berm-367	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-367	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-368	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource outside possible shoreline erosion zone caused by wave focusing
Berm-368	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-368	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-368	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-368	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-368	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-368	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentationcaused by settling of suspended material generated during construction
Berm-368	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms or reduction in the rate of littoral drift shoreward of the berm. Potential shoreline erosion
Berm-368	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-368	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-368	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-368	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-368	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-368	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-368	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-368	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-368	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-368	Environmental	Birds	Habitat Impairment	100	Unlikely - loss of coastline areas for shore dependent species not expected due to interaction of waves with berm
Berm-368	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-368	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-368	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and present within footprint area
Berm-368	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and present within footprint area
Berm-368	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource habitat inside berm footprint, and mapped shoreline habitat subject to possible shoreline erosion caused by wave focusing during larger wave events
Berm-368	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary
Berm-368	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact if species are sedentary
Berm-368	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-368	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-368	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-368	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-368	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-368	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-368	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-368	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-368	Environmental	Marine Protected Areas	Burial	100	No - resource not within berm footprint
Berm-368	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms; reduction/increase in the rate of littoral drift due to wave changes
Berm-368	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-368	Environmental	Marine Protected Areas	Habitat Impairment	100	Unlikely - berm will provide wave sheltering and reduced wave energy at shoreline along resource
Berm-368	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource in the upland
Berm-368	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-368	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-368	Environmental	SAV (eelgrass)	Burial	0	Yes - destruction of resource in berm footprint
Berm-368	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms; reduction/increase in the rate of littoral drift due to wave changes
Berm-368	Environmental	SAV (eelgrass)	Direct Destruction/Interference	0	Yes - destruction of resources in berm footprint
Berm-368	Environmental	SAV (eelgrass)	Habitat Impairment	50	Potential - shallower water depths associated with shoreline accretion caused by wave sheltering
Berm-368	Environmental	SAV (eelgrass)	Water Quality Impairment	100	Unlikely - temporary impacts to water quality during construction
Berm-368	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-368	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-368	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-368	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-368	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-368	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-368	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-368	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-368	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-368	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-368	Environmental	Wetlands	Burial	100	No - resource not present
Berm-368	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-368	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-368	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-368	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-368	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-368	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-368	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-368	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-368	Infrastructure	Cable/power/utility crossings	Burial	100	No - resources not within berm footprint
Berm-368	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resources seaward of berm
Berm-368	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resources not within berm footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-368	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resources seaward ofberm
Berm-368	Infrastructure	Coastal Structures	Burial	100	No - resources not within berm footprint
Berm-368	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - net littoral transport from east to west is isolated from Avery Point by Bushy Island and Pine Island
Berm-368	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-368	Infrastructure	Coastal Structures	Undermining / Erosion	100	No - waves isolated from Avery Point by Bushy Island and Pine Island
Berm-368	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-368	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-368	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-368	Infrastructure	Mooring Areas	Burial	100	No - resources not within berm footprint
Berm-368	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - net littoral transport from east to west is isolated from anchorage by Bushy Island and Pine Island
Berm-368	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - proposed berm does not constrict vessel access to anchorage
Berm-368	Infrastructure	Navigation Channels & Shipping	Burial	100	No - traffic is restricted to immediate vicinity of Avery Point
Berm-368	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - traffic is restricted to immediate vicinity of Avery Point
Berm-368	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - traffic is restricted to immediate vicinity of Avery Point
Berm-368	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-368	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-368	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-368	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-368	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction may cause accumulation at shoreline
Berm-368	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-368	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-368	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - reduction in wave energy along shoreline during larger wave events
Berm-368	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-368	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-368	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore area mapped as sand
Berm-368	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-368	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in wave energy alongshoreline during larger wave events
Berm-381/382	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-381/382	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-381/382	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-381/382	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms or reduction in the rate of littoral drift shoreward of the berm
Berm-381/382	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-381/382	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-381/382	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentationcaused by settling of suspended material generated during construction
Berm-381/382	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - diffusion during storms not likely to transport berm material offshore
Berm-381/382	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-381/382	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-381/382	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-381/382	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-381/382	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-381/382	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-381/382	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-381/382	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-381/382	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-381/382	Environmental	Birds	Habitat Impairment	100	Unlikely - loss of coastline areas for shore dependent species not expected due to reduced wave energy and wave sheltering
Berm-381/382	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-381/382	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-381/382	Environmental	Federal & State Listed Species	Burial	100	No - resource on barrier beach 1/4 mile from site
Berm-381/382	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-381/382	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-381/382	Environmental	Federal & State Listed Species	Harassment	50	Potential - resource at shoreline within 1/4 mile of site
Berm-381/382	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - resource at shoreline within 1/4 mile of site
Berm-381/382	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-381/382	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-381/382	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-381/382	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-381/382	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-381/382	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-381/382	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-381/382	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-381/382	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-381/382	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-381/382	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-381/382	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-381/382	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-381/382	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-381/382	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-381/382	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-381/382	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-381/382	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-381/382	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-381/382	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-381/382	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-381/382	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-381/382	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-381/382	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-381/382	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-381/382	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-381/382	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-381/382	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-381/382	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-381/382	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-381/382	Environmental	Wetlands	Burial	100	No - resource not present
Berm-381/382	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-381/382	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-381/382	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-381/382	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-381/382	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-381/382	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-381/382	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-381/382	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-381/382	Infrastructure	Cable/power/utility crossings	Burial	0	Yes - proposed berm is on top of existing cable area
Berm-381/382	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential - increased sedimentation caused by settling of suspended material generated during construction
Berm-381/382	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential - cables may be disturbed during berm construction
Berm-381/382	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	Unlikely - most cables are seaward of berm; deflected waves at eastern end of berm not expected to scour cable area
Berm-381/382	Infrastructure	Coastal Structures	Burial	100	No - resources not within berm footprint
Berm-381/382	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction may cause accumulation at western groin
Berm-381/382	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-381/382	Infrastructure	Coastal Structures	Undermining / Erosion	100	Unlikely - reduction in wave energy along shoreline during larger wave events
Berm-381/382	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-381/382	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-381/382	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-381/382	Infrastructure	Mooring Areas	Burial	100	No - resources not within berm footprint
Berm-381/382	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - anchorage is behind barrier beach
Berm-381/382	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - anchorage is behind barrier beach
Berm-381/382	Infrastructure	Navigation Channels & Shipping	Burial	100	No - traffic is seaward of active berm
Berm-381/382	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - traffic is seaward of active berm
Berm-381/382	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - traffic is seaward of active berm
Berm-381/382	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-381/382	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-381/382	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-381/382	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-381/382	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction may cause accumulation at shoreline

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-381/382	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-381/382	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-381/382	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - reduction in wave energy along shoreline during larger wave events
Berm-381/382	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-381/382	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction; increase in sediment supply as berm migrates onshore
Berm-381/382	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore area mapped as sand
Berm-381/382	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-381/382	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in wave energy along shoreline during larger wave events
Berm-384	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-384	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-384	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-384	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-384	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-384	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-384	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentation caused by settling of suspended material generated during construction
Berm-384	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - diffusion during storms not likely to transport berm material offshore
Berm-384	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-384	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-384	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-384	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-384	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-384	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-384	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-384	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-384	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-384	Environmental	Birds	Habitat Impairment	100	Unlikely - loss of habitat for shore dependent species not expected due to reduced wave energy and wave sheltering
Berm-384	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-384	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-384	Environmental	Federal & State Listed Species	Burial	100	No - resource on barrier beach 1/4 mile from site
Berm-384	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-384	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-384	Environmental	Federal & State Listed Species	Harassment	50	Potential - resource at shoreline within 1/4 mile of site
Berm-384	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - resource at shoreline within 1/4 mile of site
Berm-384	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-384	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-384	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-384	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-384	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-384	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-384	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-384	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-384	Environmental	Marine Protected Areas	Burial	100	No - resource not within berm footprint
Berm-384	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is separated from site by barrier beach; suspended sediment during construction temporary and localized
Berm-384	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-384	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is separated from site by barrier beach; suspended sediment during construction temporary and localized
Berm-384	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - suspended sediment during construction temporary and localized
Berm-384	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-384	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-384	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-384	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-384	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-384	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-384	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-384	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-384	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-384	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-384	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-384	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-384	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-384	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-384	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-384	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-384	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-384	Environmental	Wetlands	Burial	100	No - resource not present
Berm-384	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-384	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-384	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-384	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-384	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-384	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-384	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-384	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-384	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-384	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-384	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-384	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-384	Infrastructure	Coastal Structures	Burial	100	No - resources not within berm footprint
Berm-384	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	Unlikely - armoring is parallel to shoreline and not designed to trap sediments
Berm-384	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-384	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in wave energy adjacent toberm during larger waveevents due to wave deflection
Berm-384	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-384	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-384	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-384	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-384	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-384	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-384	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-384	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-384	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-384	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-384	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-384	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-384	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-384	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from west to east caused by wave energy reduction may cause accumulation at shoreline
Berm-384	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-384	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-384	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - reduction in wave energy along shoreline during larger wave events
Berm-384	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-384	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate caused by wave energy reduction; increase in sediment supply as berm migrates onshore
Berm-384	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore area mapped as sand
Berm-384	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-384	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction inwave energy along shoreline during larger wave events
Berm-433	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-433	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-433	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-433	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	50	Potential - resources inside possible shoreline erosion zone caused by wave focusing
Berm-433	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-433	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-433	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentationcaused by settling of suspended material generated during construction
Berm-433	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-433	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-433	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-433	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-433	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-433	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-433	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-433	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-433	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-433	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-433	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-433	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-433	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-433	Environmental	Federal & State Listed Species	Burial	100	No - resource in the upland
Berm-433	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-433	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-433	Environmental	Federal & State Listed Species	Harassment	100	No - resource in the upland
Berm-433	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No - resource in the upland
Berm-433	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-433	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-433	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-433	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-433	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-433	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-433	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-433	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-433	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-433	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-433	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-433	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-433	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-433	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-433	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-433	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-433	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-433	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-433	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-433	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-433	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-433	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-433	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-433	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-433	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-433	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-433	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-433	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-433	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-433	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-433	Environmental	Wetlands	Burial	100	No - resource not present
Berm-433	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-433	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-433	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-433	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-433	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-433	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-433	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-433	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-433	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-433	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-433	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-433	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-433	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-433	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west at groins shoreward of berm caused by wave energy reduction
Berm-433	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-433	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase/reduction in wave energy at adjacent structures/Southport Beach groins during largerwave events
Berm-433	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-433	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-433	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-433	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-433	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-433	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-433	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not within berm footprint
Berm-433	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - direction of net littoral transport is away from resource
Berm-433	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect boat traffic to channel
Berm-433	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-433	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-433	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-433	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-433	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west at receiving beach caused by wave energy reduction
Berm-433	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-433	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-433	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increase/reduction in wave energy at adjacent beaches/Southport Beachduring larger wave events
Berm-433	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-433	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-433	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore areas mapped as sand, gravel-sand, and gravel
Berm-433	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-433	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction inwave energy along shoreline during larger wave events
Berm-434	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-434	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-434	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-434	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	50	Potential - resources inside possible shoreline erosion zone caused by wave focusing
Berm-434	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-434	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-434	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentationcaused by settling of suspended material generated during construction
Berm-434	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-434	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-434	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-434	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-434	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-434	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-434	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-434	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-434	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-434	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-434	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-434	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-434	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-434	Environmental	Federal & State Listed Species	Burial	100	No - resource in the upland
Berm-434	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-434	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-434	Environmental	Federal & State Listed Species	Harassment	100	Unlikely - resource at shoreline 1/2 mile from site
Berm-434	Environmental	Federal & State Listed Species	Water Quality Impairment	100	Unlikely - resource at shoreline 1/2 mile from site
Berm-434	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-434	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-434	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-434	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-434	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-434	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-434	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-434	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-434	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-434	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-434	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-434	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-434	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-434	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-434	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-434	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-434	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-434	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-434	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-434	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-434	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-434	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-434	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-434	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-434	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-434	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-434	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-434	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-434	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-434	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-434	Environmental	Wetlands	Burial	100	No - resource not present
Berm-434	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-434	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-434	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-434	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-434	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-434	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-434	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-434	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-434	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-434	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-434	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-434	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-434	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-434	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west at groin shoreward of berm caused by wave energy reduction
Berm-434	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-434	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase/reduction in wave energy at adjacent structures/Sasco Hill Beach groin during larger wave events
Berm-434	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-434	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-434	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-434	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-434	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-434	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-434	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not within berm footprint
Berm-434	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - reduction in net littoral transport rate from east to west at jetty northwest of berm caused by wave energy reduction
Berm-434	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect boat traffic to channel
Berm-434	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-434	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-434	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-434	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-434	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west at receiving beach caused by wave energy reduction
Berm-434	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-434	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-434	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increase/reduction in wave energy at Country Club/Sasco Hill Beach during larger wave events
Berm-434	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-434	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-434	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint and nearshore areas mapped as sand, and silt-clay/sand
Berm-434	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-434	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction inwave energy along shoreline during larger wave events
Berm-438	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-438	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-438	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-438	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-438	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-438	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-438	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-438	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-438	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-438	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-438	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-438	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-438	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-438	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-438	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-438	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-438	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-438	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-438	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-438	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-438	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Berm-438	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Berm-438	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-438	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary
Berm-438	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact if species are sedentary
Berm-438	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-438	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-438	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-438	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-438	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-438	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-438	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-438	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-438	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-438	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-438	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-438	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-438	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-438	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-438	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-438	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-438	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-438	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-438	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-438	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-438	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-438	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-438	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-438	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-438	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-438	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-438	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-438	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-438	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-438	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-438	Environmental	Wetlands	Burial	100	No - resource not present
Berm-438	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-438	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-438	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-438	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-438	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-438	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-438	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-438	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-438	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-438	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-438	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-438	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-438	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-438	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-438	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-438	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-438	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-438	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-438	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-438	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-438	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-438	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-438	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-438	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-438	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-438	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-438	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-438	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-438	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-438	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-438	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-438	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-438	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-438	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - minor channalization of tidal flow to/from adjacent estuary
Berm-438	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-438	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore areas mapped as sand and gravel-sand
Berm-438	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-438	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction inwave energy along shoreline during larger wave events
Berm-440	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-440	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-440	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-440	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms or reduction in the rate of littoral drift shoreward of the berm
Berm-440	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-440	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-440	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentationat shoreward recource caused by settling of suspended material generated during construction
Berm-440	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms or reduction in the rate of littoral drift shoreward of the berm
Berm-440	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-440	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-440	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-440	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-440	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-440	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-440	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-440	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-440	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-440	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-440	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-440	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-440	Environmental	Federal & State Listed Species	Burial	100	No - resource in the upland
Berm-440	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-440	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-440	Environmental	Federal & State Listed Species	Harassment	100	No - resource in the upland
Berm-440	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No - resource in the upland
Berm-440	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-440	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-440	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-440	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-440	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-440	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-440	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-440	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-440	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-440	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-440	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-440	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-440	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-440	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-440	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-440	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-440	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-440	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-440	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-440	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-440	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-440	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-440	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-440	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-440	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-440	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-440	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-440	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-440	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-440	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-440	Environmental	Wetlands	Burial	100	No - resource not within berm footprint
Berm-440	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - change in wave action or migration of berm could affect wetland by changing sedimentation rate
Berm-440	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-440	Environmental	Wetlands	Habitat Impairment	50	Potential - change in wave action or migration of berm could affect wetland by changing sedimentation rate
Berm-440	Environmental	Wetlands	Water Quality Impairment	100	Unlikely - except minor change in mixing zone during construction
Berm-440	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-440	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-440	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-440	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-440	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-440	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-440	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-440	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-440	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-440	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-440	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-440	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-440	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-440	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-440	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-440	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-440	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-440	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-440	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-440	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-440	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-440	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-440	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-440	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-440	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-440	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-440	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-440	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-440	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increase/reduction in wave energy along shoreline of Compo Beachduring larger waveevents
Berm-440	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - minor channalization of tidal flow to/from adjacent estuaries
Berm-440	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-440	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint mapped as sand, and silt-clay/sand; nearshore areas mapped as gravel-sand
Berm-440	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-440	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction inwave energy along shoreline during larger wave events
Berm-441	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-441	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-441	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-441	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-441	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-441	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-441	Cultural	Shipwrecks	Burial	100	Unlikely - resources outside suspended sediment plume generated during construction
Berm-441	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-441	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-441	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-441	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-441	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-441	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-441	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-441	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-441	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-441	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-441	Environmental	Birds	Habitat Impairment	100	No - interaction of berm with incident waves will not result in loss of coastline habitat for shore dependent species
Berm-441	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-441	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-441	Environmental	Federal & State Listed Species	Burial	100	No - resource in the upland
Berm-441	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-441	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - minimal increase/reduction in wave energy along shoreline due to wave interaction with berm; therefore no expected shoreline erosion caused by wave focusing
Berm-441	Environmental	Federal & State Listed Species	Harassment	100	No - resource in the upland
Berm-441	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No - resource in the upland
Berm-441	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-441	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-441	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-441	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-441	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-441	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-441	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-441	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-441	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-441	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-441	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-441	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-441	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-441	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-441	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-441	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-441	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-441	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-441	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-441	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-441	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-441	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-441	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-441	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-441	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-441	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-441	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-441	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-441	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-441	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-441	Environmental	Wetlands	Burial	100	No - resource not present
Berm-441	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-441	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-441	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-441	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-441	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-441	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-441	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-441	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-441	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-441	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-441	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-441	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-441	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-441	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-441	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-441	Infrastructure	Coastal Structures	Undermining / Erosion	100	Unlikely - minimal increase/reduction in wave energy along shoreline due to wave interaction with berm
Berm-441	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-441	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-441	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-441	Infrastructure	Mooring Areas	Burial	100	No - resource not within berm footprint
Berm-441	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-441	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - post-construction water depths will not affect boat traffic to mooring areas
Berm-441	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-441	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-441	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-441	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-441	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-441	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-441	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-441	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-441	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-441	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to closed transport system; no change expected with stable berm
Berm-441	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-441	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-441	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - minimal increase/reduction in wave energy along shoreline due to wave interaction with berm
Berm-441	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-441	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - existing littoral transport minimal due to closed transport system; no change expected withstable berm
Berm-441	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint and nearshore area mapped as gravel and silt-clay/sand
Berm-441	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-441	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minimal increase/reduction in wave energy along shoreline caused by wave interaction withberm
Berm-445	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing
Berm-445	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-445	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-445	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-445	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-445	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-445	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentationto shoreward resources caused by settling of suspended material generated during construction
Berm-445	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms or a reduction in the rate of littoral drift shoreward of the berm
Berm-445	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-445	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-445	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-445	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-445	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-445	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-445	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-445	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-445	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-445	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-445	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-445	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-445	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Berm-445	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Berm-445	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Berm-445	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Berm-445	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-445	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-445	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-445	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-445	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-445	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-445	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-445	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-445	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-445	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-445	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-445	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-445	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-445	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-445	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-445	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-445	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-445	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-445	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-445	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-445	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-445	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-445	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-445	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-445	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-445	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-445	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-445	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-445	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-445	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-445	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-445	Environmental	Wetlands	Burial	100	No - resource is not within berm footprint
Berm-445	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - reduction in net littoral transport rate could affect wetland by changing sedimentation rate
Berm-445	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not within berm footprint
Berm-445	Environmental	Wetlands	Habitat Impairment	100	Unlikely - berm and nearshore area mapped as sand so no change in sediment structure
Berm-445	Environmental	Wetlands	Water Quality Impairment	100	Unlikely - except for short term impact in mixing zone during construction
Berm-445	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-445	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-445	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-445	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-445	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-445	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-445	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-445	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-445	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-445	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate caused by wave energy reduction may cause accumulation at groins shoreward of berm; structures west of berm will not be affected since direction of sediment transport is away from resource
Berm-445	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-445	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in wave energy along shoreline west of berm during larger wave events
Berm-445	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-445	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-445	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-445	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-445	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-445	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-445	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-445	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-445	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-445	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-445	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-445	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-445	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-445	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	Unlikely - existing littoral transport minimal due to lack of sediment supply; no change expected with stable berm
Berm-445	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-445	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-445	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increase in wave energy along shoreline of Iron Pier Beach and boatramp during larger wave events
Berm-445	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-445	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate causedby wave energy reduction
Berm-445	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore area mapped as sand
Berm-445	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-445	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-447	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-447	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-447	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-447	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-447	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-447	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-447	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-447	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-447	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-447	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-447	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-447	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-447	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-447	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-447	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-447	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-447	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-447	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-447	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-447	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-447	Environmental	Federal & State Listed Species	Burial	50	Potential - resource within berm footprint
Berm-447	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - resource within berm footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-447	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource within berm footprint, and inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-447	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary
Berm-447	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact if species are sedentary
Berm-447	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-447	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-447	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-447	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-447	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-447	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-447	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-447	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-447	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-447	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-447	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-447	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-447	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-447	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-447	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-447	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-447	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-447	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-447	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-447	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-447	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-447	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-447	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-447	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-447	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-447	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-447	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-447	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-447	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-447	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-447	Environmental	Wetlands	Burial	100	No - resource not present
Berm-447	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-447	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-447	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-447	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-447	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-447	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-447	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-447	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-447	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-447	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-447	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-447	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-447	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-447	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from southwest to northeast caused by wave energy reduction may result in accumulation at groins shoreward of berm
Berm-447	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-447	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increased waveenergy at adjacent groins during larger wave events
Berm-447	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-447	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-447	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-447	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-447	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-447	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-447	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-447	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-447	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-447	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-447	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-447	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-447	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-447	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from southwest to northeast caused by wave energy reduction may result in accumulation at receiving beach
Berm-447	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-447	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-447	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increased waveenergy at adjacent beaches during larger wave events
Berm-447	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - channalization of tidal flow to/from New Haven Harbor
Berm-447	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from southwest to northeast caused by wave energy reduction
Berm-447	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint mapped as sand-clay/silt and silt-clay/sand; nearshore areas mapped as sand
Berm-447	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-447	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction inwave energy along shoreline during larger wave events
Berm-449	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-449	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-449	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-449	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms or reduction in the rate of littoral drift shoreward of the berm
Berm-449	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-449	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-449	Cultural	Shipwrecks	Burial	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-449	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-449	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-449	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-449	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-449	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-449	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-449	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-449	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-449	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-449	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-449	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-449	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-449	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-449	Environmental	Federal & State Listed Species	Burial	100	No - resource in the upland
Berm-449	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-449	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-449	Environmental	Federal & State Listed Species	Harassment	100	No - resource in the upland
Berm-449	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No - resource in the upland
Berm-449	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-449	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-449	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-449	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-449	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-449	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-449	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-449	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-449	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-449	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-449	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-449	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-449	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-449	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-449	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-449	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-449	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-449	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-449	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-449	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-449	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-449	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-449	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-449	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-449	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-449	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-449	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-449	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-449	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-449	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-449	Environmental	Wetlands	Burial	100	No - resource not present
Berm-449	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-449	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-449	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-449	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-449	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-449	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-449	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-449	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-449	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-449	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-449	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-449	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-449	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-449	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-449	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-449	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-449	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-449	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-449	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-449	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-449	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-449	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-449	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-449	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-449	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-449	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-449	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-449	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-449	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-449	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-449	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-449	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-449	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-449	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - minor channalization of tidal flow to/from adjacent estuaries
Berm-449	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-449	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore areas mapped as sand and gravel-sand
Berm-449	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-449	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction inwave energy along shoreline during larger wave events
Berm-451	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-451	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-451	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-451	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-451	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-451	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-451	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-451	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-451	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-451	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-451	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-451	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-451	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-451	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-451	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-451	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-451	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-451	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-451	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-451	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-451	Environmental	Federal & State Listed Species	Burial	100	No - resource in marsh and nearshore areas, not within berm footprint
Berm-451	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-451	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-451	Environmental	Federal & State Listed Species	Harassment	50	Potential - if species immobile and present during construction
Berm-451	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-451	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-451	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-451	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-451	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-451	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-451	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-451	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-451	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-451	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-451	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-451	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-451	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-451	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-451	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-451	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-451	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-451	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-451	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-451	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-451	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-451	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-451	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-451	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-451	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-451	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-451	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-451	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-451	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-451	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-451	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-451	Environmental	Wetlands	Burial	100	No - resource not present
Berm-451	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-451	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-451	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-451	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-451	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-451	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-451	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-451	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-451	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-451	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-451	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-451	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-451	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-451	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from southwest to Northeast caused by wave energy reduction may result in accumulation at groins shoreward of berm
Berm-451	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-451	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increased wave energy at adjacent groins during larger wave events
Berm-451	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-451	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-451	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-451	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-451	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-451	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-451	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-451	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-451	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-451	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-451	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-451	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-451	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-451	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from southwest to northeast caused by wave energy reduction may result in accumulation at receiving beach
Berm-451	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-451	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-451	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increased waveenergy at adjacent beaches during larger wave events
Berm-451	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-451	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from southwest to northeast caused by wave energy reduction
Berm-451	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint mapped as silt-clay/sand; nearshore areas mapped as sand
Berm-451	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-451	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction inwave energy along shoreline during larger wave events
Berm-453	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing
Berm-453	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-453	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-453	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-453	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-453	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-453	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentationcaused by settling of suspended material generated during construction
Berm-453	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-453	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-453	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-453	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-453	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-453	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-453	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-453	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-453	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-453	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-453	Environmental	Birds	Habitat Impairment	100	Unlikely - loss of coastline areas for shore dependent species not expected due to wave sheltering
Berm-453	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-453	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-453	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Berm-453	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Berm-453	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Berm-453	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species include marine mammals that could be affected during construction
Berm-453	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-453	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-453	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-453	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-453	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-453	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-453	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-453	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-453	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-453	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-453	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-453	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-453	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-453	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-453	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-453	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-453	Environmental	SAV (eelgrass)	Burial	100	No - resource not within berm footprint
Berm-453	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-453	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	Unlikely - suspended sediment generated during construction not likely to move far from berm area due to granular nature of material
Berm-453	Environmental	SAV (eelgrass)	Habitat Impairment	100	Unlikely - nearshore water depths not expected to change due to limited natural sediment supply
Berm-453	Environmental	SAV (eelgrass)	Water Quality Impairment	100	Unlikely - temporary impacts to water quality during construction
Berm-453	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-453	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-453	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-453	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-453	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-453	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-453	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-453	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-453	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-453	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-453	Environmental	Wetlands	Burial	100	No - resource is not within berm footprint
Berm-453	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - reduction in net littoral transport rate could affect wetland by changing sedimentation rate
Berm-453	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not within berm footprint
Berm-453	Environmental	Wetlands	Habitat Impairment	100	Unlikely - berm and nearshore area mapped as sand so no change in sediment structure
Berm-453	Environmental	Wetlands	Water Quality Impairment	100	Unlikely - except for short term impact in mixing zone during construction
Berm-453	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-453	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-453	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-453	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-453	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-453	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-453	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-453	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-453	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-453	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	Unlikely - increased sedimentation caused by settling of suspended material generated during construction; littoral transport is away from resource
Berm-453	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-453	Infrastructure	Coastal Structures	Undermining / Erosion	100	Unlikely - reduced wave energy along shoreline during larger wave events
Berm-453	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-453	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-453	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-453	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-453	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-453	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-453	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within berm footprint
Berm-453	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - littoral transport is away from resource
Berm-453	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - berm does not compromise navigation
Berm-453	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-453	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-453	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-453	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-453	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - stable berm may move onshore during storm events
Berm-453	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-453	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-453	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - reduced wave energy along shoreline during larger wave events
Berm-453	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect on ambient tidal currents
Berm-453	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - existing littoral transport minimal due to limited sediment supply; no change expected with stable berm
Berm-453	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore area mapped as sand
Berm-453	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-453	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduced wave energy along shoreline during larger wave events
Berm-454A	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-454A	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-454A	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-454A	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-454A	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-454A	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-454A	Cultural	Shipwrecks	Burial	100	Unlikely - resource outside suspended sediment plume generated during construction
Berm-454A	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-454A	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-454A	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-454A	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-454A	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-454A	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-454A	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-454A	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-454A	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-454A	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-454A	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-454A	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-454A	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-454A	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Berm-454A	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Berm-454A	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Berm-454A	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species include marine mammals that could be affected during construction
Berm-454A	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-454A	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-454A	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-454A	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-454A	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-454A	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-454A	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-454A	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-454A	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-454A	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-454A	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-454A	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-454A	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-454A	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-454A	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-454A	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-454A	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-454A	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-454A	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-454A	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-454A	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-454A	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-454A	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-454A	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-454A	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-454A	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-454A	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-454A	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-454A	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-454A	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-454A	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-454A	Environmental	Wetlands	Burial	100	No - resource not present
Berm-454A	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-454A	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-454A	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-454A	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-454A	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-454A	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-454A	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-454A	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-454A	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-454A	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-454A	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-454A	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-454A	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-454A	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	Unlikely - existing littoral transport minimal due to lack of sediment supply; no change expected with stable berm
Berm-454A	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-454A	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in wave energy to structures west of berm; reduction inwave energy shoreward ofberm during larger wave events
Berm-454A	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-454A	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-454A	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-454A	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-454A	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-454A	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-454A	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-454A	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-454A	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-454A	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-454A	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-454A	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-454A	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-454A	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	Unlikely - existing littoral transport minimal due to lack of sediment supply; no change expected with stable berm
Berm-454A	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-454A	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-454A	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increase in wave energy to shoreline at western end of berm during larger wave events
Berm-454A	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-454A	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate caused by wave energy reduction
Berm-454A	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore area mapped as sand
Berm-454A	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-454A	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-454B	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-454B	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-454B	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-454B	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-454B	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-454B	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-454B	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-454B	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-454B	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-454B	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-454B	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-454B	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-454B	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-454B	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-454B	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-454B	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-454B	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-454B	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-454B	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-454B	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-454B	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-454B	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Berm-454B	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Berm-454B	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Berm-454B	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Berm-454B	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-454B	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-454B	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-454B	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-454B	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-454B	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-454B	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-454B	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-454B	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-454B	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-454B	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-454B	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-454B	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-454B	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-454B	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-454B	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-454B	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-454B	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-454B	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-454B	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-454B	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-454B	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-454B	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-454B	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-454B	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-454B	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-454B	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-454B	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-454B	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-454B	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-454B	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-454B	Environmental	Wetlands	Burial	100	No - resource is not within berm footprint
Berm-454B	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - reduction in net littoral transport rate could affect wetland by changing sedimentation rate
Berm-454B	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not within berm footprint
Berm-454B	Environmental	Wetlands	Habitat Impairment	100	Unlikely - berm and nearshore area mapped as sand so no change in sediment structure
Berm-454B	Environmental	Wetlands	Water Quality Impairment	100	Unlikely - except for short term impact in mixing zone during construction
Berm-454B	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-454B	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-454B	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-454B	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-454B	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-454B	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-454B	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-454B	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-454B	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-454B	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate caused by wave energy reduction
Berm-454B	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-454B	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in wave energy along shoreline during larger wave events
Berm-454B	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-454B	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-454B	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-454B	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-454B	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-454B	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-454B	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-454B	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-454B	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-454B	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-454B	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-454B	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-454B	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-454B	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate caused by wave energy reduction
Berm-454B	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-454B	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-454B	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increase in wave energy along shoreline during larger wave events
Berm-454B	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-454B	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate caused by wave energy reduction
Berm-454B	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore area mapped as sand
Berm-454B	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-454B	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-455/82	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-455/82	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-455/82	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-455/82	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-455/82	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-455/82	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-455/82	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-455/82	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-455/82	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-455/82	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-455/82	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-455/82	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-455/82	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-455/82	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-455/82	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-455/82	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-455/82	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-455/82	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-455/82	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-455/82	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-455/82	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and in footprint area
Berm-455/82	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and in construction footprint
Berm-455/82	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - no expected change in substrate type or physical characteristics
Berm-455/82	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary, or include marine mammals that could be affected during construction
Berm-455/82	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-455/82	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-455/82	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-455/82	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-455/82	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-455/82	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-455/82	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-455/82	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-455/82	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-455/82	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-455/82	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-455/82	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-455/82	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-455/82	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-455/82	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-455/82	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-455/82	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-455/82	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-455/82	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-455/82	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-455/82	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-455/82	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-455/82	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-455/82	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-455/82	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-455/82	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-455/82	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-455/82	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-455/82	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-455/82	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-455/82	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-455/82	Environmental	Wetlands	Burial	100	No - resource is not within berm footprint
Berm-455/82	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - reduction in net littoral transport rate could affect wetland by changing sedimentation rate
Berm-455/82	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not within berm footprint
Berm-455/82	Environmental	Wetlands	Habitat Impairment	50	Potential - berm and nearshore area mapped as gravel so change in substrate and habitat structure is expected
Berm-455/82	Environmental	Wetlands	Water Quality Impairment	100	Unlikely - except for short term impact in mixing zone during construction
Berm-455/82	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-455/82	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-455/82	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-455/82	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-455/82	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-455/82	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-455/82	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-455/82	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-455/82	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-455/82	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	Unlikely - existing littoral transport minimal due to lack of sediment supply; no change expected with stable berm
Berm-455/82	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-455/82	Infrastructure	Coastal Structures	Harassment	50	Potential - increase in wave energy against jettyduring larger wave events
Berm-455/82	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-455/82	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-455/82	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-455/82	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-455/82	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-455/82	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-455/82	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within berm footprint
Berm-455/82	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - existing littoral transport minimal due to lack of sediment supply; no change expected with stable berm
Berm-455/82	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - berm does not compromise navigation
Berm-455/82	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-455/82	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-455/82	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-455/82	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-455/82	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	Unlikely - existing littoral transport minimal due to lack of sediment supply; no change expected with stable berm
Berm-455/82	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-455/82	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-455/82	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - reduction in wave energy along shoreline during larger wave events
Berm-455/82	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - minor channalization of tidal flow to/from Mattituck Harbor
Berm-455/82	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - low rates of existing littoral transport; no change expected with stable berm
Berm-455/82	Physical	Sediments	Change in Grain Size	100	No - berm footprint mapped as sand; nearshore area mapped as gravel
Berm-455/82	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-455/82	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-456	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-456	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-456	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-456	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-456	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-456	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-456	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentationto proximal resources caused by settling of suspended material generated during construction
Berm-456	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms or reduction in the rate of littoral drift shoreward of the berm
Berm-456	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - berm construction would not remove or disturb objects on the seafloor
Berm-456	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-456	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-456	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-456	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-456	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-456	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-456	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-456	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-456	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-456	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-456	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-456	Environmental	Federal & State Listed Species	Burial	100	No - resource in the upland
Berm-456	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-456	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing
Berm-456	Environmental	Federal & State Listed Species	Harassment	100	No - resource in the upland
Berm-456	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No - resource in the upland
Berm-456	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-456	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-456	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-456	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-456	Environmental	Marine Mammals	Direct Destruction/Interference	100	Unlikely - whales not documented at site; other marine mammals not susceptible to strikes
Berm-456	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-456	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-456	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-456	Environmental	Marine Protected Areas	Burial	100	No - resource in the upland
Berm-456	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is separated from site by barrier beach; suspended sediment during construction temporary and localized
Berm-456	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-456	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is separated from site by barrier beach; suspended sediment during construction temporary and localized
Berm-456	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - suspended sediment during construction temporary and localized
Berm-456	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-456	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-456	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-456	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-456	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-456	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-456	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-456	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-456	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-456	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-456	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-456	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-456	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-456	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-456	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-456	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-456	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-456	Environmental	Wetlands	Burial	100	No - resource is not within berm footprint
Berm-456	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - reduction in net littoral transport rate could affect wetland by changing sedimentation rate
Berm-456	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not within berm footprint
Berm-456	Environmental	Wetlands	Habitat Impairment	100	Unlikely - no major change in sediment structure
Berm-456	Environmental	Wetlands	Water Quality Impairment	100	Unlikely - except for short term impact in mixing zone during construction
Berm-456	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-456	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-456	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-456	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-456	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-456	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-456	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-456	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-456	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-456	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate caused by wave energy reduction may cause accumulation shoreward of berm
Berm-456	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-456	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in wave energy against bulkheads on western endof berm during larger wave events
Berm-456	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-456	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-456	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-456	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-456	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-456	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-456	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-456	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-456	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-456	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-456	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-456	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-456	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-456	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate caused by wave energy reduction may cause accumulation at beach
Berm-456	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-456	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-456	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increase in wave energy at SoundsideBeach on western end of berm during larger wave events
Berm-456	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - minor channalization of tidal flow to/from Oyster Bay
Berm-456	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-456	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint mapped as sand/silt/clay and silt-clay/sand; nearshore area mapped as sand
Berm-456	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-456	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-457	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-457	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-457	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-457	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-457	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-457	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-457	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-457	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-457	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-457	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-457	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-457	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-457	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-457	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-457	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-457	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-457	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-457	Environmental	Birds	Habitat Impairment	100	Unlikely - loss of coastline areas for shore dependent species not expected due to existing shore protection structures
Berm-457	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-457	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-457	Environmental	Federal & State Listed Species	Burial	100	No - resource in upland and on Tuxis Island, not within berm footprint
Berm-457	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-457	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-457	Environmental	Federal & State Listed Species	Harassment	50	Potential - if species immobile and present during construction
Berm-457	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-457	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-457	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-457	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-457	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-457	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-457	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-457	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-457	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-457	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-457	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-457	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-457	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-457	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-457	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-457	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-457	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-457	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-457	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-457	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-457	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-457	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-457	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-457	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-457	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-457	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-457	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-457	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-457	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-457	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-457	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-457	Environmental	Wetlands	Burial	100	No - resource not present
Berm-457	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-457	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-457	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-457	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-457	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-457	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-457	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-457	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-457	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not within berm footprint
Berm-457	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	Unlikely - no change to area expected with stable berm
Berm-457	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-457	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	Unlikely - berm is small and comparatively far from cable area
Berm-457	Infrastructure	Coastal Structures	Burial	100	No - resources not within berm footprint
Berm-457	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	Unlikely - existing littoral transport minimal due to limited sediment supply; no change expected with stable berm
Berm-457	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-457	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increased wave energy at adjacent structures during larger wave events

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-457	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-457	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-457	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-457	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-457	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-457	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-457	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-457	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-457	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-457	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-457	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-457	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-457	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-457	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	Unlikely - existing littoral transport minimal due to limited sediment supply; no change expected with stable berm
Berm-457	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-457	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-457	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - berm is small and comparatively far from other recreation areas
Berm-457	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-457	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - existing littoral transport minimal due to limited sediment supply; no change expected with stable berm
Berm-457	Physical	Sediments	Change in Grain Size	100	No - berm footprint mapped as sand; nearshore area mapped as gravel
Berm-457	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-457	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction inwave energy along shoreline during larger wave events
Berm-467	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-467	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-467	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-467	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-467	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-467	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-467	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentationcaused by settling of suspended material generated during construction
Berm-467	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-467	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-467	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-467	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-467	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-467	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-467	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-467	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-467	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-467	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-467	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-467	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-467	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-467	Environmental	Federal & State Listed Species	Burial	100	No - resource not within berm footprint
Berm-467	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-467	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing during larger wave events
Berm-467	Environmental	Federal & State Listed Species	Harassment	50	Potential - if species are sedentary
Berm-467	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short-term impact if species are sedentary
Berm-467	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-467	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-467	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-467	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-467	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-467	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-467	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-467	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-467	Environmental	Marine Protected Areas	Burial	100	No - resource not within berm footprint
Berm-467	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms; reduction/increase in the rate of littoral drift due to wave changes
Berm-467	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-467	Environmental	Marine Protected Areas	Habitat Impairment	50	Potential - increased erosion of shoreline at resource caused by potential wave focusing
Berm-467	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resouce is in the upland
Berm-467	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-467	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-467	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-467	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-467	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-467	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-467	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-467	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-467	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-467	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-467	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-467	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-467	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-467	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-467	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-467	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-467	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-467	Environmental	Wetlands	Burial	100	No - resource not present
Berm-467	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-467	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-467	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-467	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-467	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-467	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-467	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-467	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-467	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-467	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-467	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-467	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-467	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-467	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction may result in accumulation at groins shoreward of berm
Berm-467	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-467	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increased wave energy at adjacent groins during larger wave events
Berm-467	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-467	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-467	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-467	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-467	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-467	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-467	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-467	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-467	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-467	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-467	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-467	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-467	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-467	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction may result in accumulation at receiving beach
Berm-467	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-467	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-467	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increased wave energy at adjacent beaches during larger wave events
Berm-467	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-467	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction/increase innet littoral transport rate from east to west caused by wave energy reduction
Berm-467	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore areas mapped as sand and gravel-sand
Berm-467	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-467	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction inwave energy along shoreline during larger wave events
Berm-600	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing
Berm-600	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-600	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-600	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms or reduction in the rate of littoral drift shoreward of the berm
Berm-600	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-600	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-600	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentation caused by settling of suspended material generated during construction
Berm-600	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - diffusion during storms not likely to transport berm material offshore
Berm-600	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-600	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-600	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-600	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-600	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-600	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-600	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-600	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-600	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-600	Environmental	Birds	Habitat Impairment	100	Unlikely - loss of coastline areas for shore dependent species not expected due to interaction of waves with berm
Berm-600	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-600	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-600	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and present within footprint area
Berm-600	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and present within footprint area
Berm-600	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource habitat inside berm footprint, and mapped shoreline habitat subject to possible shoreline erosion caused by wave focusing during larger wave events
Berm-600	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary
Berm-600	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact if species are sedentary
Berm-600	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-600	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-600	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-600	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-600	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-600	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-600	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-600	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-600	Environmental	Marine Protected Areas	Burial	100	No - resources not within berm footprint
Berm-600	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resources beyond zone of potential increase in suspended sediment
Berm-600	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resources not within berm footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-600	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resources beyond zone of potential increase in suspended sediment
Berm-600	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resouce is in the upland
Berm-600	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-600	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-600	Environmental	SAV (eelgrass)	Burial	100	No - resource not within berm footprint
Berm-600	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-600	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	Unlikely - suspended sediment generated during construction not likely to move far from berm area due to granular nature of material
Berm-600	Environmental	SAV (eelgrass)	Habitat Impairment	100	Unlikely - nearshore water depths not expected to change due to limited natural sediment supply
Berm-600	Environmental	SAV (eelgrass)	Water Quality Impairment	100	Unlikely - temporary impacts to water quality during construction
Berm-600	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-600	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-600	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-600	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-600	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-600	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-600	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-600	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-600	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-600	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-600	Environmental	Wetlands	Burial	100	No - resource not present
Berm-600	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-600	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-600	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-600	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-600	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-600	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-600	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-600	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-600	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-600	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-600	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-600	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-600	Infrastructure	Coastal Structures	Burial	100	No - resource not present
Berm-600	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - resource not present
Berm-600	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present
Berm-600	Infrastructure	Coastal Structures	Undermining / Erosion	100	No - resource not present
Berm-600	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-600	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-600	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-600	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-600	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-600	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-600	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-600	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-600	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-600	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-600	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-600	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-600	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-600	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction may result in accumulation at receiving beach
Berm-600	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-600	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-600	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increased wave energy at adjacent beaches during larger wave events
Berm-600	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-600	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate caused by wave energy reduction
Berm-600	Physical	Sediments	Change in Grain Size	100	No - berm footprint and nearshore areas mapped as sand and gravel-sand
Berm-600	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-600	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-610	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-610	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-610	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-610	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-610	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-610	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-610	Cultural	Shipwrecks	Burial	100	No - resource not present
Berm-610	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-610	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
Berm-610	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-610	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-610	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-610	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-610	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-610	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-610	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-610	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-610	Environmental	Birds	Habitat Impairment	100	Unlikely - loss of coastline areas for shore dependent species not expected due to interaction of waves with berm
Berm-610	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-610	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-610	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and present within footprint area
Berm-610	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and present within footprint area

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-610	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource habitat inside berm footprint, and mapped shoreline habitat subject to possible shoreline erosion caused by wave focusing during larger wave events
Berm-610	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary
Berm-610	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact if species are sedentary
Berm-610	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-610	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-610	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-610	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-610	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-610	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-610	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-610	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-610	Environmental	Marine Protected Areas	Burial	100	No - resources not within berm footprint
Berm-610	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms; reduction/increase in the rate of littoral drift due to wave changes
Berm-610	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-610	Environmental	Marine Protected Areas	Habitat Impairment	50	Potential - increased erosion of shoreline at resource caused by potential wave focusing
Berm-610	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resouce is in the upland
Berm-610	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-610	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-610	Environmental	SAV (eelgrass)	Burial	100	No - resource not within berm footprint
Berm-610	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation caused by diffusion of berm material during storms
Berm-610	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	Unlikely - suspended sediment generated during construction not likely to move far from berm area due to granular nature of material
Berm-610	Environmental	SAV (eelgrass)	Habitat Impairment	100	Unlikely - nearshore water depths not expected to change due to limited natural sediment supply
Berm-610	Environmental	SAV (eelgrass)	Water Quality Impairment	100	Unlikely - temporary impacts to water quality during construction
Berm-610	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-610	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-610	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-610	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-610	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-610	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-610	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-610	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-610	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-610	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-610	Environmental	Wetlands	Burial	100	No - resource not present
Berm-610	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-610	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-610	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-610	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-610	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-610	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-610	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-610	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-610	Infrastructure	Cable/power/utility crossings	Burial	0	Yes - proposed berm is on top of existing cable area
Berm-610	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential - increased sedimentation caused by settling of suspended material generated during construction
Berm-610	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential - cables may be disturbed during berm construction
Berm-610	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	Unlikely - most cables are seaward of berm; deflected waves at eastern end of berm not expected to scour cable area
Berm-610	Infrastructure	Coastal Structures	Burial	100	No - resource not present
Berm-610	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - resource not present
Berm-610	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present
Berm-610	Infrastructure	Coastal Structures	Undermining / Erosion	100	No - resource not present
Berm-610	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-610	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-610	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-610	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-610	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-610	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-610	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Berm-610	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Berm-610	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-610	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-610	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-610	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-610	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-610	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction may result in accumulation at receiving beach
Berm-610	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-610	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-610	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential - increased wave energy at adjacent beaches during larger wave events
Berm-610	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-610	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate caused by wave energy reduction
Berm-610	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint mapped as sand/gravel and material to be placed is finer grained sand
Berm-610	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-610	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-63	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-63	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-63	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-63	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-63	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-63	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-63	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentationcaused by settling of suspended material generated during construction
Berm-63	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - diffusion during storms not likely to transport berm material offshore
Berm-63	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-63	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-63	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-63	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-63	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-63	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-63	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-63	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-63	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-63	Environmental	Birds	Habitat Impairment	50	Potential - reduction in habitat for shore dependent species caused by wave focusing and shoreline erosion
Berm-63	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-63	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-63	Environmental	Federal & State Listed Species	Burial	100	No - resource in the upland
Berm-63	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-63	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource inside possible shoreline erosion zone caused by wave focusing
Berm-63	Environmental	Federal & State Listed Species	Harassment	100	No - resource in the upland
Berm-63	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No - resource in the upland
Berm-63	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-63	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-63	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-63	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-63	Environmental	Marine Mammals	Direct Destruction/Interference	100	Unlikely - whales not documented at site; other marine mammals not susceptible to strikes
Berm-63	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-63	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-63	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-63	Environmental	Marine Protected Areas	Burial	100	No - resource not present
Berm-63	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-63	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
Berm-63	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
Berm-63	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
Berm-63	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-63	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-63	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
Berm-63	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-63	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
Berm-63	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
Berm-63	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
Berm-63	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-63	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-63	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint
Berm-63	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-63	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-63	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
Berm-63	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
Berm-63	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
Berm-63	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
Berm-63	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-63	Environmental	Wetlands	Burial	100	No - resource is not within berm footprint
Berm-63	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - reduction in net littoral transport rate could affect wetland by changing sedimentation rate
Berm-63	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not within berm footprint
Berm-63	Environmental	Wetlands	Habitat Impairment	100	Unlikely - berm and nearshore area mapped as sand and gravel/sand so no major change in sediment structure
Berm-63	Environmental	Wetlands	Water Quality Impairment	100	Unlikely - except for short term impact in mixing zone during construction
Berm-63	Infrastructure	Aquaculture	Burial	100	No - resource not within berm footprint
Berm-63	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource is seaward of berm
Berm-63	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-63	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource is seaward of berm
Berm-63	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not within berm footprint
Berm-63	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	Unlikely - net littoral transport is away from resource
Berm-63	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-63	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	Unlikely - increase in waveenergy along shoreline east of berm during larger wave events
Berm-63	Infrastructure	Coastal Structures	Burial	100	No - resource not within berm footprint
Berm-63	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate caused by wave energy reduction may cause accumulation shoreward of berm
Berm-63	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-63	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in wave energy against jetties east of berm duringlarger wave events
Berm-63	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-63	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Berm-63	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-63	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-63	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-63	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-63	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within berm footprint
Berm-63	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - net littoral transport is away from channel
Berm-63	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - berm does not compromise navigation

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-63	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-63	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-63	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-63	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-63	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - reduction in net littoral transport rate caused by wave energy reduction may cause accumulation at beach
Berm-63	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-63	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-63	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - increase in waveenergy along shoreline east of berm during larger wave events
Berm-63	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of berm on ambient tidal currents
Berm-63	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - reduction in net littoral transport rate from east to west caused by wave energy reduction
Berm-63	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint and nearshore area mapped as sand and gravel-sand
Berm-63	Physical	Sediments	Change in TOC	100	Unlikely - existing sediments characterized by granular material typically low in TOC
Berm-63	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/reduction in wave energy along shoreline during larger wave events
Berm-Grove Point Beach	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-Grove Point Beach	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
Berm-Grove Point Beach	Cultural	Archaeological Sites	Visual Impact	100	No - berm not visible from shore
Berm-Grove Point Beach	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-Grove Point Beach	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
Berm-Grove Point Beach	Cultural	Historic Districts	Visual Impact	100	No - berm not visible from shore
Berm-Grove Point Beach	Cultural	Shipwrecks	Burial	50	Potential - increased sedimentation caused by settling of suspended material generated during construction
Berm-Grove Point Beach	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - diffusion during storms not likely to transport berm material offshore
Berm-Grove Point Beach	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-Grove Point Beach	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-Grove Point Beach	Environmental	Air Quality/Noise	Harassment	50	Potential - Intermittent short-term noise and air quality impacts during placement of material.
Berm-Grove Point Beach	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within berm footprint
Berm-Grove Point Beach	Environmental	Benthic Invertebrates	Direct Destruction/Interference	100	No – resource is not being removed from the site
Berm-Grove Point Beach	Environmental	Benthic Invertebrates	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-Grove Point Beach	Environmental	Benthic Invertebrates	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-Grove Point Beach	Environmental	Bioaccumulation Potential	Habitat Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-Grove Point Beach	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	Unlikely - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
Berm-Grove Point Beach	Environmental	Birds	Habitat Impairment	100	Unlikely - loss of coastline areas for shore dependent species not expected due to interaction of waves with berm
Berm-Grove Point Beach	Environmental	Birds	Harassment	100	Unlikely - temporary vessel traffic during construction not likely to disturb mobile resource
Berm-Grove Point Beach	Environmental	Birds	Water Quality Impairment	100	Unlikely - scale of habitat for waterfowl large relative to potential/ temporary zone of increased suspended sediment during construction
Berm-Grove Point Beach	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and present within footprint area
Berm-Grove Point Beach	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and present within footprint area

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-Grove Point Beach	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - resource habitat inside berm footprint, and mapped shoreline habitat subject to possible shoreline erosion caused by wave focusing during larger wave events
Berm-Grove Point Beach	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are sedentary
Berm-Grove Point Beach	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact if species are sedentary
Berm-Grove Point Beach	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
Berm-Grove Point Beach	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
Berm-Grove Point Beach	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
Berm-Grove Point Beach	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
Berm-Grove Point Beach	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction
Berm-Grove Point Beach	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-Grove Point Beach	Environmental	Marine Mammals	Harassment	50	Potential - during construction
Berm-Grove Point Beach	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely - scale of habitat large relative to project area
Berm-Grove Point Beach	Environmental	Marine Protected Areas	Burial	100	No - resources not within berm footprint
Berm-Grove Point Beach	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resources beyond zone of potential increase in suspended sediment
Berm-Grove Point Beach	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-Grove Point Beach	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resources beyond zone of potential increase in suspended sediment
Berm-Grove Point Beach	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resources beyond zone of potential increase in suspended sediment
Berm-Grove Point Beach	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
Berm-Grove Point Beach	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Berm-Grove Point Beach	Environmental	SAV (eelgrass)	Burial	100	No - resource not within berm footprint
Berm-Grove Point Beach	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	Unlikely - diffusion of berm material during storms not expected to move seaward towards breakwaters
Berm-Grove Point Beach	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	Unlikely - suspended sediment generated during construction not likely to move far from berm area due to granular nature of material
Berm-Grove Point Beach	Environmental	SAV (eelgrass)	Habitat Impairment	100	Unlikley - berm will not alter more seaward habitat adjacent to breakwaters
Berm-Grove Point Beach	Environmental	SAV (eelgrass)	Water Quality Impairment	100	Unlikely - temporary impacts to water quality during construction
Berm-Grove Point Beach	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Coarser grained material to be used for berm creation is generally lower in TOC, and thus lower in contaminants. Testing program will minimize exposure of organisms to contaminants.
Berm-Grove Point Beach	Environmental	Shellfish	Burial	0	Yes - loss of species within berm footprint
Berm-Grove Point Beach	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - loss of species within berm footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-Grove Point Beach	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
Berm-Grove Point Beach	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - suspended sediment during construction temporary and localized
Berm-Grove Point Beach	Environmental	Terrestrial Wildlife	Burial	100	No - resource not within CDF footprint
Berm-Grove Point Beach	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not within CDF footprint
Berm-Grove Point Beach	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - underwater berm will not alter upland mammal habitat
Berm-Grove Point Beach	Environmental	Terrestrial Wildlife	Harassment	100	No - disturbance limited to marine areas in vicinity of berm
Berm-Grove Point Beach	Environmental	Water Quality	Water Quality Impairment	50	Potential - Short-term impacts to water quality during placement of material. Potential changes in turbidity from increased erosion.
Berm-Grove Point Beach	Environmental	Wetlands	Burial	100	No - resource not present
Berm-Grove Point Beach	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
Berm-Grove Point Beach	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
Berm-Grove Point Beach	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
Berm-Grove Point Beach	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Aquaculture	Burial	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Coastal Structures	Burial	100	No - resources not within berm footprint
Berm-Grove Point Beach	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	Unlikely - existing littoral transport minimal due to limited sediment supply; no change expected with stable berm
Berm-Grove Point Beach	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within berm footprint
Berm-Grove Point Beach	Infrastructure	Coastal Structures	Undermining / Erosion	100	Unlikely - minimal increase/reduction in wave energy along shoreline due to wave interaction with berm
Berm-Grove Point Beach	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Berm-Grove Point Beach	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within berm footprint
Berm-Grove Point Beach	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - existing littoral transport minimal due to limited sediment supply; no change expected with stable berm
Berm-Grove Point Beach	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	100	No - berm does not compromise navigation
Berm-Grove Point Beach	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Ports	Changes in Vessel Traffic Patterns	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Berm-Grove Point Beach	Infrastructure	Recreational Areas	Burial	100	No - resources not within berm footprint
Berm-Grove Point Beach	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	Unlikely - existing littoral transport minimal due to limited sediment supply; no change expected with stable berm
Berm-Grove Point Beach	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	Unlikely - post-construction water depths will not affect recreational boat traffic
Berm-Grove Point Beach	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within berm footprint
Berm-Grove Point Beach	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - minimal increase/reduction in wave energy along shoreline due to wave interaction with berm
Berm-Grove Point Beach	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - channalization of tidal flow to/from adjacent estuary
Berm-Grove Point Beach	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - existing littoral transport minimal due to limited sediment supply; no change expected with stable berm
Berm-Grove Point Beach	Physical	Sediments	Change in Grain Size	50	Potential - berm footprint and nearshore areas mapped as silt-clay/sand and sand
Berm-Grove Point Beach	Physical	Sediments	Change in TOC	50	Potential - existing finer grained sediments typically higher in TOC would be covered with granular material low in TOC
Berm-Grove Point Beach	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minimal increase/reduction in wave energy along shoreline due to wave interaction withberm
BF-422/423	Cultural	Archaeological Sites	Direct Destruction/Interference	50	Potential - Where resources are present, potential direct destruction if resources are within excavation area.
BF-422/423	Cultural	Archaeological Sites	Visual Impact	100	No - unlikely resource is located within this site.
BF-422/423	Cultural	Historic Districts	Direct Destruction/Interference	100	No - unlikely resource is located within this site.
BF-422/423	Cultural	Historic Districts	Visual Impact	100	No visual impacts since site would be converted from airport to parkland.
BF-422/423	Environmental	Air Quality/Noise	Habitat Impairment	0	Yes - On-road truck operation and on-site redevelopment activities involving equipment operation and materials transporting would have adverse impacts in sensitive land uses immediately adjacent to truck routes and around the redevelopment site.
BF-422/423	Environmental	Air Quality/Noise	Harassment	0	Yes - On-road truck operation and on-site redevelopment activities involving equipment operation and materials transporting would have adverse impacts in sensitive land uses immediately adjacent to truck routes and around the redevelopment site.
BF-422/423	Environmental	Bioaccumulation Potential	Habitat Impairment	50	Potential - A brownfields/redevelopment site bioaccumulation pathway exists for terrestrial wildlife depending on design or management practices.
BF-422/423	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	50	Potential - A brownfields/redevelopment site bioaccumulation pathway exists for terrestrial wildlife depending on design or management practices.
BF-422/423	Environmental	Birds	Habitat Impairment	100	Unlikely
BF-422/423	Environmental	Birds	Harassment	100	Unlikely - Harassment is unlikely because construction/site operation is not likely to disturb mobile resource.
BF-422/423	Environmental	Birds	Water Quality Impairment	100	Unlikely
BF-422/423	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and located within construction footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
BF-422/423	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and located within construction footprint
BF-422/423	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential for impairment where habitat is located within construction footprint.
BF-422/423	Environmental	Federal & State Listed Species	Harassment	50	Potential - if species are sedentary and present during construction.
BF-422/423	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short-term water quality impacts
BF-422/423	Environmental	Sediment Quality	Sediment Quality Impairment	50	Potential - There is a potential for runoff and related TSS to intersect with receiving water sediments near Brownfileds/Redeveloment sites.
BF-422/423	Environmental	Terrestrial Wildlife	Burial	100	No - resources are not present
BF-422/423	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resources are not present
BF-422/423	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resources are not present
BF-422/423	Environmental	Terrestrial Wildlife	Harassment	100	No - resources are not present
BF-422/423	Environmental	Water Quality	Water Quality Impairment	50	Potential - There is a potential for runoff to intersect with surface and ground water resources near Brownfileds/Redeveloment sites.
BF-422/423	Environmental	Wetlands	Burial	0	Yes
BF-422/423	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	0	Yes
BF-422/423	Environmental	Wetlands	Direct Destruction/Interference	0	Yes
BF-422/423	Environmental	Wetlands	Water Quality Impairment	0	Yes
BF-422/423	Infrastructure	Cable/power/utility crossings	Burial	50	Potential - Site specific information would be required to determine extent of impact.
BF-422/423	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential - Site specific information would be required to determine extent of impact.
BF-422/423	Infrastructure	Commercial & Industrial Facilities	Burial	100	No - resource not within landfill footprint
BF-422/423	Infrastructure	Commercial & Industrial Facilities	Changes in Sedimentation Patterns	100	No - resource not within landfill footprint
BF-422/423	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	50	Potential - Commercial and industrial areas surrounding sites may be termporarily impacted by changes to air quality, noise, and traffic congestion in immediate area during construction period.
BF-422/423	Infrastructure	Commercial & Industrial Facilities	Undermining / Erosion	100	No - resource not within landfill footprint
BF-422/423	Infrastructure	Commercial & Industrial Facilities	Visual Impact	100	No - resource not within landfill footprint
BF-422/423	Infrastructure	Recreational Areas	Burial	100	No - resource not within landfill footprint
BF-422/423	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - resource not within landfill footprint
BF-422/423	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential - Recreational green space adjacent to sites may be temporarily impacted by changes to air quality, noise, and traffic congestion in immediate area during construction period.
BF-422/423	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - resource not within landfill footprint
BF-422/423	Infrastructure	Recreational Areas	Visual Impact	100	No - resource not within landfill footprint
BF-422/423	Physical	Sediments	Change in Grain Size	50	Potential - There is a potential for runoff and related TSS to alter receiving aquatic sediment characteristics near Brownfileds/Redeveloment sites.
BF-422/423	Physical	Sediments	Change in TOC	50	Potential - There is a potential for runoff and related TSS to alter receiving aquatic sediment characteristics near Brownfileds/Redeveloment sites.
BF-422/423	Physical	Soils	Change in Grain Size	50	Potential - There is a potential for runoff and related TSS to alter receiving aquatic sediment characteristics near Brownfileds/Redeveloment sites.
BF-422/423	Physical	Soils	Change in TOC	50	Potential - There is a potential for runoff and related TSS to alter receiving aquatic sediment characteristics near Brownfileds/Redeveloment sites.
CAD-G	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
CAD-G	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
CAD-G	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
CAD-G	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	Unlikely -changes in bathymetry would not result in wave focusing or increased erosion along the shoreline
CAD-G	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	100	No - CAD below water surface
CAD-G	Cultural	Historic Districts	Direct Destruction/Interference	100	No -resources not within CAD footprint
CAD-G	Cultural	Shipwrecks	Burial	100	No -resources not within CAD footprint
CAD-G	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential -increased sedimentation during CDF filling
CAD-G	Cultural	Shipwrecks	Direct Destruction/Interference	100	No -resources not within CAD footprint
CAD-G	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
CAD-G	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
CAD-G	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
CAD-G	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
CAD-G	Environmental	Benthic Invertebrates	Habitat Impairment	50	Potential - cap sediment would provide suitable benthic habitat; sediment in nearshore habitat not expected to change
CAD-G	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
CAD-G	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - short-term turbidity increase during placement or capping
CAD-G	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
CAD-G	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
CAD-G	Environmental	Birds	Habitat Impairment	100	No - CAD site on sea floor would not impact bird habitat
CAD-G	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
CAD-G	Environmental	Birds	Sediment Quality Impairment	100	No - CAD site on sea floor would not provide bird habitat
CAD-G	Environmental	Birds	Water Quality Impairment	100	Unlikely - short-term turbidity increase during placement or capping
CAD-G	Environmental	Federal & State Listed Species	Burial	100	No - resource not within project footprint
CAD-G	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within project footprint
CAD-G	Environmental	Federal & State Listed Species	Habitat Impairment	100	No - filling sea floor will not impair listed species habitat in upland
CAD-G	Environmental	Federal & State Listed Species	Harassment	50	Potential - during construction
CAD-G	Environmental	Federal & State Listed Species	Sediment Quality Impairment	100	Unlikely - resource occurs in upland
CAD-G	Environmental	Federal & State Listed Species	Water Quality Impairment	100	Unlikely - resource occurs in upland
CAD-G	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
CAD-G	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
CAD-G	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
CAD-G	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
CAD-G	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
CAD-G	Environmental	Marine Mammals	Direct Destruction/Interference	100	Unlikely - strikes not likely at nearshore site
CAD-G	Environmental	Marine Mammals	Habitat Impairment	100	No - water column habitat for mammals not altered
CAD-G	Environmental	Marine Mammals	Harassment	50	Potential - during construction
CAD-G	Environmental	Marine Mammals	Sediment Quality Impairment	100	No - water column habitat for mammals not altered
CAD-G	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
CAD-G	Environmental	Marine Protected Areas	Burial	100	No - resource not within project footprint
CAD-G	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	Unlikely - change not expected at resource located updrift of CAD
CAD-G	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within project footprint
CAD-G	Environmental	Marine Protected Areas	Habitat Impairment	100	Unlikely - change not expected at resource located updrift of CAD
CAD-G	Environmental	Marine Protected Areas	Sediment Quality Impairment	100	Unlikely - change not expected at resource located updrift of CAD
CAD-G	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
CAD-G	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
CAD-G	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
CAD-G	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
CAD-G	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
CAD-G	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
CAD-G	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
CAD-G	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
CAD-G	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
CAD-G	Environmental	Shellfish	Burial	0	Yes - resource is within CAD footprint
CAD-G	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - resource is within CAD footprint
CAD-G	Environmental	Shellfish	Habitat Impairment	100	Unlikely - cap sediment would provide suitable shellfish habitat; sediment in nearshore habitat not expected to change
CAD-G	Environmental	Shellfish	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
CAD-G	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - short-term turbidity increase during placement or capping
CAD-G	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
CAD-G	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
CAD-G	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
CAD-G	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
CAD-G	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
CAD-G	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
CAD-G	Environmental	Wetlands	Burial	100	No - resource not present
CAD-G	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
CAD-G	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
CAD-G	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
CAD-G	Environmental	Wetlands	Sediment Quality Impairment	100	No - resource not present
CAD-G	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
CAD-G	Infrastructure	Aquaculture	Burial	100	No - resource not present
CAD-G	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
CAD-G	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
CAD-G	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
CAD-G	Infrastructure	Cable/power/utility crossings	Burial	100	No - resources not within CAD footprint
CAD-G	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - littoral drift patterns/rates not impacted by offshore CAD
CAD-G	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-G	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - cable area isolated from outer harbor
CAD-G	Infrastructure	Coastal Structures	Burial	100	No - resources not within CAD footprint
CAD-G	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - littoral drift patterns/rates not impacted by offshore CAD
CAD-G	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-G	Infrastructure	Coastal Structures	Undermining / Erosion	100	No - filling of CAD to ambient sea floor elevation will not alter the local wave climatology
CAD-G	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-G	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
CAD-G	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
CAD-G	Infrastructure	Mooring Areas	Burial	100	No - resources not within CDF footprint
CAD-G	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - anchorage area isolated from outer harbor
CAD-G	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within CDF footprint
CAD-G	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	50	Potential - particle settling during dumping could deposit in channel
CAD-G	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - working areas of port are armored and isolated from CAD
CAD-G	Infrastructure	Ports	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-G	Infrastructure	Recreational Areas	Burial	100	No - resources not within CAD footprint
CAD-G	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - littoral drift patterns/rates not impacted by offshore CAD
CAD-G	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	No - CAD below water surface
CAD-G	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-G	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - filling of CAD to ambient sea floor elevation will not alter the local wave climatology
CAD-G	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	No - filling of CAD to ambient sea floor elevation will not alter local current patterns/rates
CAD-G	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - littoral drift patterns/rates not impacted by offshore CAD
CAD-G	Physical	Sediments	Change in Grain Size	0	Likely - reduction in TOC following placement of granular cap material
CAD-G	Physical	Sediments	Visual Impact	50	Potential -CAD footprint mapped as silt-clay/sand
CAD-G	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	100	No - filling of CAD to ambient sea floor elevation will not alter the local wave climatology
CAD-H	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
CAD-H	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
CAD-H	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
CAD-H	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	Unlikely -changes in bathymetry would not result in wave focusing or increased erosion along the shoreline
CAD-H	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	100	No - CAD below water surface
CAD-H	Cultural	Historic Districts	Direct Destruction/Interference	100	No -resources not within CAD footprint
CAD-H	Cultural	Shipwrecks	Burial	100	No -resources not within CAD footprint
CAD-H	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential -increased sedimentation during CDF filling
CAD-H	Cultural	Shipwrecks	Direct Destruction/Interference	100	No -resources not within CAD footprint
CAD-H	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
CAD-H	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
CAD-H	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
CAD-H	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
CAD-H	Environmental	Benthic Invertebrates	Habitat Impairment	50	Potential - cap sediment would provide suitable benthic habitat; sediment in nearshore habitat not expected to change

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
CAD-H	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
CAD-H	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - short-term turbidity increase during placement or capping
CAD-H	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
CAD-H	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
CAD-H	Environmental	Birds	Habitat Impairment	100	No - CAD site on sea floor would not impact bird habitat
CAD-H	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
CAD-H	Environmental	Birds	Sediment Quality Impairment	100	No - CAD site on sea floor would not provide bird habitat
CAD-H	Environmental	Birds	Water Quality Impairment	100	Unlikely - short-term turbidity increase during placement or capping
CAD-H	Environmental	Federal & State Listed Species	Burial	100	No - resource not within project footprint
CAD-H	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within project footprint
CAD-H	Environmental	Federal & State Listed Species	Habitat Impairment	100	No - filling sea floor will not impair listed species habitat in upland
CAD-H	Environmental	Federal & State Listed Species	Harassment	50	Potential - during construction
CAD-H	Environmental	Federal & State Listed Species	Sediment Quality Impairment	100	Unlikely - resource occurs in upland
CAD-H	Environmental	Federal & State Listed Species	Water Quality Impairment	100	Unlikely - resource occurs in upland
CAD-H	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
CAD-H	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
CAD-H	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
CAD-H	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
CAD-H	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
CAD-H	Environmental	Marine Mammals	Direct Destruction/Interference	100	Unlikely - strikes not likely at nearshore site
CAD-H	Environmental	Marine Mammals	Habitat Impairment	100	No - water column habitat for mammals not altered
CAD-H	Environmental	Marine Mammals	Harassment	50	Potential - during construction
CAD-H	Environmental	Marine Mammals	Sediment Quality Impairment	100	No - water column habitat for mammals not altered
CAD-H	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
CAD-H	Environmental	Marine Protected Areas	Burial	100	No - resource not within project footprint
CAD-H	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	Unlikely - change not expected at resource located updrift of CAD
CAD-H	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within project footprint
CAD-H	Environmental	Marine Protected Areas	Habitat Impairment	100	Unlikely - change not expected at resource located updrift of CAD
CAD-H	Environmental	Marine Protected Areas	Sediment Quality Impairment	100	Unlikely - change not expected at resource located updrift of CAD
CAD-H	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
CAD-H	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
CAD-H	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
CAD-H	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
CAD-H	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
CAD-H	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
CAD-H	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
CAD-H	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
CAD-H	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
CAD-H	Environmental	Shellfish	Burial	0	Yes - resource is within CAD footprint
CAD-H	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - resource is within CAD footprint
CAD-H	Environmental	Shellfish	Habitat Impairment	100	Unlikely - cap sediment would provide suitable shellfish habitat; sediment in nearshore habitat not expected to change
CAD-H	Environmental	Shellfish	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
CAD-H	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - short-term turbidity increase during placement or capping
CAD-H	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
CAD-H	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
CAD-H	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
CAD-H	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
CAD-H	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
CAD-H	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
CAD-H	Environmental	Wetlands	Burial	100	No - resource not present
CAD-H	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
CAD-H	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
CAD-H	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
CAD-H	Environmental	Wetlands	Sediment Quality Impairment	100	No - resource not present
CAD-H	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
CAD-H	Infrastructure	Aquaculture	Burial	100	No - resource not present
CAD-H	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
CAD-H	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
CAD-H	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
CAD-H	Infrastructure	Cable/power/utility crossings	Burial	100	No - resources not within CAD footprint
CAD-H	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - littoral drift patterns/rates not impacted by offshore CAD
CAD-H	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-H	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - cable area isolated from outer harbor
CAD-H	Infrastructure	Coastal Structures	Burial	100	No - resources not within CAD footprint
CAD-H	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - littoral drift patterns/rates not impacted by offshore CAD
CAD-H	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-H	Infrastructure	Coastal Structures	Undermining / Erosion	100	No - filling of CAD to ambient sea floor elevation will not alter the local wave climatology
CAD-H	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-H	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
CAD-H	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
CAD-H	Infrastructure	Mooring Areas	Burial	100	No - resources not within CDF footprint
CAD-H	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - anchorage area isolated from outer harbor
CAD-H	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within CDF footprint
CAD-H	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	50	Potential - particle settling during dumping could deposit in channel
CAD-H	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - working areas of port are armored and isolated from CAD
CAD-H	Infrastructure	Ports	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-H	Infrastructure	Recreational Areas	Burial	100	No - resources not within CAD footprint
CAD-H	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - littoral drift patterns/rates not impacted by offshore CAD
CAD-H	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	No - CAD below water surface
CAD-H	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-H	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - filling of CAD to ambient sea floor elevation will not alter the local wave climatology

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
CAD-H	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	No - filling of CAD to ambient sea floor elevation will not alter local current patterns/rates
CAD-H	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - littoral drift patterns/rates not impacted by offshore CAD
CAD-H	Physical	Sediments	Change in Grain Size	0	Likely - reduction in TOC following placement of granular cap material
CAD-H	Physical	Sediments	Visual Impact	50	Potential -CAD footprint mapped as silt-clay/sand
CAD-H	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	100	No - filling of CAD to ambient sea floor elevation will not alter the local wave climatology
CAD-M	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
CAD-M	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
CAD-M	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
CAD-M	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	Unlikely -changes in bathymetry would not result in wave focusing or increased erosion along the shoreline
CAD-M	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	100	No - CAD below water surface
CAD-M	Cultural	Historic Districts	Direct Destruction/Interference	100	No -resources not within CAD footprint
CAD-M	Cultural	Shipwrecks	Burial	100	No -resources not within CAD footprint
CAD-M	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential -increased sedimentation during CDF filling
CAD-M	Cultural	Shipwrecks	Direct Destruction/Interference	100	No -resources not within CAD footprint
CAD-M	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
CAD-M	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
CAD-M	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
CAD-M	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
CAD-M	Environmental	Benthic Invertebrates	Habitat Impairment	50	Potential - cap sediment would provide suitable benthic habitat; sediment in nearshore habitat not expected to change
CAD-M	Environmental	Benthic Invertebrates	Sediment Quality Impairment	50	Potential - increase in habitat due to restoration of pit to ambient depth
CAD-M	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - short-term turbidity increase during placement or capping
CAD-M	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
CAD-M	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
CAD-M	Environmental	Birds	Habitat Impairment	100	No - CAD site on sea floor would not impact bird habitat
CAD-M	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
CAD-M	Environmental	Birds	Sediment Quality Impairment	100	No - CAD site on sea floor would not provide bird habitat
CAD-M	Environmental	Birds	Water Quality Impairment	100	Unlikely - short-term turbidity increase during placement or capping
CAD-M	Environmental	Federal & State Listed Species	Burial	100	No - resource not within project footprint
CAD-M	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within project footprint
CAD-M	Environmental	Federal & State Listed Species	Habitat Impairment	100	No - filling sea floor will not impair listed species habitat in upland
CAD-M	Environmental	Federal & State Listed Species	Harassment	50	Potential - during construction
CAD-M	Environmental	Federal & State Listed Species	Sediment Quality Impairment	100	Unlikely - resource occurs in upland
CAD-M	Environmental	Federal & State Listed Species	Water Quality Impairment	100	Unlikely - resource occurs in upland
CAD-M	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
CAD-M	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No - proposed CAD fills existing borrow pit, no excavation necessary
CAD-M	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
CAD-M	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
CAD-M	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
CAD-M	Environmental	Marine Mammals	Direct Destruction/Interference	100	Unlikely - strikes not likely at nearshore site
CAD-M	Environmental	Marine Mammals	Habitat Impairment	100	No - water column habitat for mammals not altered
CAD-M	Environmental	Marine Mammals	Harassment	50	Potential - during construction
CAD-M	Environmental	Marine Mammals	Sediment Quality Impairment	100	No - water column habitat for mammals not altered
CAD-M	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
CAD-M	Environmental	Marine Protected Areas	Burial	100	No - resource not present
CAD-M	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
CAD-M	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
CAD-M	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
CAD-M	Environmental	Marine Protected Areas	Sediment Quality Impairment	100	No - resource not present
CAD-M	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
CAD-M	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
CAD-M	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
CAD-M	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
CAD-M	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
CAD-M	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
CAD-M	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
CAD-M	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
CAD-M	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
CAD-M	Environmental	Shellfish	Burial	50	Potential - resource may be within CAD footprint where borrow pit is not deep
CAD-M	Environmental	Shellfish	Direct Destruction/Interference	100	No - proposed CAD fills existing borrow pit, no excavation necessary
CAD-M	Environmental	Shellfish	Habitat Impairment	100	Unlikely - cap sediment would provide suitable shellfish habitat; sediment in nearshore habitat not expected to change
CAD-M	Environmental	Shellfish	Sediment Quality Impairment	50	Potential - increase in habitat due to restoration of pit to ambient depth
CAD-M	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - short-term turbidity increase during placement or capping
CAD-M	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
CAD-M	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
CAD-M	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
CAD-M	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
CAD-M	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
CAD-M	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
CAD-M	Environmental	Wetlands	Burial	100	No - resource not within project footprint
CAD-M	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is in the upland
CAD-M	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not within project footprint
CAD-M	Environmental	Wetlands	Habitat Impairment	100	No - resource is in the upland
CAD-M	Environmental	Wetlands	Sediment Quality Impairment	100	No - resource is in the upland
CAD-M	Environmental	Wetlands	Water Quality Impairment	100	No - resource is in the upland
CAD-M	Infrastructure	Aquaculture	Burial	100	No - resource not present
CAD-M	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
CAD-M	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
CAD-M	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
CAD-M	Infrastructure	Cable/power/utility crossings	Burial	100	No - resources not within CAD footprint
CAD-M	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	Unlikely - particle settling during dumping not expected to deposit in cable area

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
CAD-M	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-M	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - filling of CAD to ambient sea floor elevation will not alter the local wave climatology
CAD-M	Infrastructure	Coastal Structures	Burial	100	No - resources not within CAD footprint
CAD-M	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - littoral drift patterns/rates not impacted by offshore CAD
CAD-M	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-M	Infrastructure	Coastal Structures	Undermining / Erosion	100	No - filling of CAD to ambient sea floor elevation will not alter the local wave climatology
CAD-M	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-M	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
CAD-M	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
CAD-M	Infrastructure	Mooring Areas	Burial	100	No - resource not present
CAD-M	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
CAD-M	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within CAD footprint
CAD-M	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - particle settling during dumping not expected to deposit in channel
CAD-M	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - significant distance between CAD and port
CAD-M	Infrastructure	Ports	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-M	Infrastructure	Recreational Areas	Burial	100	No - resources not within CAD footprint
CAD-M	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - littoral drift patterns/rates not impacted by offshore CAD
CAD-M	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	No - CAD below water surface
CAD-M	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within CAD footprint
CAD-M	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - filling of CAD to ambient sea floor elevation will not alter the local wave climatology
CAD-M	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	No - filling of CAD to ambient sea floor elevation will not alter local current patterns/rates
CAD-M	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - littoral drift patterns/rates not impacted by offshore CAD
CAD-M	Physical	Sediments	Change in Grain Size	0	Likely - reduction in TOC following placement of granular cap material
CAD-M	Physical	Sediments	Visual Impact	50	Potential -CAD footprint mapped as sand, and sand-clay/silt
CAD-M	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	100	No - filling of CAD to ambient sea floor elevation will not alter the local wave climatology
COW-E	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
COW-E	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
COW-E	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
COW-E	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	Unlikely -changes in bathymetry would not result in wave focusing or increased erosion along the shoreline
COW-E	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	100	No - CAD below water surface
COW-E	Cultural	Historic Districts	Direct Destruction/Interference	100	No -resources not within CAD footprint
COW-E	Cultural	Shipwrecks	Burial	100	No -resources not within CAD footprint
COW-E	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential -increased sedimentation during CDF filling
COW-E	Cultural	Shipwrecks	Direct Destruction/Interference	100	No -resources not within CAD footprint
COW-E	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
COW-E	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
COW-E	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
COW-E	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
COW-E	Environmental	Benthic Invertebrates	Habitat Impairment	50	Potential - cap sediment would provide suitable benthic habitat; sediment in nearshore habitat not expected to change
COW-E	Environmental	Benthic Invertebrates	Sediment Quality Impairment	50	Potential - increase in habitat due to restoration of pit to ambient depth
COW-E	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - short-term turbidity increase during placement or capping
COW-E	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
COW-E	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
COW-E	Environmental	Birds	Habitat Impairment	100	No - CAD site on sea floor would not impact bird habitat
COW-E	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
COW-E	Environmental	Birds	Sediment Quality Impairment	100	No - CAD site on sea floor would not provide bird habitat
COW-E	Environmental	Birds	Water Quality Impairment	100	Unlikely - short-term turbidity increase during placement or capping
COW-E	Environmental	Federal & State Listed Species	Burial	100	No - resource not within project footprint
COW-E	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within project footprint
COW-E	Environmental	Federal & State Listed Species	Habitat Impairment	100	No - filling sea floor will not impair listed species habitat in upland
COW-E	Environmental	Federal & State Listed Species	Harassment	100	Unlikely - construction activity would occur 1/2 mile from resource
COW-E	Environmental	Federal & State Listed Species	Sediment Quality Impairment	100	Unlikely - resource occurs in upland
COW-E	Environmental	Federal & State Listed Species	Water Quality Impairment	100	Unlikely - resource occurs in upland
COW-E	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
COW-E	Environmental	Federally Managed Species	Direct Destruction/Interference	100	No - proposed CAD fills existing borrow pit, no excavation necessary
COW-E	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
COW-E	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
COW-E	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
COW-E	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction and operation
COW-E	Environmental	Marine Mammals	Habitat Impairment	100	No - water column habitat for mammals not altered
COW-E	Environmental	Marine Mammals	Harassment	50	Potential - during construction
COW-E	Environmental	Marine Mammals	Sediment Quality Impairment	100	No - water column habitat for mammals not altered
COW-E	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
COW-E	Environmental	Marine Protected Areas	Burial	100	No - resource not present
COW-E	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
COW-E	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
COW-E	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
COW-E	Environmental	Marine Protected Areas	Sediment Quality Impairment	100	No - resource not present
COW-E	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
COW-E	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
COW-E	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
COW-E	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
COW-E	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
COW-E	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
COW-E	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
COW-E	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
COW-E	Environmental	Sediment Quality	Change in TOC	100	No - Contaminants are: 1) similar to reference areas in Long Island Sound and 2) consistently below concentrations considered adverse to organisms Acute toxicity not found in the site or at nearby reference areas. Testing program will minimize exposure o

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
COW-E	Environmental	Shellfish	Burial	0	Yes - resource is within CAD footprint
COW-E	Environmental	Shellfish	Direct Destruction/Interference	100	No - proposed CAD fills existing borrow pit, no excavation necessary
COW-E	Environmental	Shellfish	Habitat Impairment	100	Unlikely - cap sediment would provide suitable shellfish habitat; sediment in nearshore habitat not expected to change
COW-E	Environmental	Shellfish	Sediment Quality Impairment	50	Potential - increase in habitat due to restoration of pit to ambient depth
COW-E	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - short-term turbidity increase during placement or capping
COW-E	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
COW-E	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
COW-E	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
COW-E	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
COW-E	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
COW-E	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
COW-E	Environmental	Wetlands	Burial	100	No - resource not present
COW-E	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
COW-E	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
COW-E	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
COW-E	Environmental	Wetlands	Sediment Quality Impairment	100	No - resource not present
COW-E	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
COW-E	Infrastructure	Aquaculture	Burial	100	No - resource not present
COW-E	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
COW-E	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
COW-E	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
COW-E	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
COW-E	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
COW-E	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
COW-E	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
COW-E	Infrastructure	Coastal Structures	Burial	100	No - resources not within CAD footprint
COW-E	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - littoral drift patterns/rates not impacted by offshore CAD
COW-E	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within CAD footprint
COW-E	Infrastructure	Coastal Structures	Undermining / Erosion	100	No - filling of CAD to ambient sea floor elevation will not alter the local wave climatology
COW-E	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
COW-E	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
COW-E	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
COW-E	Infrastructure	Mooring Areas	Burial	100	No - resource not present
COW-E	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
COW-E	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
COW-E	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
COW-E	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
COW-E	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
COW-E	Infrastructure	Recreational Areas	Burial	100	No - resources not within CAD footprint
COW-E	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - littoral drift patterns/rates not impacted by offshore CAD
COW-E	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	No - CAD below water surface
COW-E	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within CAD footprint
COW-E	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - filling of CAD to ambient sea floor elevation will not alter the local wave climatology
COW-E	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	No - filling of CAD to ambient sea floor elevation will not alter local current patterns/rates
COW-E	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - littoral drift patterns/rates not impacted by offshore CAD
COW-E	Physical	Sediments	Change in Grain Size	0	Likely - reduction in TOC following placement of granular cap material
COW-E	Physical	Sediments	Visual Impact	0	Yes -CAD footprint mapped as sand/silt/clay, silt-clay/sand, sand, gravel-sand, and gravel
COW-E	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	100	No - filling of CAD to ambient sea floor elevation will not alter the local wave climatology
IslandCDF-B	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-B	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
IslandCDF-B	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
IslandCDF-B	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-B	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	100	No - resource not present
IslandCDF-B	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
IslandCDF-B	Cultural	Shipwrecks	Burial	100	No -resources not within CDF footprint
IslandCDF-B	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely -resources beyond possible zone of wave focusing along shoreline; resources beyond dewatering impact zone
IslandCDF-B	Cultural	Shipwrecks	Direct Destruction/Interference	100	No -resources not within CDF footprint
IslandCDF-B	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
IslandCDF-B	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
IslandCDF-B	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
IslandCDF-B	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
IslandCDF-B	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
IslandCDF-B	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-B	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
IslandCDF-B	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
IslandCDF-B	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
IslandCDF-B	Environmental	Birds	Habitat Impairment	0	Yes - loss of natural shoreline habitat around existing islands for shore dependent species by CDF placement; potential loss of shoreline habitat from wave focusing and shoreline erosion
IslandCDF-B	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
IslandCDF-B	Environmental	Birds	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
IslandCDF-B	Environmental	Birds	Water Quality Impairment	50	Potential - degradation of waterfowl habitat by increased turbidity during construction or dewatering

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
IslandCDF-B	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and within construction footprint
IslandCDF-B	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and within construction footprint
IslandCDF-B	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - depending on characteristics of completed project
IslandCDF-B	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are in project vicinity
IslandCDF-B	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
IslandCDF-B	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact from dewatering
IslandCDF-B	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
IslandCDF-B	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
IslandCDF-B	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
IslandCDF-B	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
IslandCDF-B	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
IslandCDF-B	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction and operation
IslandCDF-B	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement
IslandCDF-B	Environmental	Marine Mammals	Harassment	50	Potential - during construction
IslandCDF-B	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals
IslandCDF-B	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
IslandCDF-B	Environmental	Marine Protected Areas	Burial	0	Yes - resource is within CDF footprint
IslandCDF-B	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	0	Yes - resource is within CDF footprint
IslandCDF-B	Environmental	Marine Protected Areas	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
IslandCDF-B	Environmental	Marine Protected Areas	Habitat Impairment	0	Yes - resource is within CDF footprint
IslandCDF-B	Environmental	Marine Protected Areas	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
IslandCDF-B	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
IslandCDF-B	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
IslandCDF-B	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
IslandCDF-B	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-B	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
IslandCDF-B	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
IslandCDF-B	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
IslandCDF-B	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
IslandCDF-B	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
IslandCDF-B	Environmental	Shellfish	Burial	0	Yes - resource is within CDF footprint
IslandCDF-B	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
IslandCDF-B	Environmental	Shellfish	Habitat Impairment	0	Yes - resource is within CDF footprint
IslandCDF-B	Environmental	Shellfish	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-B	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
IslandCDF-B	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
IslandCDF-B	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
IslandCDF-B	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
IslandCDF-B	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
IslandCDF-B	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
IslandCDF-B	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
IslandCDF-B	Environmental	Wetlands	Burial	0	Yes - resource will be covered with berm material
IslandCDF-B	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	0	Yes - at project footprint and in local area due to changes in wave energy
IslandCDF-B	Environmental	Wetlands	Direct Destruction/Interference	50	Potential - due to filling of wetland area within project footprint
IslandCDF-B	Environmental	Wetlands	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
IslandCDF-B	Environmental	Wetlands	Water Quality Impairment	50	Potential - short term impact during construction
IslandCDF-B	Infrastructure	Aquaculture	Burial	100	No - resource not present
IslandCDF-B	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-B	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
IslandCDF-B	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
IslandCDF-B	Infrastructure	Cable/power/utility crossings	Burial	100	No - resources not within CDF footprint
IslandCDF-B	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	Unlikely - minimal littoral transport at existing island sites and adjacent rocky shoreline; no change expected with CDF
IslandCDF-B	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resources not within CDF footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
IslandCDF-B	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	Unlikely - cable area is seaward of CDF
IslandCDF-B	Infrastructure	Coastal Structures	Burial	0	Yes - Calf Island groins within CDF footprint
IslandCDF-B	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	Unlikely - minimal littoral transport at existing island sites and adjacent rocky shoreline; no change expected with CDF
IslandCDF-B	Infrastructure	Coastal Structures	Direct Destruction/Interference	0	Yes - Calf Island groins within CDF footprint
IslandCDF-B	Infrastructure	Coastal Structures	Undermining / Erosion	100	Unlikely - reduction in wave energy along shoreline due to wave sheltering
IslandCDF-B	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
IslandCDF-B	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-B	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
IslandCDF-B	Infrastructure	Mooring Areas	Burial	100	No - resources not within CDF footprint
IslandCDF-B	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	Unlikely - minimal littoral transport at existing island sites and adjacent rocky shoreline; no change expected with CDF
IslandCDF-B	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
IslandCDF-B	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-B	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-B	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
IslandCDF-B	Infrastructure	Recreational Areas	Burial	100	No - resources not within CDF footprint
IslandCDF-B	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	Unlikely - minimal littoral transport at existing island sites and adjacent rocky shoreline; no change expected with CDF
IslandCDF-B	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	0	Yes - CDF will be visible from Byram Park and Belle Haven Club
IslandCDF-B	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within CDF footprint
IslandCDF-B	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - reduction in wave energy along shoreline due to wave sheltering
IslandCDF-B	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/ channelization in currents due to large size of CDF in harbor
IslandCDF-B	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minimal littoral transport at existing island sites and adjacent rocky shoreline; no change expected with CDF
IslandCDF-B	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
IslandCDF-B	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as silt-clay/sand and gravel
IslandCDF-B	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - increase in local wave energy around CDF due to reflection/ refraction off containment structure; reduction in wave energy along shoreline due to wave sheltering
IslandCDF-L	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-L	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
IslandCDF-L	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
IslandCDF-L	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-L	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	100	No - resource not present
IslandCDF-L	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
IslandCDF-L	Cultural	Shipwrecks	Burial	100	No - resource not present
IslandCDF-L	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-L	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
IslandCDF-L	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
IslandCDF-L	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
IslandCDF-L	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
IslandCDF-L	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
IslandCDF-L	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
IslandCDF-L	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-L	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
IslandCDF-L	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
IslandCDF-L	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
IslandCDF-L	Environmental	Birds	Habitat Impairment	50	Potential - habitat for shorebird species within zone of shoreline erosion caused by wave focusing
IslandCDF-L	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
IslandCDF-L	Environmental	Birds	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
IslandCDF-L	Environmental	Birds	Water Quality Impairment	50	Potential - degradation of waterfowl habitat by increased turbidity during construction or dewatering
IslandCDF-L	Environmental	Federal & State Listed Species	Burial	100	No - resource not within project footprint
IslandCDF-L	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within project footprint
IslandCDF-L	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - resource not in immediate vicinity
IslandCDF-L	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact to sedentary species during construction
IslandCDF-L	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of built project
IslandCDF-L	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
IslandCDF-L	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
IslandCDF-L	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
IslandCDF-L	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
IslandCDF-L	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
IslandCDF-L	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
IslandCDF-L	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction and operation
IslandCDF-L	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement
IslandCDF-L	Environmental	Marine Mammals	Harassment	50	Potential - during construction
IslandCDF-L	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals
IslandCDF-L	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
IslandCDF-L	Environmental	Marine Protected Areas	Burial	100	No - resource not present
IslandCDF-L	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-L	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
IslandCDF-L	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
IslandCDF-L	Environmental	Marine Protected Areas	Sediment Quality Impairment	100	No - resource not present
IslandCDF-L	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
IslandCDF-L	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
IslandCDF-L	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
IslandCDF-L	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-L	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
IslandCDF-L	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
IslandCDF-L	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
IslandCDF-L	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
IslandCDF-L	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
IslandCDF-L	Environmental	Shellfish	Burial	0	Yes - resource is within CDF footprint
IslandCDF-L	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
IslandCDF-L	Environmental	Shellfish	Habitat Impairment	0	Yes - resource is within CDF footprint
IslandCDF-L	Environmental	Shellfish	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-L	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
IslandCDF-L	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
IslandCDF-L	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
IslandCDF-L	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
IslandCDF-L	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
IslandCDF-L	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
IslandCDF-L	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
IslandCDF-L	Environmental	Wetlands	Burial	100	No - resource not present
IslandCDF-L	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-L	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
IslandCDF-L	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
IslandCDF-L	Environmental	Wetlands	Sediment Quality Impairment	100	No - resource not present
IslandCDF-L	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
IslandCDF-L	Infrastructure	Aquaculture	Burial	100	No - resource not present
IslandCDF-L	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-L	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
IslandCDF-L	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
IslandCDF-L	Infrastructure	Cable/power/utility crossings	Burial	100	No - resources not within CDF footprint
IslandCDF-L	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential - dewatering run-off could deposit in cable area
IslandCDF-L	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resources not within CDF footprint
IslandCDF-L	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	50	Potential - current speeds may increase east of breakwater due to narrowing of harbor
IslandCDF-L	Infrastructure	Coastal Structures	Burial	100	No - breakwaters to be incorporated into CDF dike wall
IslandCDF-L	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	Unlikely - current speeds may increase east of breakwater due to narrowing of harbor
IslandCDF-L	Infrastructure	Coastal Structures	Direct Destruction/Interference	0	Yes - Breakwaters to be incorporated into CDF
IslandCDF-L	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - current speeds may increase east of breakwater due to narrowing of harbor
IslandCDF-L	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
IslandCDF-L	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - significant distance between CDF and disposal site
IslandCDF-L	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - significant distance between CDF and disposal site
IslandCDF-L	Infrastructure	Mooring Areas	Burial	100	No - resource not present
IslandCDF-L	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-L	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within CDF footprint
IslandCDF-L	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	50	Potential - dewatering run-off could deposit in channel
IslandCDF-L	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - significant distance between CDF and port
IslandCDF-L	Infrastructure	Ports	Direct Destruction/Interference	100	No - resources not within CDF footprint
IslandCDF-L	Infrastructure	Recreational Areas	Burial	100	No - resources not within CDF footprint
IslandCDF-L	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - enhanced sheltering effect of breakwater-based CDF could slow longshore sediment transport and cause accumulation at shoreward beaches
IslandCDF-L	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	0	Yes - CDF will be visible from Bradley Point Park, Morse Park, and Lighthouse Point Park
IslandCDF-L	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within CDF footprint
IslandCDF-L	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - significant distance between CDF and parks
IslandCDF-L	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Likely - increase/ deflection of tidal currents in/out of New Haven Harbor
IslandCDF-L	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - decrease in rate of littoral drift along shoreline shoreward of CDF due to enhanced wave sheltering
IslandCDF-L	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
IslandCDF-L	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as sand, sand-clay/silt, and silt-clay/sand
IslandCDF-L	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - further reduction in local wave energy shoreward of CDF due to wave sheltering; reduction/increase in wave energy along West Haven shoreline due to wave sheltering and/or wave focusing
IslandCDF-N	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-N	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
IslandCDF-N	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
IslandCDF-N	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-N	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	100	No - resource not present
IslandCDF-N	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
IslandCDF-N	Cultural	Shipwrecks	Burial	0	Yes -resource inside CDF would be buried during site operation; resources outside CDF not buried
IslandCDF-N	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential -shipwreck to north may be within the dewatering impact zone
IslandCDF-N	Cultural	Shipwrecks	Direct Destruction/Interference	0	Likely -resources in close proximity to work area with containment structures
IslandCDF-N	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
IslandCDF-N	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
IslandCDF-N	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
IslandCDF-N	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
IslandCDF-N	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
IslandCDF-N	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-N	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
IslandCDF-N	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
IslandCDF-N	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
IslandCDF-N	Environmental	Birds	Habitat Impairment	0	Yes - loss of natural shoreline habitat around existing island/shoal for shore dependent species by CDF placement
IslandCDF-N	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
IslandCDF-N	Environmental	Birds	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
IslandCDF-N	Environmental	Birds	Water Quality Impairment	50	Potential - degradation of waterfowl habitat by increased turbidity during construction or dewatering
IslandCDF-N	Environmental	Federal & State Listed Species	Burial	0	Yes - resource within project footprint
IslandCDF-N	Environmental	Federal & State Listed Species	Direct Destruction/Interference	0	Yes - resource within project footprint
IslandCDF-N	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - physical change in habitat area due to filling submerged land
IslandCDF-N	Environmental	Federal & State Listed Species	Harassment	50	Potential - during construction
IslandCDF-N	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
IslandCDF-N	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
IslandCDF-N	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
IslandCDF-N	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
IslandCDF-N	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
IslandCDF-N	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
IslandCDF-N	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
IslandCDF-N	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction and operation
IslandCDF-N	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
IslandCDF-N	Environmental	Marine Mammals	Harassment	50	Potential - during construction
IslandCDF-N	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals
IslandCDF-N	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
IslandCDF-N	Environmental	Marine Protected Areas	Burial	0	Yes - resource is within CDF footprint
IslandCDF-N	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	0	Yes - resource is within CDF footprint
IslandCDF-N	Environmental	Marine Protected Areas	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
IslandCDF-N	Environmental	Marine Protected Areas	Habitat Impairment	0	Yes - resource is within CDF footprint
IslandCDF-N	Environmental	Marine Protected Areas	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
IslandCDF-N	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
IslandCDF-N	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
IslandCDF-N	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
IslandCDF-N	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-N	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
IslandCDF-N	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
IslandCDF-N	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
IslandCDF-N	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
IslandCDF-N	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
IslandCDF-N	Environmental	Shellfish	Burial	100	No - resource not present
IslandCDF-N	Environmental	Shellfish	Direct Destruction/Interference	100	No - resource not present
IslandCDF-N	Environmental	Shellfish	Habitat Impairment	100	No - resource not present
IslandCDF-N	Environmental	Shellfish	Sediment Quality Impairment	100	No - resource not present
IslandCDF-N	Environmental	Shellfish	Water Quality Impairment	100	No - resource not present
IslandCDF-N	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
IslandCDF-N	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
IslandCDF-N	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
IslandCDF-N	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
IslandCDF-N	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
IslandCDF-N	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
IslandCDF-N	Environmental	Wetlands	Burial	100	No - resource not present
IslandCDF-N	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-N	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
IslandCDF-N	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
IslandCDF-N	Environmental	Wetlands	Sediment Quality Impairment	100	No - resource not present
IslandCDF-N	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
IslandCDF-N	Infrastructure	Aquaculture	Burial	100	No - resource not present
IslandCDF-N	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-N	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
IslandCDF-N	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
IslandCDF-N	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
IslandCDF-N	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-N	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
IslandCDF-N	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
IslandCDF-N	Infrastructure	Coastal Structures	Burial	100	No - resource not present
IslandCDF-N	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-N	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resource not present
IslandCDF-N	Infrastructure	Coastal Structures	Undermining / Erosion	100	No - resource not present
IslandCDF-N	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
IslandCDF-N	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-N	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
IslandCDF-N	Infrastructure	Mooring Areas	Burial	100	No - resource not present
IslandCDF-N	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-N	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
IslandCDF-N	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
IslandCDF-N	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-N	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
IslandCDF-N	Infrastructure	Recreational Areas	Burial	100	No - resource not present
IslandCDF-N	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-N	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
IslandCDF-N	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not present
IslandCDF-N	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - resource not present
IslandCDF-N	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of CDF on ambient tidal currents
IslandCDF-N	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - CDF too far offshore to affect littoral transport processes along shoreline
IslandCDF-N	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
IslandCDF-N	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as gravel, and sand
IslandCDF-N	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - increase in local wave energy around CDF due to reflection/ refraction off containment structure
IslandCDF-P	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-P	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
IslandCDF-P	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
IslandCDF-P	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - wave and current patterns at resource inside harbor not altered by CDF
IslandCDF-P	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	50	Potential -CDF facility could be seen from historic district site in vicinity
IslandCDF-P	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not within CDF footprint
IslandCDF-P	Cultural	Shipwrecks	Burial	100	No - resource not present
IslandCDF-P	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-P	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
IslandCDF-P	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
IslandCDF-P	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
IslandCDF-P	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
IslandCDF-P	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
IslandCDF-P	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
IslandCDF-P	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-P	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
IslandCDF-P	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
IslandCDF-P	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
IslandCDF-P	Environmental	Birds	Habitat Impairment	100	Unlikely - habitat for shorebird species not within zone of shoreline erosion caused by wave focusing
IslandCDF-P	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
IslandCDF-P	Environmental	Birds	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
IslandCDF-P	Environmental	Birds	Water Quality Impairment	50	Potential - degradation of waterfowl habitat by increased turbidity during construction or dewatering
IslandCDF-P	Environmental	Federal & State Listed Species	Burial	100	No - resource not within project footprint
IslandCDF-P	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within project footprint
IslandCDF-P	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely - resource not in immediate vicinity
IslandCDF-P	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact to sedentary species during construction
IslandCDF-P	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of built project
IslandCDF-P	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
IslandCDF-P	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
IslandCDF-P	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
IslandCDF-P	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
IslandCDF-P	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
IslandCDF-P	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
IslandCDF-P	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction and operation
IslandCDF-P	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement
IslandCDF-P	Environmental	Marine Mammals	Harassment	50	Potential - during construction
IslandCDF-P	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals
IslandCDF-P	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
IslandCDF-P	Environmental	Marine Protected Areas	Burial	100	No - resource not within CDF footprint
IslandCDF-P	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource outside zone of influence for littoral drift created by CDF
IslandCDF-P	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within CDF footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
IslandCDF-P	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource outside zone of influence for littoral drift created by CDF
IslandCDF-P	Environmental	Marine Protected Areas	Sediment Quality Impairment	100	No - resource outside zone of influence for littoral drift created by CDF
IslandCDF-P	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
IslandCDF-P	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
IslandCDF-P	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
IslandCDF-P	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-P	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
IslandCDF-P	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
IslandCDF-P	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
IslandCDF-P	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
IslandCDF-P	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
IslandCDF-P	Environmental	Shellfish	Burial	100	No - resource not within project footprint
IslandCDF-P	Environmental	Shellfish	Direct Destruction/Interference	100	No - resource not within project footprint
IslandCDF-P	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-P	Environmental	Shellfish	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-P	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - nearshore resource outside zone of increased turbidity
IslandCDF-P	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
IslandCDF-P	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
IslandCDF-P	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
IslandCDF-P	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
IslandCDF-P	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
IslandCDF-P	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
IslandCDF-P	Environmental	Wetlands	Burial	100	No - resource not present
IslandCDF-P	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-P	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
IslandCDF-P	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
IslandCDF-P	Environmental	Wetlands	Sediment Quality Impairment	100	No - resource not present
IslandCDF-P	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
IslandCDF-P	Infrastructure	Aquaculture	Burial	100	No - resource not present
IslandCDF-P	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-P	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
IslandCDF-P	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
IslandCDF-P	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
IslandCDF-P	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-P	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
IslandCDF-P	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
IslandCDF-P	Infrastructure	Coastal Structures	Burial	100	No - breakwater to be incorporated into CDF dike wall
IslandCDF-P	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - decrease in rate of littoral drift along shoreline shoreward of CDF may cause accumulation at shoreline groins
IslandCDF-P	Infrastructure	Coastal Structures	Direct Destruction/Interference	0	Yes - Breakwater to be incorporated into CDF
IslandCDF-P	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in wave energy along shoreline due to wave focusing may cause erosion at select shoreline groins
IslandCDF-P	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
IslandCDF-P	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	Unlikely - resource is too distant to receive run-off during construction
IslandCDF-P	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	50	Potential -increase/channelization in ambient tidal currents between shoreline and CDF could induce scour at disposal site
IslandCDF-P	Infrastructure	Mooring Areas	Burial	100	No - resource not present
IslandCDF-P	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-P	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
IslandCDF-P	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-P	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-P	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
IslandCDF-P	Infrastructure	Recreational Areas	Burial	100	No - resource not present
IslandCDF-P	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-P	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
IslandCDF-P	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
IslandCDF-P	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - resource not present
IslandCDF-P	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/ channelization in ambient tidal currents between shoreline and CDF
IslandCDF-P	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Likely - decrease in rate of littoral drift along shoreline shoreward of CDF
IslandCDF-P	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
IslandCDF-P	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as sand
IslandCDF-P	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - increase in local wave energy around CDF due to reflection/ refraction off containment structure; increase/ reduction in wave energy along shoreline due to wave sheltering and/or wave focusing
IslandCDF-Q	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-Q	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
IslandCDF-Q	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
IslandCDF-Q	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation/erosion at shoreline due to changes in wave patterns
IslandCDF-Q	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	50	Potential - CDF facility could be seen from historic district sites in vicinity
IslandCDF-Q	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resources not within CDF footprint
IslandCDF-Q	Cultural	Shipwrecks	Burial	100	No - resources not within CDF footprint
IslandCDF-Q	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation at closest resource from dewatering and/or wave sheltering
IslandCDF-Q	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resources not within CDF footprint
IslandCDF-Q	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
IslandCDF-Q	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
IslandCDF-Q	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
IslandCDF-Q	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
IslandCDF-Q	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
IslandCDF-Q	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-Q	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
IslandCDF-Q	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
IslandCDF-Q	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
IslandCDF-Q	Environmental	Birds	Habitat Impairment	0	Yes - loss of natural shoreline habitat around existing island/shoal for shore dependent species by CDF placement; potential loss of shoreline habitat from wave focusing and shoreline erosion
IslandCDF-Q	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
IslandCDF-Q	Environmental	Birds	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
IslandCDF-Q	Environmental	Birds	Water Quality Impairment	50	Potential - degradation of waterfowl habitat by increased turbidity during construction or dewatering
IslandCDF-Q	Environmental	Federal & State Listed Species	Burial	100	No - resource not within project footprint
IslandCDF-Q	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within project footprint
IslandCDF-Q	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - change in wave action and sedimentation/erosion regime could affect shoreline habitat
IslandCDF-Q	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact during construction
IslandCDF-Q	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of built project
IslandCDF-Q	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
IslandCDF-Q	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
IslandCDF-Q	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
IslandCDF-Q	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
IslandCDF-Q	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
IslandCDF-Q	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
IslandCDF-Q	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction and operation
IslandCDF-Q	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement
IslandCDF-Q	Environmental	Marine Mammals	Harassment	50	Potential - during construction
IslandCDF-Q	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals
IslandCDF-Q	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
IslandCDF-Q	Environmental	Marine Protected Areas	Burial	100	No - resource not present
IslandCDF-Q	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-Q	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
IslandCDF-Q	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
IslandCDF-Q	Environmental	Marine Protected Areas	Sediment Quality Impairment	100	No - resource not present
IslandCDF-Q	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
IslandCDF-Q	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
IslandCDF-Q	Environmental	SAV (eelgrass)	Burial	0	Yes - resource inside CDF would be buried during site operation; nearshore resources would not be impacted

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
IslandCDF-Q	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation from dewatering
IslandCDF-Q	Environmental	SAV (eelgrass)	Direct Destruction/Interference	50	Potential - resource in close proximity to work area with containment structures; nearshore resources would not be impacted
IslandCDF-Q	Environmental	SAV (eelgrass)	Habitat Impairment	50	Potential - increased wave energy caused by wave focusing could result in loss of resource
IslandCDF-Q	Environmental	SAV (eelgrass)	Sediment Quality Impairment	50	Potential - decreased wave energy caused by sheltering could increase habitat area
IslandCDF-Q	Environmental	SAV (eelgrass)	Water Quality Impairment	50	Potential - increased suspended sediment concentration from dewatering
IslandCDF-Q	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
IslandCDF-Q	Environmental	Shellfish	Burial	100	No - resource not within project footprint
IslandCDF-Q	Environmental	Shellfish	Direct Destruction/Interference	100	No - resource not within project footprint
IslandCDF-Q	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-Q	Environmental	Shellfish	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-Q	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - nearshore resource outside zone of increased turbidity
IslandCDF-Q	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
IslandCDF-Q	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
IslandCDF-Q	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
IslandCDF-Q	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
IslandCDF-Q	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
IslandCDF-Q	Environmental	Wetlands	Burial	100	No - resource not within project footprint
IslandCDF-Q	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - change in wave action and sedimentation/erosion regime could affect shoreline habitat
IslandCDF-Q	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not within project footprint
IslandCDF-Q	Environmental	Wetlands	Habitat Impairment	50	Potential - change in wave action and sedimentation/erosion regime could affect shoreline habitat
IslandCDF-Q	Environmental	Wetlands	Sediment Quality Impairment	100	No - resource not present
IslandCDF-Q	Environmental	Wetlands	Water Quality Impairment	50	Potential - short term impact during construction
IslandCDF-Q	Infrastructure	Aquaculture	Burial	100	No - resource not present
IslandCDF-Q	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-Q	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
IslandCDF-Q	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
IslandCDF-Q	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
IslandCDF-Q	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-Q	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
IslandCDF-Q	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
IslandCDF-Q	Infrastructure	Coastal Structures	Burial	50	Potential - decrease in rate of littoral drift along shoreline shoreward of CDF may cause accumulation at shoreline groins
IslandCDF-Q	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - resources not within CDF footprint
IslandCDF-Q	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within CDF footprint
IslandCDF-Q	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in wave energy along shoreline due to wave focusing may cause erosion at select shoreline groins
IslandCDF-Q	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	Unlikely - minor, localized effect of CDF on ambient tidal currents; though Millstone operators historically expressed concern over CDF interference with intake of cooling water
IslandCDF-Q	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-Q	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
IslandCDF-Q	Infrastructure	Mooring Areas	Burial	100	No - resource not present
IslandCDF-Q	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-Q	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
IslandCDF-Q	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-Q	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-Q	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
IslandCDF-Q	Infrastructure	Recreational Areas	Burial	100	No - resources not within CDF footprint
IslandCDF-Q	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - decrease in rate of littoral drift along shoreline shoreward of CDF may cause accumulation at beach
IslandCDF-Q	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	0	Yes - CDF visible from Pleasure Beach
IslandCDF-Q	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within CDF footprint
IslandCDF-Q	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential -increase/reduction in wave energy along shoreline due to wave sheltering and/or wave focusing
IslandCDF-Q	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of CDF on ambient tidal currents
IslandCDF-Q	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - decrease in rate of littoral drift along shoreline shoreward of CDF
IslandCDF-Q	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
IslandCDF-Q	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as gravel, gravel-sand, and sand

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
IslandCDF-Q	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - increase in local wave energy around CDF due to reflection/ refraction off containment structure; increase/ reduction in wave energy along shoreline due to wave sheltering and/or wave focusing
IslandCDF-R	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation/erosion at shoreline due to changes in wave patterns
IslandCDF-R	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	50	Potential -CDF facility could be seen from historic district sites in vicinity
IslandCDF-R	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No -resource not within CDF footprint
IslandCDF-R	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation/erosion at shoreline due to changes in wave patterns
IslandCDF-R	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	50	Potential -CDF facility could be seen from historic district sites in vicinity
IslandCDF-R	Cultural	Historic Districts	Direct Destruction/Interference	100	No -resources not within CDF footprint
IslandCDF-R	Cultural	Shipwrecks	Burial	100	No -resource not within CDF footprint
IslandCDF-R	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation at closest resource from dewatering and/or wave sheltering
IslandCDF-R	Cultural	Shipwrecks	Direct Destruction/Interference	100	No -resource not within CDF footprint
IslandCDF-R	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
IslandCDF-R	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
IslandCDF-R	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
IslandCDF-R	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
IslandCDF-R	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
IslandCDF-R	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-R	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
IslandCDF-R	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
IslandCDF-R	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
IslandCDF-R	Environmental	Birds	Habitat Impairment	50	Potential - loss of natural shoreline habitat for shorebird species from wave focusing and shoreline erosion
IslandCDF-R	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
IslandCDF-R	Environmental	Birds	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
IslandCDF-R	Environmental	Birds	Water Quality Impairment	50	Potential - degradation of waterfowl habitat by increased turbidity during construction or dewatering
IslandCDF-R	Environmental	Federal & State Listed Species	Burial	100	No - resource not within project footprint
IslandCDF-R	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource not within project footprint
IslandCDF-R	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - change in wave action and sedimentation/erosion regime could affect shoreline habitat
IslandCDF-R	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact during construction
IslandCDF-R	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of built project
IslandCDF-R	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
IslandCDF-R	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
IslandCDF-R	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
IslandCDF-R	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
IslandCDF-R	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
IslandCDF-R	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
IslandCDF-R	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction and operation
IslandCDF-R	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement
IslandCDF-R	Environmental	Marine Mammals	Harassment	50	Potential - during construction
IslandCDF-R	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals
IslandCDF-R	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
IslandCDF-R	Environmental	Marine Protected Areas	Burial	100	No - resource not within CDF footprint
IslandCDF-R	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - increased shoreline erosion at resource due to wave focusing
IslandCDF-R	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within CDF footprint
IslandCDF-R	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource in the upland
IslandCDF-R	Environmental	Marine Protected Areas	Sediment Quality Impairment	50	Potential - shoreline accretion due to wave sheltering
IslandCDF-R	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource in the upland
IslandCDF-R	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
IslandCDF-R	Environmental	SAV (eelgrass)	Burial	100	No - resource not within CDF footprint
IslandCDF-R	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation from dewatering
IslandCDF-R	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not within CDF footprint
IslandCDF-R	Environmental	SAV (eelgrass)	Habitat Impairment	50	Potential - increased wave energy caused by wave focusing could result in loss of resource
IslandCDF-R	Environmental	SAV (eelgrass)	Sediment Quality Impairment	50	Potential - decreased wave energy caused by sheltering could increase habitat area
IslandCDF-R	Environmental	SAV (eelgrass)	Water Quality Impairment	50	Potential - increased suspended sediment concentration from dewatering

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
IslandCDF-R	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
IslandCDF-R	Environmental	Shellfish	Burial	100	No - resource not within project footprint
IslandCDF-R	Environmental	Shellfish	Direct Destruction/Interference	100	No - resource not within project footprint
IslandCDF-R	Environmental	Shellfish	Habitat Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-R	Environmental	Shellfish	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
IslandCDF-R	Environmental	Shellfish	Water Quality Impairment	100	Unlikely - nearshore resource outside zone of increased turbidity
IslandCDF-R	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
IslandCDF-R	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
IslandCDF-R	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
IslandCDF-R	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
IslandCDF-R	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
IslandCDF-R	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
IslandCDF-R	Environmental	Wetlands	Burial	100	No - resource not present
IslandCDF-R	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
IslandCDF-R	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
IslandCDF-R	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
IslandCDF-R	Environmental	Wetlands	Sediment Quality Impairment	100	No - resource not present
IslandCDF-R	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
IslandCDF-R	Infrastructure	Aquaculture	Burial	100	No - resource not present
IslandCDF-R	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-R	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
IslandCDF-R	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
IslandCDF-R	Infrastructure	Cable/power/utility crossings	Burial	0	Yes - resources within CDF footprint
IslandCDF-R	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential - dewatering runoff may migrate to other portions of cable area
IslandCDF-R	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	0	Yes - resources within CDF footprint
IslandCDF-R	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	50	Potential - increase in local wave energy around CDF due to reflection/refraction off containment structure may scour cable area
IslandCDF-R	Infrastructure	Coastal Structures	Burial	100	No - resources not within CDF footprint
IslandCDF-R	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential - decrease in rate of littoral drift along shoreline shoreward of CDF may cause accumulation at shoreline groins
IslandCDF-R	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within CDF footprint
IslandCDF-R	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in wave energy along shoreline due to wave focusing may cause erosion at select shoreline groins
IslandCDF-R	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
IslandCDF-R	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-R	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
IslandCDF-R	Infrastructure	Mooring Areas	Burial	100	No - resources not within CDF footprint
IslandCDF-R	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resources not expected to be influenced by construction run-off or littoral drift
IslandCDF-R	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within CDF footprint
IslandCDF-R	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	50	Potential - dewatering runoff may migrate to channel
IslandCDF-R	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
IslandCDF-R	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
IslandCDF-R	Infrastructure	Recreational Areas	Burial	100	No - resources not within CDF footprint
IslandCDF-R	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - decrease in rate of littoral drift along shoreline shoreward of CDF may cause accumulation at beach
IslandCDF-R	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	0	Yes - CDF visible from Bluff Point State Park
IslandCDF-R	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within CDF footprint
IslandCDF-R	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely -reduction in wave energy along shoreline due to wave sheltering
IslandCDF-R	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential -increase/deflection of tidal currents in/out of New London Harbor
IslandCDF-R	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - decrease in rate of littoral drift along shoreline shoreward of CDF
IslandCDF-R	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
IslandCDF-R	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as gravel, gravel-sand, sand, and silt-clay/sand
IslandCDF-R	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - increase in local wave energy around CDF due to reflection/refraction off containment structure; increase/reduction in wave energy along shoreline due to wave sheltering and/or wave focusing
ShoreCDF-A	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-A	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
ShoreCDF-A	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-A	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	50	Potential - increased shoreline erosion at Cedarmere-Clayton Estates from vessel boat wake
ShoreCDF-A	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	50	Potential -CDF facility could be seen from historic district sites in vicinity
ShoreCDF-A	Cultural	Historic Districts	Direct Destruction/Interference	100	No - historic district sites not within CDF footprint
ShoreCDF-A	Cultural	Shipwrecks	Burial	0	Yes -resources inside CDF would be buried during site operation
ShoreCDF-A	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation from dewatering; increased sedimentation/scour from vessel traffic to and from CDF
ShoreCDF-A	Cultural	Shipwrecks	Direct Destruction/Interference	0	Likely -resources in close proximity to work area with containment structures
ShoreCDF-A	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-A	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-A	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
ShoreCDF-A	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
ShoreCDF-A	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
ShoreCDF-A	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
ShoreCDF-A	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-A	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-A	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-A	Environmental	Birds	Habitat Impairment	0	Yes - loss of shallow water habitat for waterfowl species by CDF placement
ShoreCDF-A	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
ShoreCDF-A	Environmental	Birds	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-A	Environmental	Birds	Water Quality Impairment	50	Potential - increased turbidity from dewatering; increased turbidity from vessel traffic to and from CDF
ShoreCDF-A	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and within construction footprint
ShoreCDF-A	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and within construction footprint
ShoreCDF-A	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-A	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact if species are in project vicinity
ShoreCDF-A	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-A	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact from dewatering
ShoreCDF-A	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
ShoreCDF-A	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
ShoreCDF-A	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
ShoreCDF-A	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
ShoreCDF-A	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-A	Environmental	Marine Mammals	Direct Destruction/Interference	100	Unlikely - strikes not likely at nearshore site
ShoreCDF-A	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement
ShoreCDF-A	Environmental	Marine Mammals	Harassment	50	Potential - during construction
ShoreCDF-A	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals
ShoreCDF-A	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
ShoreCDF-A	Environmental	Marine Protected Areas	Burial	100	No - resource not present
ShoreCDF-A	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-A	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-A	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
ShoreCDF-A	Environmental	Marine Protected Areas	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-A	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
ShoreCDF-A	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
ShoreCDF-A	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
ShoreCDF-A	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-A	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-A	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
ShoreCDF-A	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-A	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
ShoreCDF-A	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
ShoreCDF-A	Environmental	Shellfish	Burial	0	Yes - resource is within CDF footprint
ShoreCDF-A	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
ShoreCDF-A	Environmental	Shellfish	Habitat Impairment	0	Yes - resource is within CDF footprint
ShoreCDF-A	Environmental	Shellfish	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-A	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-A	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
ShoreCDF-A	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-A	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
ShoreCDF-A	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
ShoreCDF-A	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-A	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
ShoreCDF-A	Environmental	Wetlands	Burial	0	Yes - resource within project footprint
ShoreCDF-A	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	0	Yes - resource within project footprint
ShoreCDF-A	Environmental	Wetlands	Direct Destruction/Interference	0	Yes - resource within project footprint
ShoreCDF-A	Environmental	Wetlands	Habitat Impairment	0	Yes - resource within project footprint
ShoreCDF-A	Environmental	Wetlands	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-A	Environmental	Wetlands	Water Quality Impairment	50	Potential - short term impact during construction due to dewatering or building dikes
ShoreCDF-A	Infrastructure	Aquaculture	Burial	100	No - resource not present
ShoreCDF-A	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-A	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-A	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
ShoreCDF-A	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
ShoreCDF-A	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-A	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-A	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
ShoreCDF-A	Infrastructure	Coastal Structures	Burial	100	No - resources not within CDF footprint
ShoreCDF-A	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to low energy environment; no change expected with CDF
ShoreCDF-A	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-A	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - current speeds may increase east of CDF due to narrowing of harbor
ShoreCDF-A	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-A	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-A	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
ShoreCDF-A	Infrastructure	Mooring Areas	Burial	100	No - resource not present
ShoreCDF-A	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-A	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within CDF footprint
ShoreCDF-A	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	50	Potential - dewatering run-off could deposit in channel
ShoreCDF-A	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to low energy environment; no change expected with CDF
ShoreCDF-A	Infrastructure	Ports	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-A	Infrastructure	Recreational Areas	Burial	0	Yes - Bar Beach Boat Ramp within CDF footprint
ShoreCDF-A	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	Unlikely - CDF is on opposite side of Bar Beach than recreational areas, dewatering run-off not expected to migrate to beaches
ShoreCDF-A	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	0	Yes - CDF will be visible from Bar Beach Town Park and golf course
ShoreCDF-A	Infrastructure	Recreational Areas	Direct Destruction/Interference	0	Yes - Bar Beach Boat Ramp within CDF footprint
ShoreCDF-A	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - CDF is on opposite side of Bar Beach than recreational areas, dewatering run-off not expected to occur at beaches
ShoreCDF-A	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - increase/ channelization in currents due to narrowing of harbor
ShoreCDF-A	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - existing littoral transport minimal due to low energy environment; no change expected with CDF
ShoreCDF-A	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
ShoreCDF-A	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as silt-clay/sand and sand
ShoreCDF-A	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - existing wave energy low due to sheltered environment; no change expected with CDF
ShoreCDF-C	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-C	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
ShoreCDF-C	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-C	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-C	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	100	No - resource not present
ShoreCDF-C	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-C	Cultural	Shipwrecks	Burial	0	Yes -resources inside CDF would be buried during site operation; resources outside CDF not buried
ShoreCDF-C	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential -shoreward resources may be within the dewatering impact zone
ShoreCDF-C	Cultural	Shipwrecks	Direct Destruction/Interference	0	Likely -resources in close proximity to work area with containment structures

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-C	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-C	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-C	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
ShoreCDF-C	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
ShoreCDF-C	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
ShoreCDF-C	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
ShoreCDF-C	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-C	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-C	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-C	Environmental	Birds	Habitat Impairment	100	Unlikely - extent of marsh habitat for shorebird species to increase
ShoreCDF-C	Environmental	Birds	Harassment	50	Potential - during construction or site operation for nesting shorebirds
ShoreCDF-C	Environmental	Birds	Sediment Quality Impairment	0	Yes - restoration of marsh resource will increase habitat for shorebird species
ShoreCDF-C	Environmental	Birds	Water Quality Impairment	50	Potential - degradation of waterfowl habitat by increased turbidity during construction or dewatering
ShoreCDF-C	Environmental	Federal & State Listed Species	Burial	0	Yes - resource within project footprint
ShoreCDF-C	Environmental	Federal & State Listed Species	Direct Destruction/Interference	0	Yes - resource within project footprint
ShoreCDF-C	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - physical change in habitat area due to filling submerged land
ShoreCDF-C	Environmental	Federal & State Listed Species	Harassment	50	Potential - during construction
ShoreCDF-C	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-C	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-C	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
ShoreCDF-C	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
ShoreCDF-C	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
ShoreCDF-C	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
ShoreCDF-C	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-C	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction and operation
ShoreCDF-C	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement
ShoreCDF-C	Environmental	Marine Mammals	Harassment	50	Potential - during construction
ShoreCDF-C	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals
ShoreCDF-C	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
ShoreCDF-C	Environmental	Marine Protected Areas	Burial	0	Yes - resource is within CDF footprint
ShoreCDF-C	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	0	Yes - resource is within CDF footprint
ShoreCDF-C	Environmental	Marine Protected Areas	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
ShoreCDF-C	Environmental	Marine Protected Areas	Habitat Impairment	0	Yes - resource is within CDF footprint
ShoreCDF-C	Environmental	Marine Protected Areas	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-C	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
ShoreCDF-C	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
ShoreCDF-C	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
ShoreCDF-C	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-C	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-C	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
ShoreCDF-C	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-C	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
ShoreCDF-C	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
ShoreCDF-C	Environmental	Shellfish	Burial	0	Yes - resource is within CDF footprint
ShoreCDF-C	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
ShoreCDF-C	Environmental	Shellfish	Habitat Impairment	0	Yes - resource is within CDF footprint
ShoreCDF-C	Environmental	Shellfish	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-C	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-C	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
ShoreCDF-C	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-C	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
ShoreCDF-C	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
ShoreCDF-C	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-C	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
ShoreCDF-C	Environmental	Wetlands	Burial	0	Yes - resource within project footprint
ShoreCDF-C	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	0	Yes - resource within project footprint
ShoreCDF-C	Environmental	Wetlands	Direct Destruction/Interference	0	Yes - resource within project footprint
ShoreCDF-C	Environmental	Wetlands	Habitat Impairment	0	Yes - resource within project footprint
ShoreCDF-C	Environmental	Wetlands	Sediment Quality Impairment	0	Yes - restoration of marsh resource will increase wetland area
ShoreCDF-C	Environmental	Wetlands	Water Quality Impairment	50	Potential - short term impact to adjacent wetlands during construction due to dewatering or building dikes
ShoreCDF-C	Infrastructure	Aquaculture	Burial	100	No - resource not present
ShoreCDF-C	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-C	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-C	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
ShoreCDF-C	Infrastructure	Cable/power/utility crossings	Burial	0	Yes - resources within CDF footprint
ShoreCDF-C	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	Unlikely - minimal littoral transport at existing island site; no change expected with CDF
ShoreCDF-C	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	0	Yes - resources within CDF footprint
ShoreCDF-C	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	50	Potential - increase in wave energy south of Sheffield Island due to reflection/ refraction off containment structure may erode cable area south of CDF
ShoreCDF-C	Infrastructure	Coastal Structures	Burial	0	Yes - resources within CDF footprint
ShoreCDF-C	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - residential docks would likely be removed if project was developed
ShoreCDF-C	Infrastructure	Coastal Structures	Direct Destruction/Interference	0	Yes - resources within CDF footprint
ShoreCDF-C	Infrastructure	Coastal Structures	Undermining / Erosion	100	No - residential docks would likely be removed if project was developed
ShoreCDF-C	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-C	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-C	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
ShoreCDF-C	Infrastructure	Mooring Areas	Burial	100	No - resource not present
ShoreCDF-C	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-C	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within CDF footprint
ShoreCDF-C	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - dewatering run-off not expected to deposit in channel
ShoreCDF-C	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-C	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-C	Infrastructure	Recreational Areas	Burial	100	No - resources not within CDF footprint
ShoreCDF-C	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	Unlikely - CDF in shoreward bay not expected to affect processes at seaward portions of the island
ShoreCDF-C	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	0	Yes - CDF will be visible from Ram Historical Park
ShoreCDF-C	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-C	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - CDF in shoreward bay not expected to affect processes at seaward portions of the island
ShoreCDF-C	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of CDF on ambient tidal currents
ShoreCDF-C	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minimal littoral transport on shorelines in Ram Bay and mainland armored/rocky shoreline; no change expected with CDF
ShoreCDF-C	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
ShoreCDF-C	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as silt-clay/sand, and gravel-sand
ShoreCDF-C	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	100	No - CDF is protected from waves by an existing barrier system
ShoreCDF-D	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-D	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
ShoreCDF-D	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-D	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-D	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	100	No - resource not present
ShoreCDF-D	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-D	Cultural	Shipwrecks	Burial	0	Yes -resource inside CDF would be buried during site operation; resources outside CDF not buried
ShoreCDF-D	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential -shoreward resources may be within the dewatering impact zone
ShoreCDF-D	Cultural	Shipwrecks	Direct Destruction/Interference	0	Likely -resources in close proximity to work area with containment structures
ShoreCDF-D	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-D	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-D	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
ShoreCDF-D	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
ShoreCDF-D	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
ShoreCDF-D	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-D	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-D	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-D	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-D	Environmental	Birds	Habitat Impairment	0	Yes - loss of shoreline habitat for shore dependent species by CDF placement; potential loss of shoreline habitat from wave focusing and shoreline erosion
ShoreCDF-D	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
ShoreCDF-D	Environmental	Birds	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-D	Environmental	Birds	Water Quality Impairment	50	Potential - degradation of waterfowl habitat by increased turbidity during construction or dewatering
ShoreCDF-D	Environmental	Federal & State Listed Species	Burial	0	Yes - resource within project footprint
ShoreCDF-D	Environmental	Federal & State Listed Species	Direct Destruction/Interference	0	Yes - resource within project footprint
ShoreCDF-D	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - physical change in habitat area due to filling submerged land
ShoreCDF-D	Environmental	Federal & State Listed Species	Harassment	50	Potential - during construction
ShoreCDF-D	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-D	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-D	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
ShoreCDF-D	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
ShoreCDF-D	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
ShoreCDF-D	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
ShoreCDF-D	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-D	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during construction and operation
ShoreCDF-D	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement
ShoreCDF-D	Environmental	Marine Mammals	Harassment	50	Potential - during construction
ShoreCDF-D	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals
ShoreCDF-D	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
ShoreCDF-D	Environmental	Marine Protected Areas	Burial	0	Yes - resource is within CDF footprint
ShoreCDF-D	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	0	Yes - resource is within CDF footprint
ShoreCDF-D	Environmental	Marine Protected Areas	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
ShoreCDF-D	Environmental	Marine Protected Areas	Habitat Impairment	0	Yes - resource is within CDF footprint
ShoreCDF-D	Environmental	Marine Protected Areas	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-D	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
ShoreCDF-D	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
ShoreCDF-D	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
ShoreCDF-D	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-D	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-D	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
ShoreCDF-D	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-D	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
ShoreCDF-D	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
ShoreCDF-D	Environmental	Shellfish	Burial	0	Yes - resource is within CDF footprint
ShoreCDF-D	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
ShoreCDF-D	Environmental	Shellfish	Habitat Impairment	0	Yes - resource is within CDF footprint
ShoreCDF-D	Environmental	Shellfish	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
ShoreCDF-D	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-D	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
ShoreCDF-D	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-D	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
ShoreCDF-D	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
ShoreCDF-D	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-D	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
ShoreCDF-D	Environmental	Wetlands	Burial	0	Yes - resource within project footprint
ShoreCDF-D	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	0	Yes - resource within project footprint
ShoreCDF-D	Environmental	Wetlands	Direct Destruction/Interference	0	Yes - resource within project footprint
ShoreCDF-D	Environmental	Wetlands	Habitat Impairment	0	Yes - resource within project footprint
ShoreCDF-D	Environmental	Wetlands	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-D	Environmental	Wetlands	Water Quality Impairment	50	Potential - short term impact to adjacent wetlands during construction due to dewatering or building dikes
ShoreCDF-D	Infrastructure	Aquaculture	Burial	100	No - resource not present
ShoreCDF-D	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-D	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-D	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
ShoreCDF-D	Infrastructure	Cable/power/utility crossings	Burial	100	No - resources not within CDF footprint
ShoreCDF-D	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	Unlikely - minimal littoral transport at existing island site; no change expected with CDF
ShoreCDF-D	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-D	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	Unlikely - CDF in inlet of Ram Bay not expected to affect processes in shoreward bay
ShoreCDF-D	Infrastructure	Coastal Structures	Burial	100	No - resources not within CDF footprint
ShoreCDF-D	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	Unlikely - minimal littoral transport at existing island site; no change expected with CDF
ShoreCDF-D	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-D	Infrastructure	Coastal Structures	Undermining / Erosion	100	Unlikely - CDF in inlet of Ram Bay not expected to affect processes in shoreward bay
ShoreCDF-D	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-D	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-D	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
ShoreCDF-D	Infrastructure	Mooring Areas	Burial	100	No - resource not present
ShoreCDF-D	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-D	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within CDF footprint
ShoreCDF-D	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - dewatering run-off not expected to deposit in channel
ShoreCDF-D	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-D	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-D	Infrastructure	Recreational Areas	Burial	50	Potential - portions of resource may be within CDF footprint where tied to shore
ShoreCDF-D	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	Unlikely - minimal littoral transport at existing island site; no change expected with CDF
ShoreCDF-D	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	0	Yes - CDF will be visible from Ram Historical Park
ShoreCDF-D	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential - portions of resource may be within CDF footprint where tied to shore
ShoreCDF-D	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely - CDF in shoreward bay not expected to affect processes at seaward portions of the island
ShoreCDF-D	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minor, localized effect of CDF on ambient tidal currents
ShoreCDF-D	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	Unlikely - minimal littoral transport on shorelines in Ram Bay and mainland armored/rocky shoreline; no change expected with CDF
ShoreCDF-D	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
ShoreCDF-D	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as gravel-sand
ShoreCDF-D	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	100	No - CDF is protected from waves by an existing barrier system
ShoreCDF-F	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-F	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
ShoreCDF-F	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-F	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	50	Potential - Seaside Park within possible zone of wave focusing along shoreline
ShoreCDF-F	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	0	Yes - CDF visible from Black Rock and Seaside Park Historic Districts
ShoreCDF-F	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-F	Cultural	Shipwrecks	Burial	100	No - resources not within CDF footprint
ShoreCDF-F	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - resources within possible zone of wave focusing along shoreline
ShoreCDF-F	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-F	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-F	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-F	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
ShoreCDF-F	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
ShoreCDF-F	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
ShoreCDF-F	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
ShoreCDF-F	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-F	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-F	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-F	Environmental	Birds	Habitat Impairment	0	Yes - loss of natural shoreline habitat for shorebird species by CDF placement; potential loss of shoreline habitat from wave focusing and shoreline erosion
ShoreCDF-F	Environmental	Birds	Harassment	50	Potential - during construction or site operation for nesting shorebirds
ShoreCDF-F	Environmental	Birds	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-F	Environmental	Birds	Water Quality Impairment	100	Unlikely - shorebird species not impacted by changes in turbidity during construction or dewatering
ShoreCDF-F	Environmental	Federal & State Listed Species	Burial	0	Yes - resource within project footprint
ShoreCDF-F	Environmental	Federal & State Listed Species	Direct Destruction/Interference	0	Yes - resource within project footprint
ShoreCDF-F	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - physical change in habitat area due to filling submerged land
ShoreCDF-F	Environmental	Federal & State Listed Species	Harassment	50	Potential - during construction
ShoreCDF-F	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-F	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-F	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
ShoreCDF-F	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
ShoreCDF-F	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
ShoreCDF-F	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
ShoreCDF-F	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-F	Environmental	Marine Mammals	Direct Destruction/Interference	100	Unlikely - strikes not likely at nearshore site
ShoreCDF-F	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement
ShoreCDF-F	Environmental	Marine Mammals	Harassment	50	Potential - during construction
ShoreCDF-F	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals
ShoreCDF-F	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
ShoreCDF-F	Environmental	Marine Protected Areas	Burial	100	No - resource not present
ShoreCDF-F	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-F	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-F	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
ShoreCDF-F	Environmental	Marine Protected Areas	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-F	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
ShoreCDF-F	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
ShoreCDF-F	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
ShoreCDF-F	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-F	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-F	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
ShoreCDF-F	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-F	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
ShoreCDF-F	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
ShoreCDF-F	Environmental	Shellfish	Burial	0	Yes - resource is within CDF footprint
ShoreCDF-F	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
ShoreCDF-F	Environmental	Shellfish	Habitat Impairment	0	Yes - resource is within CDF footprint
ShoreCDF-F	Environmental	Shellfish	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
ShoreCDF-F	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-F	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
ShoreCDF-F	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-F	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
ShoreCDF-F	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
ShoreCDF-F	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-F	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
ShoreCDF-F	Environmental	Wetlands	Burial	100	No - resource not within project footprint
ShoreCDF-F	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - at nearby wetlands due to changes in wave energy
ShoreCDF-F	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not within project footprint
ShoreCDF-F	Environmental	Wetlands	Habitat Impairment	50	Potential - change in wave action and sedimentation/erosion regime could affect shoreline habitat
ShoreCDF-F	Environmental	Wetlands	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-F	Environmental	Wetlands	Water Quality Impairment	50	Potential - short term impact during construction
ShoreCDF-F	Infrastructure	Aquaculture	Burial	100	No - resource not present
ShoreCDF-F	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-F	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-F	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
ShoreCDF-F	Infrastructure	Cable/power/utility crossings	Burial	0	Yes - resources within CDF footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-F	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential - dewatering runoff may migrate to cable area
ShoreCDF-F	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	0	Yes - resources within CDF footprint
ShoreCDF-F	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	50	Potential - dewatering runoff may scour adjacent cable area
ShoreCDF-F	Infrastructure	Coastal Structures	Burial	0	Yes - CDF connected to shore in area of six groins
ShoreCDF-F	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	0	Yes - CDF would form a barrier to net sediment transport from east to west and cause accumulation at jetty east of CDF
ShoreCDF-F	Infrastructure	Coastal Structures	Direct Destruction/Interference	0	Yes - CDF connected to shore in area of six groins
ShoreCDF-F	Infrastructure	Coastal Structures	Undermining / Erosion	0	Yes - increase in wave energy along shoreline at Jennings and West Fairfield Beaches due to wave focusing
ShoreCDF-F	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-F	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-F	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
ShoreCDF-F	Infrastructure	Mooring Areas	Burial	100	No - resource not present
ShoreCDF-F	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-F	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within CDF footprint
ShoreCDF-F	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	50	Potential - dewatering run-off could deposit in channel
ShoreCDF-F	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-F	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-F	Infrastructure	Recreational Areas	Burial	0	Yes - resources within CDF footprint
ShoreCDF-F	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	0	Yes - CDF would form a barrier to net sediment transport from east to west; potential change to the rate and direction of littoral drift at remaining portions of Jennings and West Fairfield Beaches due to wave sheltering and/or wave focusing
ShoreCDF-F	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	0	Yes - CDF will be visible from remaining portions of Penfield Beach and Jennings Beach, and from Fayerweather Island and Black Rock Harbor
ShoreCDF-F	Infrastructure	Recreational Areas	Direct Destruction/Interference	0	Yes - resources within CDF footprint
ShoreCDF-F	Infrastructure	Recreational Areas	Undermining / Erosion	0	Yes - increase in wave energy along remaining shoreline of Jennings and West Fairfield Beaches due to wave focusing
ShoreCDF-F	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential -increase/deflection in local currents due to large size of CDF
ShoreCDF-F	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - CDF would eliminate longshore sediment transport on Lordship Beach and impound easterly transport along Long Beach
ShoreCDF-F	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
ShoreCDF-F	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as gravel, gravel-sand, sand, and silt-clay/sand
ShoreCDF-F	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - increase in local wave energy around CDF due to reflection/ refraction off containment structure; reduction/increase in wave energy along shoreline at Long Beach due to wave sheltering and/or wave focusing
ShoreCDF-I	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-I	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
ShoreCDF-I	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-I	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - CDF confined by upland with no alteration to local wave and current patterns
ShoreCDF-I	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	50	Potential -CDF facility could be seen from historic districts
ShoreCDF-I	Cultural	Historic Districts	Direct Destruction/Interference	100	No -resources not within CDF footprint
ShoreCDF-I	Cultural	Shipwrecks	Burial	100	No -resources not within CDF footprint
ShoreCDF-I	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation from dewatering; increased sedimentation/scour from vessel traffic to and from CDF
ShoreCDF-I	Cultural	Shipwrecks	Direct Destruction/Interference	100	No -resources not within CDF footprint
ShoreCDF-I	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-I	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-I	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
ShoreCDF-I	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
ShoreCDF-I	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
ShoreCDF-I	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
ShoreCDF-I	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-I	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-I	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-I	Environmental	Birds	Habitat Impairment	0	Yes - loss of shallow/mid water habitat for waterfowl species by CDF placement
ShoreCDF-I	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
ShoreCDF-I	Environmental	Birds	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-I	Environmental	Birds	Water Quality Impairment	50	Potential - degradation of waterfowl habitat by increased turbidity during construction or dewatering
ShoreCDF-I	Environmental	Federal & State Listed Species	Burial	0	Yes - resource within project footprint
ShoreCDF-I	Environmental	Federal & State Listed Species	Direct Destruction/Interference	0	Yes - resource within project footprint
ShoreCDF-I	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - physical change in habitat area due to filling submerged land
ShoreCDF-I	Environmental	Federal & State Listed Species	Harassment	50	Potential - during construction

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-I	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-I	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-I	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
ShoreCDF-I	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
ShoreCDF-I	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
ShoreCDF-I	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
ShoreCDF-I	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-I	Environmental	Marine Mammals	Direct Destruction/Interference	100	Unlikely - strikes not likely at nearshore site
ShoreCDF-I	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement
ShoreCDF-I	Environmental	Marine Mammals	Harassment	50	Potential - during construction
ShoreCDF-I	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals
ShoreCDF-I	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
ShoreCDF-I	Environmental	Marine Protected Areas	Burial	100	No - resource not present
ShoreCDF-I	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-I	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-I	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
ShoreCDF-I	Environmental	Marine Protected Areas	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-I	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
ShoreCDF-I	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
ShoreCDF-I	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
ShoreCDF-I	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-I	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-I	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
ShoreCDF-I	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-I	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
ShoreCDF-I	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
ShoreCDF-I	Environmental	Shellfish	Burial	0	Yes - resource is within CDF footprint
ShoreCDF-I	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
ShoreCDF-I	Environmental	Shellfish	Habitat Impairment	0	Yes - resource is within CDF footprint
ShoreCDF-I	Environmental	Shellfish	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
ShoreCDF-I	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-I	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
ShoreCDF-I	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-I	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
ShoreCDF-I	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
ShoreCDF-I	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-I	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
ShoreCDF-I	Environmental	Wetlands	Burial	100	No - resource not present
ShoreCDF-I	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-I	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-I	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
ShoreCDF-I	Environmental	Wetlands	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-I	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
ShoreCDF-I	Infrastructure	Aquaculture	Burial	100	No - resource not present
ShoreCDF-I	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-I	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-I	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
ShoreCDF-I	Infrastructure	Cable/power/utility crossings	Burial	100	No - resources not within CDF footprint
ShoreCDF-I	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to low energy environment; no change expected with CDF
ShoreCDF-I	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-I	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	50	Potential - increase in local wave energy in channel due to reflection/refraction off containment structure
ShoreCDF-I	Infrastructure	Coastal Structures	Burial	100	No - resources not within CDF footprint
ShoreCDF-I	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - existing littoral transport minimal due to low energy environment; no change expected with CDF

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-I	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-I	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - increase in local wave energy in adjacent harbor due to reflection/refraction off containment structure
ShoreCDF-I	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-I	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-I	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
ShoreCDF-I	Infrastructure	Mooring Areas	Burial	100	No - resources not within CDF footprint
ShoreCDF-I	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - anchorage area isolated from CDF
ShoreCDF-I	Infrastructure	Navigation Channels & Shipping	Burial	0	Yes - CDF development would convert northern portion of channel to upland
ShoreCDF-I	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	50	Potential - dewatering run-off could deposit in channel
ShoreCDF-I	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - working areas of port are armored and isolated from CDF
ShoreCDF-I	Infrastructure	Ports	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-I	Infrastructure	Recreational Areas	Burial	100	No - resources not within CDF footprint
ShoreCDF-I	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential - dewatering run-off could deposit in adjacent parks
ShoreCDF-I	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	0	Yes - CDF will be contiguous to both parks
ShoreCDF-I	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-I	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - CDF will be bounded by existing landforms on all sides
ShoreCDF-I	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/ deflection of tidal currents in Bridgeport Harbor due elimination of channel as part of estuary
ShoreCDF-I	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - existing littoral transport minimal due to low energy environment; no change expected with CDF
ShoreCDF-I	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
ShoreCDF-I	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as sand-clay/silt
ShoreCDF-I	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase in local wave energy in adjacent navigation channel due to reflection/ refraction off containment structure
ShoreCDF-J	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-J	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
ShoreCDF-J	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-J	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-J	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	100	No - resource not present
ShoreCDF-J	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-J	Cultural	Shipwrecks	Burial	100	No -resources not within CDF footprint
ShoreCDF-J	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential -resources within possible zone of wave focusing along shoreline
ShoreCDF-J	Cultural	Shipwrecks	Direct Destruction/Interference	100	No -resources not within CDF footprint
ShoreCDF-J	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-J	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-J	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
ShoreCDF-J	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
ShoreCDF-J	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
ShoreCDF-J	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
ShoreCDF-J	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-J	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-J	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-J	Environmental	Birds	Habitat Impairment	0	Yes - loss of natural shoreline habitat for shorebird species by CDF placement; potential loss of shoreline habitat from wave focusing and shoreline erosion
ShoreCDF-J	Environmental	Birds	Harassment	50	Potential - during construction or site operation for nesting shorebirds
ShoreCDF-J	Environmental	Birds	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-J	Environmental	Birds	Water Quality Impairment	100	Unlikely - shorebird species not impacted by changes in turbidity during construction or dewatering
ShoreCDF-J	Environmental	Federal & State Listed Species	Burial	0	Yes - resource within project footprint
ShoreCDF-J	Environmental	Federal & State Listed Species	Direct Destruction/Interference	0	Yes - resource within project footprint
ShoreCDF-J	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - physical change in habitat area due to filling submerged land
ShoreCDF-J	Environmental	Federal & State Listed Species	Harassment	50	Potential - during construction
ShoreCDF-J	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-J	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-J	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
ShoreCDF-J	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
ShoreCDF-J	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
ShoreCDF-J	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-J	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-J	Environmental	Marine Mammals	Direct Destruction/Interference	100	Unlikely - strikes not likely at nearshore site
ShoreCDF-J	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement
ShoreCDF-J	Environmental	Marine Mammals	Harassment	50	Potential - during construction
ShoreCDF-J	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals
ShoreCDF-J	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
ShoreCDF-J	Environmental	Marine Protected Areas	Burial	100	No - resource not within project footprint
ShoreCDF-J	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	50	Potential - at Long Beach due to changes in wave energy
ShoreCDF-J	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within project footprint
ShoreCDF-J	Environmental	Marine Protected Areas	Habitat Impairment	50	Potential - change in wave action and sedimentation/erosion regime could affect Long Beach shoreline habitat
ShoreCDF-J	Environmental	Marine Protected Areas	Sediment Quality Impairment	100	Unlikely - change not expected at resource upland of CDF
ShoreCDF-J	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
ShoreCDF-J	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
ShoreCDF-J	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
ShoreCDF-J	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-J	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-J	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
ShoreCDF-J	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-J	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
ShoreCDF-J	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
ShoreCDF-J	Environmental	Shellfish	Burial	0	Yes - resource is within CDF footprint
ShoreCDF-J	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
ShoreCDF-J	Environmental	Shellfish	Habitat Impairment	0	Yes - resource is within CDF footprint
ShoreCDF-J	Environmental	Shellfish	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
ShoreCDF-J	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-J	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
ShoreCDF-J	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-J	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
ShoreCDF-J	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
ShoreCDF-J	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-J	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
ShoreCDF-J	Environmental	Wetlands	Burial	100	No - resource not within project footprint
ShoreCDF-J	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential - at nearby wetlands due to changes in wave energy
ShoreCDF-J	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not within project footprint
ShoreCDF-J	Environmental	Wetlands	Habitat Impairment	50	Potential - change in wave action and sedimentation/erosion regime could affect shoreline habitat
ShoreCDF-J	Environmental	Wetlands	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-J	Environmental	Wetlands	Water Quality Impairment	50	Potential - short term impact during construction
ShoreCDF-J	Infrastructure	Aquaculture	Burial	100	No - resource not present
ShoreCDF-J	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-J	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-J	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
ShoreCDF-J	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
ShoreCDF-J	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-J	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-J	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
ShoreCDF-J	Infrastructure	Coastal Structures	Burial	0	Yes - CDF connected to shore in area of eleven groins
ShoreCDF-J	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	0	Yes - CDF would form a barrier to net sediment transport from west to east and cause accumulation at the western edge of CDF
ShoreCDF-J	Infrastructure	Coastal Structures	Direct Destruction/Interference	0	Yes - CDF connected to shore in area of shoreline armoring and eleven groins
ShoreCDF-J	Infrastructure	Coastal Structures	Undermining / Erosion	0	Yes - increase in wave energy along shoreline at Long Beach due to wave focusing
ShoreCDF-J	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-J	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-J	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
ShoreCDF-J	Infrastructure	Mooring Areas	Burial	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-J	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-J	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within CDF footprint
ShoreCDF-J	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - dewatering run-off not expected to deposit in channel
ShoreCDF-J	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-J	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-J	Infrastructure	Recreational Areas	Burial	100	No - resource not present
ShoreCDF-J	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-J	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
ShoreCDF-J	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-J	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - resource not present
ShoreCDF-J	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential -increase/deflection in local currents due to large size of CDF
ShoreCDF-J	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - CDF would form a barrier to net sediment transport from east to west; potential change to the rate and direction of littoral drift at Jennings and West Fairfield Beaches due to wave sheltering and/or wave focusing
ShoreCDF-J	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
ShoreCDF-J	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as gravel, gravel-sand, and sand
ShoreCDF-J	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - increase in local wave energy around CDF due to reflection/ refraction off containment structure; reduction/increase in wave energy along shoreline at Jennings and West Fairfield Beaches due to wave sheltering and/or wave focusing
ShoreCDF-K	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-K	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
ShoreCDF-K	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-K	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - CDF outside harbor entrance, wave and current patterns at resource inside harbor not altered by CDF
ShoreCDF-K	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	50	Potential -CDF facility could be seen from historic districts
ShoreCDF-K	Cultural	Historic Districts	Direct Destruction/Interference	100	No -resources not within CDF footprint
ShoreCDF-K	Cultural	Shipwrecks	Burial	100	No -resources not within CDF footprint
ShoreCDF-K	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	50	Potential -increased erosion due to wave reflection off CDF containment; increased sedimentation from dewatering
ShoreCDF-K	Cultural	Shipwrecks	Direct Destruction/Interference	100	No -resources not within CDF footprint
ShoreCDF-K	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-K	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-K	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
ShoreCDF-K	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
ShoreCDF-K	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
ShoreCDF-K	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
ShoreCDF-K	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-K	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-K	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-K	Environmental	Birds	Habitat Impairment	50	Potential - loss of natural shoreline habitat for shorebird species from wave focusing and shoreline erosion
ShoreCDF-K	Environmental	Birds	Harassment	100	Unlikely -construction/site operation not likely to disturb mobile resource
ShoreCDF-K	Environmental	Birds	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-K	Environmental	Birds	Water Quality Impairment	50	Potential - degradation of waterfowl habitat by increased turbidity during construction or dewatering
ShoreCDF-K	Environmental	Federal & State Listed Species	Burial	100	No - resource not within project footprint
ShoreCDF-K	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource at shoreline
ShoreCDF-K	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - increase in wave action could cause erosion/deposition of material at shoreline and change habitat conditions
ShoreCDF-K	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact during construction if species are sedentary
ShoreCDF-K	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of built project
ShoreCDF-K	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-K	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
ShoreCDF-K	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
ShoreCDF-K	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
ShoreCDF-K	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
ShoreCDF-K	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-K	Environmental	Marine Mammals	Direct Destruction/Interference	100	Unlikely - strikes not likely at nearshore site
ShoreCDF-K	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement
ShoreCDF-K	Environmental	Marine Mammals	Harassment	50	Potential - during construction
ShoreCDF-K	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-K	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
ShoreCDF-K	Environmental	Marine Protected Areas	Burial	100	No - resource not within project footprint
ShoreCDF-K	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	Unlikely - resource outside zone of influence for littoral drift created by CDF
ShoreCDF-K	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not within project footprint
ShoreCDF-K	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not within project footprint
ShoreCDF-K	Environmental	Marine Protected Areas	Sediment Quality Impairment	100	Unlikely - resource outside zone of influence for littoral drift created by CDF
ShoreCDF-K	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is in the upland
ShoreCDF-K	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
ShoreCDF-K	Environmental	SAV (eelgrass)	Burial	100	No - resource not present
ShoreCDF-K	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-K	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-K	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource not present
ShoreCDF-K	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-K	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource not present
ShoreCDF-K	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
ShoreCDF-K	Environmental	Shellfish	Burial	0	Yes - resource is within CDF footprint
ShoreCDF-K	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
ShoreCDF-K	Environmental	Shellfish	Habitat Impairment	0	Yes - resource is within CDF footprint
ShoreCDF-K	Environmental	Shellfish	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
ShoreCDF-K	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-K	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
ShoreCDF-K	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-K	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
ShoreCDF-K	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
ShoreCDF-K	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-K	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
ShoreCDF-K	Environmental	Wetlands	Burial	100	No - resource not present
ShoreCDF-K	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-K	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-K	Environmental	Wetlands	Habitat Impairment	100	No - resource not present
ShoreCDF-K	Environmental	Wetlands	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-K	Environmental	Wetlands	Water Quality Impairment	100	No - resource not present
ShoreCDF-K	Infrastructure	Aquaculture	Burial	100	No - resource not present
ShoreCDF-K	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-K	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-K	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
ShoreCDF-K	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
ShoreCDF-K	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-K	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-K	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
ShoreCDF-K	Infrastructure	Coastal Structures	Burial	50	Potential - CDF integrated into eastern jetty
ShoreCDF-K	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	0	Yes - CDF would form a barrier to net sediment transport from east to west on Gulf Beach causing accumulation against eastern jetty
ShoreCDF-K	Infrastructure	Coastal Structures	Direct Destruction/Interference	0	Yes - eastern jetty within CDF footprint
ShoreCDF-K	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential - current speeds may increase west of CDF due to narrowing of harbor
ShoreCDF-K	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-K	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-K	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
ShoreCDF-K	Infrastructure	Mooring Areas	Burial	100	No - resources not within CDF footprint
ShoreCDF-K	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - mooring area isolated from outer harbor
ShoreCDF-K	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within CDF footprint
ShoreCDF-K	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	50	Potential - dewatering run-off could deposit in channel
ShoreCDF-K	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-K	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-K	Infrastructure	Recreational Areas	Burial	100	No - resources not within CDF footprint
ShoreCDF-K	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	0	Yes - CDF would form a barrier to net sediment transport from east to west on Gulf Beach causing accumulation at Gulf Beach
ShoreCDF-K	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	0	Yes - CDF will be visible from Gulf Beach and Silver Sands State Park
ShoreCDF-K	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-K	Infrastructure	Recreational Areas	Undermining / Erosion	100	Unlikely -reduction in wave energy along shorelines adjacent to Milford Harbor entrance due to wave sheltering
ShoreCDF-K	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential -increase/deflection of tidal currents in/out of Milford Harbor
ShoreCDF-K	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - CDF would form a barrier to net sediment transport from east to west on Gulf Beach; decrease in rate of littoral drift along Gulf Beach shoreline east of CDF
ShoreCDF-K	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
ShoreCDF-K	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as sand, and gravel-sand
ShoreCDF-K	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - increase in local wave energy around CDF due to reflection/refraction off containment structure; reduction/increase in wave energy along shorelines adjacent to Milford Harbor entrance due to wave sheltering and/or wave focusing
ShoreCDF-O	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-O	Cultural	Archaeological Sites	Changes in Vessel Traffic Patterns	100	No - resource not present
ShoreCDF-O	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-O	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - wave and current patterns at resource inside harbor not altered by CDF
ShoreCDF-O	Cultural	Historic Districts	Changes in Vessel Traffic Patterns	50	Potential -CDF facility could be seen from historic district site in vicinity
ShoreCDF-O	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not within CDF footprint
ShoreCDF-O	Cultural	Shipwrecks	Burial	100	No - resource not present
ShoreCDF-O	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	No - resource not present
ShoreCDF-O	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-O	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-O	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
ShoreCDF-O	Environmental	Benthic Invertebrates	Burial	0	Yes - when resource is within CAD footprint
ShoreCDF-O	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - when resource is within CAD footprint
ShoreCDF-O	Environmental	Benthic Invertebrates	Habitat Impairment	0	Yes - where resource is within CDF footprint
ShoreCDF-O	Environmental	Benthic Invertebrates	Sediment Quality Impairment	100	Unlikely - sediment characteristics in nearshore habitat not expected to change
ShoreCDF-O	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-O	Environmental	Bioaccumulation Potential	Change in TOC	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-O	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Unsuitable base material isolated and capped with suitable material.
ShoreCDF-O	Environmental	Birds	Habitat Impairment	100	Unlikely - extent of marsh habitat for shorebird species to increase
ShoreCDF-O	Environmental	Birds	Harassment	50	Potential - during construction or site operation for nesting shorebirds
ShoreCDF-O	Environmental	Birds	Sediment Quality Impairment	0	Yes - restoration of marsh resource will increase habitat for shorebird species
ShoreCDF-O	Environmental	Birds	Water Quality Impairment	50	Potential - degradation of waterfowl habitat by increased turbidity during construction or dewatering
ShoreCDF-O	Environmental	Federal & State Listed Species	Burial	0	Yes - resource within project footprint
ShoreCDF-O	Environmental	Federal & State Listed Species	Direct Destruction/Interference	0	Yes - resource within project footprint
ShoreCDF-O	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-O	Environmental	Federal & State Listed Species	Harassment	50	Potential - short term impact during construction
ShoreCDF-O	Environmental	Federal & State Listed Species	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-O	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential - short term impact from dewatering
ShoreCDF-O	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
ShoreCDF-O	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
ShoreCDF-O	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
ShoreCDF-O	Environmental	Federally Managed Species	Sediment Quality Impairment	50	Potential - increase in habitat diversity due to bathymetric variations
ShoreCDF-O	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
ShoreCDF-O	Environmental	Marine Mammals	Direct Destruction/Interference	100	Unlikely - strikes not likely at nearshore site
ShoreCDF-O	Environmental	Marine Mammals	Habitat Impairment	0	Yes - loss of habitat due to CDF placement
ShoreCDF-O	Environmental	Marine Mammals	Harassment	50	Potential - during construction
ShoreCDF-O	Environmental	Marine Mammals	Sediment Quality Impairment	50	Potential - increase fisheries habitat and feeding area for mammals
ShoreCDF-O	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during construction or dewatering
ShoreCDF-O	Environmental	Marine Protected Areas	Burial	100	No - resources not within CDF footprint
ShoreCDF-O	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resources outside zone of influence for littoral drift created by CDF
ShoreCDF-O	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-O	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resources outside zone of influence for littoral drift created by CDF
ShoreCDF-O	Environmental	Marine Protected Areas	Sediment Quality Impairment	100	No - resources outside zone of influence for littoral drift created by CDF

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-O	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resources are in the upland
ShoreCDF-O	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
ShoreCDF-O	Environmental	SAV (eelgrass)	Burial	100	No - resource not within CDF footprint
ShoreCDF-O	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	50	Potential - increased sedimentation from dewatering during flood tide
ShoreCDF-O	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource not within CDF footprint
ShoreCDF-O	Environmental	SAV (eelgrass)	Habitat Impairment	100	Unlikely - little to no change in wave energy; significant runoff during dewatering could result in a loss of resource
ShoreCDF-O	Environmental	SAV (eelgrass)	Sediment Quality Impairment	100	Unlikely - CDF not likely to cause a measurable change in water quality in Clinton Harbor
ShoreCDF-O	Environmental	SAV (eelgrass)	Water Quality Impairment	50	Potential - increased suspended sediment concentration from dewatering during flood tide
ShoreCDF-O	Environmental	Sediment Quality	Change in TOC	50	Potential - limited loss of material outside the CAD cell during disposal of unsuitable dredged material (base material). Potential for sediment quality impacts under worst case conditions.
ShoreCDF-O	Environmental	Shellfish	Burial	0	Yes - resource is within CDF footprint
ShoreCDF-O	Environmental	Shellfish	Direct Destruction/Interference	0	Yes - resource is within CDF footprint
ShoreCDF-O	Environmental	Shellfish	Habitat Impairment	0	Yes - resource is within CDF footprint
ShoreCDF-O	Environmental	Shellfish	Sediment Quality Impairment	50	Potential - depending on characteristics of completed project
ShoreCDF-O	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during construction or dewatering
ShoreCDF-O	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
ShoreCDF-O	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-O	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
ShoreCDF-O	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
ShoreCDF-O	Environmental	Terrestrial Wildlife	Sediment Quality Impairment	100	No - resource not present
ShoreCDF-O	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term changes within the residual plumes following disposal. Potential for water quality impacts under worst case conditions.
ShoreCDF-O	Environmental	Wetlands	Burial	0	Yes - resource within project footprint
ShoreCDF-O	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	0	Yes - resource within project footprint
ShoreCDF-O	Environmental	Wetlands	Direct Destruction/Interference	0	Yes - resource within project footprint
ShoreCDF-O	Environmental	Wetlands	Habitat Impairment	0	Yes - resource within project footprint
ShoreCDF-O	Environmental	Wetlands	Sediment Quality Impairment	0	Yes - restoration of marsh resource will increase wetland area
ShoreCDF-O	Environmental	Wetlands	Water Quality Impairment	50	Potential - short term impact during construction due to dewatering or building dikes
ShoreCDF-O	Infrastructure	Aquaculture	Burial	100	No - resource not present
ShoreCDF-O	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-O	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-O	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
ShoreCDF-O	Infrastructure	Cable/power/utility crossings	Burial	100	No - resources not within CDF footprint
ShoreCDF-O	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - effects of CDF do not extend to inner harbor
ShoreCDF-O	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-O	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - effects of CDF do not extend to inner harbor
ShoreCDF-O	Infrastructure	Coastal Structures	Burial	100	No - resources not within CDF footprint
ShoreCDF-O	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	100	No - magnitude of change not significant enough to affect distant resources
ShoreCDF-O	Infrastructure	Coastal Structures	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-O	Infrastructure	Coastal Structures	Undermining / Erosion	100	No - magnitude of change not significant enough to affect distant resources
ShoreCDF-O	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-O	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - magnitude of change not significant enough to affect distant resources
ShoreCDF-O	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - magnitude of change not significant enough to affect distant resources
ShoreCDF-O	Infrastructure	Mooring Areas	Burial	100	No - resource not present
ShoreCDF-O	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-O	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resources not within CDF footprint
ShoreCDF-O	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	Unlikely - dewatering run-off not expected to deposit in channel
ShoreCDF-O	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
ShoreCDF-O	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
ShoreCDF-O	Infrastructure	Recreational Areas	Burial	100	No - resources not within CDF footprint
ShoreCDF-O	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - magnitude of change not significant enough to affect distant resources
ShoreCDF-O	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	0	Yes - constructed wetlands will be visible from Clinton Town Beach
ShoreCDF-O	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resources not within CDF footprint
ShoreCDF-O	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - magnitude of change not significant enough to affect distant resources
ShoreCDF-O	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase/ deflection of tidal currents in/out of Clinton Harbor

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
ShoreCDF-O	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	50	Potential - CDF could reduce sediment supply to Cedar Island Beach
ShoreCDF-O	Physical	Sediments	Change in Grain Size	50	Potential - dependent on design for final restoration
ShoreCDF-O	Physical	Sediments	Visual Impact	0	Yes -CDF footprint mapped as sand
ShoreCDF-O	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - increase in local wave energy along west end of Cedar Island Beach due to interaction with CDF shoreline
Habitat-427	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	50	Potential - Where resources are present within or near the site, potential for changes in sedimentation/erosion.
Habitat-427	Cultural	Archaeological Sites	Direct Destruction/Interference	100	Unlikely - resources not likely to be removed during project activities
Habitat-427	Cultural	Archaeological Sites	Visual Impact	100	Unlikely - dredged material likely to be similar to existing material
Habitat-427	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resources would likely be upland from site
Habitat-427	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resources would likely be upland from site
Habitat-427	Cultural	Historic Districts	Visual Impact	100	No - resources would likely be upland from site
Habitat-427	Environmental	Air Quality/Noise	Habitat Impairment	0	Yes - On-road truck and on-site equipment operation would have adverse impacts in sensitive land uses immediately adjacent to truck routes and sites.
Habitat-427	Environmental	Air Quality/Noise	Harassment	0	Yes - On-road truck and on-site equipment operation would have adverse impacts in sensitive land uses immediately adjacent to truck routes and sites.
Habitat-427	Environmental	Benthic Invertebrates	Burial	0	Yes - where benthic communities are present
Habitat-427	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - where benthic communities are present
Habitat-427	Environmental	Benthic Invertebrates	Habitat Impairment	50	Potential
Habitat-427	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential
Habitat-427	Environmental	Bioaccumulation Potential	Habitat Impairment	50	Potential - A bioaccumulation pathway exists for terrestrial wildlife depending on the alternative site design or management practices.
Habitat-427	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	50	Potential - A bioaccumulation pathway exists for terrestrial wildlife depending on the alternative site design or management practices.
Habitat-427	Environmental	Birds	Habitat Impairment	50	Potential - Potential reduction in habitat during construction
Habitat-427	Environmental	Birds	Harassment	100	Unlikely - Harassment is unlikely because construction/site operation is not likely to disturb mobile resource.
Habitat-427	Environmental	Birds	Water Quality Impairment	50	Potential - Potential reduction in water quality during construction
Habitat-427	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and located within construction footprint
Habitat-427	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and located within construction footprint
Habitat-427	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential for impairment where habitat is located within construction footprint.
Habitat-427	Environmental	Federal & State Listed Species	Harassment	50	Potential - if species are sedentary and present during construction.
Habitat-427	Environmental	Federal & State Listed Species	Water Quality Impairment	50	Potential for short-term water quality impacts
Habitat-427	Environmental	Federally Managed Species	Burial	50	Potential - for bottom-dwelling species
Habitat-427	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - for bottom-dwelling species
Habitat-427	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - through physical change of sediment characteristics or bottom depth
Habitat-427	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential for short-term water quality impacts
Habitat-427	Environmental	Marine Mammals	Direct Destruction/Interference	100	No - resource is not likely present within project area
Habitat-427	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Habitat-427	Environmental	Marine Mammals	Harassment	50	Potential - harassment during construction
Habitat-427	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Habitat-427	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Habitat-427	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Habitat-427	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Habitat-427	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Habitat-427	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Habitat-427	Environmental	Plankton	Direct Destruction/Interference	0	Yes - impact from small, short-term entrainment losses
Habitat-427	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Habitat-427	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Habitat-427	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Habitat-427	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Habitat-427	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Habitat-427	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Habitat-427	Environmental	Sediment Quality	Sediment Quality Impairment	50	Potential - There is a potential for runoff and related TSS to intersect with and alter aquatic sediment resources near these alternative sites.
Habitat-427	Environmental	Shellfish	Burial	50	Potential - where resource is located within construction footprint
Habitat-427	Environmental	Shellfish	Direct Destruction/Interference	50	Potential - where resource is located within construction footprint
Habitat-427	Environmental	Shellfish	Habitat Impairment	50	Potential - where resource is located within construction footprint
Habitat-427	Environmental	Shellfish	Water Quality Impairment	50	Potential for short-term water quality impacts
Habitat-427	Environmental	Terrestrial Wildlife	Burial	100	Unlikely - resources are mobile
Habitat-427	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	Unlikely - resources are mobile

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Habitat-427	Environmental	Terrestrial Wildlife	Habitat Impairment	50	Potential - Potential reduction in habitat during construction
Habitat-427	Environmental	Terrestrial Wildlife	Harassment	100	Unlikely - Harassment is unlikely because construction/site operation is not likely to disturb mobile resource.
Habitat-427	Environmental	Water Quality	Water Quality Impairment	50	Potential - There is a potential for runoff to intersect with and alter surface water resources near these alternative sites. The potential for leachate to reach groundwater resources also exists.
Habitat-427	Environmental	Wetlands	Burial	0	Yes
Habitat-427	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	0	Yes
Habitat-427	Environmental	Wetlands	Direct Destruction/Interference	0	Yes
Habitat-427	Environmental	Wetlands	Water Quality Impairment	0	Yes
Habitat-427	Infrastructure	Aquaculture	Burial	100	No - resource not present
Habitat-427	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Habitat-427	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Habitat-427	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Habitat-427	Infrastructure	Cable/power/utility crossings	Burial	50	Potential if resource is within project footprint
Habitat-427	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential if resource is within project footprint
Habitat-427	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential if resource is within project footprint
Habitat-427	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	50	Potential if resource is within project footprint
Habitat-427	Infrastructure	Coastal Structures	Burial	50	Potential if resource is within project footprint
Habitat-427	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential if resource is within project footprint
Habitat-427	Infrastructure	Coastal Structures	Direct Destruction/Interference	50	Potential if resource is within project footprint
Habitat-427	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential if resource is within project footprint
Habitat-427	Infrastructure	Commercial & Industrial Facilities	Burial	100	No - resource is not present within site footprint
Habitat-427	Infrastructure	Commercial & Industrial Facilities	Changes in Sedimentation Patterns	100	No - resource is not present within site footprint
Habitat-427	Infrastructure	Commercial & Industrial Facilities	Changes in Vessel Traffic Patterns	100	No - resource is not present within site footprint
Habitat-427	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource is not present within site footprint
Habitat-427	Infrastructure	Commercial & Industrial Facilities	Undermining / Erosion	100	No - resource is not present within site footprint
Habitat-427	Infrastructure	Commercial & Industrial Facilities	Visual Impact	100	No - resource is not present within site footprint
Habitat-427	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Habitat-427	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Habitat-427	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Habitat-427	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Habitat-427	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Habitat-427	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Habitat-427	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Habitat-427	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Habitat-427	Infrastructure	Recreational Areas	Burial	50	Potential
Habitat-427	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Habitat-427	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	50	Potential
Habitat-427	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Habitat-427	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential
Habitat-427	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Habitat-427	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Habitat-427	Physical	Sediments	Change in Grain Size	50	Potential - There is a potential for runoff and related TSS to alter aquatic sediment resources near these alternative sites.
Habitat-427	Physical	Sediments	Change in TOC	50	Potential - There is a potential for runoff and related TSS to alter aquatic sediment resources near these alternative sites.
Habitat-427	Physical	Soils	Change in Grain Size	50	Potential - There is a potential for soil and drainage patterns to be altered based on siting and design.
Habitat-427	Physical	Soils	Change in TOC	50	Potential - There is a potential for soil and drainage patterns to be altered based on siting and design.
Habitat-427	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Habitat-429	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	50	Potential - Where resources are present within or near the site, potential for changes in sedimentation/erosion.
Habitat-429	Cultural	Archaeological Sites	Direct Destruction/Interference	100	Unlikely - resources not likely to be removed during project activities
Habitat-429	Cultural	Archaeological Sites	Visual Impact	100	Unlikely - dredged material likely to be similar to existing material
Habitat-429	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resources would likely be upland from site
Habitat-429	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resources would likely be upland from site
Habitat-429	Cultural	Historic Districts	Visual Impact	100	No - resources would likely be upland from site
Habitat-429	Environmental	Air Quality/Noise	Habitat Impairment	0	Yes - On-road truck and on-site equipment operation would have adverse impacts in sensitive land uses immediately adjacent to truck routes and sites.
Habitat-429	Environmental	Air Quality/Noise	Harassment	0	Yes - On-road truck and on-site equipment operation would have adverse impacts in sensitive land uses immediately adjacent to truck routes and sites.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Habitat-429	Environmental	Benthic Invertebrates	Burial	0	Yes - where benthic communities are present
Habitat-429	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - where benthic communities are present
Habitat-429	Environmental	Benthic Invertebrates	Habitat Impairment	50	Potential
Habitat-429	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential
Habitat-429	Environmental	Bioaccumulation Potential	Habitat Impairment	50	Potential - A bioaccumulation pathway exists for terrestrial wildlife depending on the alternative site design or management practices.
Habitat-429	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	50	Potential - A bioaccumulation pathway exists for terrestrial wildlife depending on the alternative site design or management practices.
Habitat-429	Environmental	Birds	Habitat Impairment	50	Potential - Potential reduction in habitat during construction
Habitat-429	Environmental	Birds	Harassment	100	Unlikely - Harassment is unlikely because construction/site operation is not likely to disturb mobile resource.
Habitat-429	Environmental	Birds	Water Quality Impairment	50	Potential - Potential reduction in water quality during construction
Habitat-429	Environmental	Federal & State Listed Species	Burial	100	No - resource is not present
Habitat-429	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource is not present
Habitat-429	Environmental	Federal & State Listed Species	Habitat Impairment	100	No - resource is not present
Habitat-429	Environmental	Federal & State Listed Species	Harassment	100	No - resource is not present
Habitat-429	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No - resource is not present
Habitat-429	Environmental	Federally Managed Species	Burial	50	Potential - for bottom-dwelling species
Habitat-429	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - for bottom-dwelling species
Habitat-429	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - through physical change of sediment characteristics or bottom depth
Habitat-429	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential for short-term water quality impacts
Habitat-429	Environmental	Marine Mammals	Direct Destruction/Interference	100	No - resource is not likely present within project area
Habitat-429	Environmental	Marine Mammals	Habitat Impairment	100	Unlikely habitat impairment given the large scale of habitat relative to the project area.
Habitat-429	Environmental	Marine Mammals	Harassment	50	Potential - harassment during construction
Habitat-429	Environmental	Marine Mammals	Water Quality Impairment	100	Unlikely water quality impairment given the large scale of habitat relative to the project area.
Habitat-429	Environmental	Marine Protected Areas	Burial	100	No - resource is not present
Habitat-429	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Habitat-429	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource is not present
Habitat-429	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource is not present
Habitat-429	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource is not present
Habitat-429	Environmental	Plankton	Direct Destruction/Interference	0	Yes - impact from small, short-term entrainment losses
Habitat-429	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
Habitat-429	Environmental	SAV (eelgrass)	Burial	100	No - resource is not present
Habitat-429	Environmental	SAV (eelgrass)	Changes in Local Sedimentation / Erosion	100	No - resource is not present
Habitat-429	Environmental	SAV (eelgrass)	Direct Destruction/Interference	100	No - resource is not present
Habitat-429	Environmental	SAV (eelgrass)	Habitat Impairment	100	No - resource is not present
Habitat-429	Environmental	SAV (eelgrass)	Water Quality Impairment	100	No - resource is not present
Habitat-429	Environmental	Sediment Quality	Sediment Quality Impairment	50	Potential - There is a potential for runoff and related TSS to intersect with and alter aquatic sediment resources near these alternative sites.
Habitat-429	Environmental	Shellfish	Burial	50	Potential
Habitat-429	Environmental	Shellfish	Direct Destruction/Interference	50	Potential
Habitat-429	Environmental	Shellfish	Habitat Impairment	50	Potential - where resource is located within construction footprint
Habitat-429	Environmental	Shellfish	Water Quality Impairment	50	Potential for short-term water quality impacts
Habitat-429	Environmental	Terrestrial Wildlife	Burial	100	Unlikely - resources are mobile
Habitat-429	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	Unlikely - resources are mobile
Habitat-429	Environmental	Terrestrial Wildlife	Habitat Impairment	50	Potential - Potential reduction in habitat during construction
Habitat-429	Environmental	Terrestrial Wildlife	Harassment	100	Unlikely - Harassment is unlikely because construction/site operation is not likely to disturb mobile resource.
Habitat-429	Environmental	Water Quality	Water Quality Impairment	50	Potential - There is a potential for runoff to intersect with and alter surface water resources near these alternative sites. The potential for leachate to reach groundwater resources also exists.
Habitat-429	Environmental	Wetlands	Burial	0	Yes
Habitat-429	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	0	Yes
Habitat-429	Environmental	Wetlands	Direct Destruction/Interference	0	Yes
Habitat-429	Environmental	Wetlands	Water Quality Impairment	0	Yes
Habitat-429	Infrastructure	Aquaculture	Burial	100	No - resource not present
Habitat-429	Infrastructure	Aquaculture	Changes in Sedimentation Patterns	100	No - resource not present
Habitat-429	Infrastructure	Aquaculture	Direct Destruction/Interference	100	No - resource not present
Habitat-429	Infrastructure	Aquaculture	Undermining / Erosion	100	No - resource not present
Habitat-429	Infrastructure	Cable/power/utility crossings	Burial	50	Potential if resource is within project footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
Habitat-429	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	50	Potential if resource is within project footprint
Habitat-429	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	50	Potential if resource is within project footprint
Habitat-429	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	50	Potential if resource is within project footprint
Habitat-429	Infrastructure	Coastal Structures	Burial	50	Potential if resource is within project footprint
Habitat-429	Infrastructure	Coastal Structures	Changes in Sedimentation Patterns	50	Potential if resource is within project footprint
Habitat-429	Infrastructure	Coastal Structures	Direct Destruction/Interference	50	Potential if resource is within project footprint
Habitat-429	Infrastructure	Coastal Structures	Undermining / Erosion	50	Potential if resource is within project footprint
Habitat-429	Infrastructure	Commercial & Industrial Facilities	Burial	100	No - resource is not present within site footprint
Habitat-429	Infrastructure	Commercial & Industrial Facilities	Changes in Sedimentation Patterns	100	No - resource is not present within site footprint
Habitat-429	Infrastructure	Commercial & Industrial Facilities	Changes in Vessel Traffic Patterns	100	No - resource is not present within site footprint
Habitat-429	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource is not present within site footprint
Habitat-429	Infrastructure	Commercial & Industrial Facilities	Undermining / Erosion	100	No - resource is not present within site footprint
Habitat-429	Infrastructure	Commercial & Industrial Facilities	Visual Impact	100	No - resource is not present within site footprint
Habitat-429	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
Habitat-429	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
Habitat-429	Infrastructure	Mooring Areas	Burial	100	No - resource not present
Habitat-429	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
Habitat-429	Infrastructure	Navigation Channels & Shipping	Burial	100	No - resource not present
Habitat-429	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	100	No - resource not present
Habitat-429	Infrastructure	Ports	Changes in Sedimentation Patterns	100	No - resource not present
Habitat-429	Infrastructure	Ports	Direct Destruction/Interference	100	No - resource not present
Habitat-429	Infrastructure	Recreational Areas	Burial	50	Potential
Habitat-429	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	50	Potential
Habitat-429	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	50	Potential
Habitat-429	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential
Habitat-429	Infrastructure	Recreational Areas	Undermining / Erosion	50	Potential
Habitat-429	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Habitat-429	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
Habitat-429	Physical	Sediments	Change in Grain Size	50	Potential - There is a potential for runoff and related TSS to alter aquatic sediment resources near these alternative sites.
Habitat-429	Physical	Sediments	Change in TOC	50	Potential - There is a potential for runoff and related TSS to alter aquatic sediment resources near these alternative sites.
Habitat-429	Physical	Soils	Change in Grain Size	50	Potential - There is a potential for soil and drainage patterns to be altered based on siting and design.
Habitat-429	Physical	Soils	Change in TOC	50	Potential - There is a potential for soil and drainage patterns to be altered based on siting and design.
Habitat-429	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	0	Yes - may be engineered to be positive
LFCap-251	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - unlikely that resource located within this previously disturbed site.
LFCap-251	Cultural	Archaeological Sites	Visual Impact	100	No - unlikely that historic districts are located within this previously disturbed site.
LFCap-251	Cultural	Historic Districts	Direct Destruction/Interference	100	No - unlikely that resource located within this previously disturbed site.
LFCap-251	Cultural	Historic Districts	Visual Impact	100	No - unlikely that historic districts are located within this previously disturbed site.
LFCap-251	Environmental	Air Quality/Noise	Habitat Impairment	0	Yes - On-road truck operation and on-site landfill cover/capping associated construction activities would have adverse impacts in sensitive land uses immediately adjacent to truck routes and around the landfill cover/capping site.
LFCap-251	Environmental	Air Quality/Noise	Harassment	0	Yes - On-road truck operation and on-site landfill cover/capping associated construction activities would have adverse impacts in sensitive land uses immediately adjacent to truck routes and around the landfill cover/capping site.
LFCap-251	Environmental	Bioaccumulation Potential	Habitat Impairment	50	Potential - A landfill cover bioaccumulation pathway exists for terrestrial wildlife depending on management practices.
LFCap-251	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	50	Potential - A landfill cover bioaccumulation pathway exists for terrestrial wildlife depending on management practices.
LFCap-251	Environmental	Birds	Habitat Impairment	100	Unlikely
LFCap-251	Environmental	Birds	Harassment	100	Unlikely - Harassment is unlikely because construction/site operation is not likely to disturb mobile resource.
LFCap-251	Environmental	Birds	Water Quality Impairment	100	Unlikely
LFCap-251	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and located within construction footprint
LFCap-251	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and located within construction footprint
LFCap-251	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential for impairment where habitat is located within construction footprint.
LFCap-251	Environmental	Federal & State Listed Species	Harassment	50	Potential if species are sedentary and present during construction
LFCap-251	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No
LFCap-251	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
LFCap-251	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
LFCap-251	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
LFCap-251	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
LFCap-251	Environmental	Water Quality	Water Quality Impairment	50	Potential for landfill cover runoff to intersect with surface water resources near landfill sites. The potential for leachate to reach groundwater resources also exists.
LFCap-251	Environmental	Wetlands	Burial	100	No - resource is not present
LFCap-251	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
LFCap-251	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
LFCap-251	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
LFCap-251	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
LFCap-251	Infrastructure	Cable/power/utility crossings	Burial	100	No impacts expected due to pre-existing land use.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
LFCap-251	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No impacts expected due to pre-existing land use.
LFCap-251	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No impacts expected due to pre-existing land use.
LFCap-251	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No impacts expected due to pre-existing land use.
LFCap-251	Infrastructure	Commercial & Industrial Facilities	Burial	100	No - resource not within landfill footprint
LFCap-251	Infrastructure	Commercial & Industrial Facilities	Changes in Sedimentation Patterns	100	No - resource not within landfill footprint
LFCap-251	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	50	Potential - Commercial and industrial areas surrounding sites may be termporarily impacted by changes to air quality, noise, and traffic congestion in immediate area during construction period.
LFCap-251	Infrastructure	Commercial & Industrial Facilities	Undermining / Erosion	100	No - resource not within landfill footprint
LFCap-251	Infrastructure	Commercial & Industrial Facilities	Visual Impact	100	No - resource not within landfill footprint
LFCap-251	Infrastructure	Recreational Areas	Burial	100	No - resource not within landfill footprint
LFCap-251	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - resource not within landfill footprint
LFCap-251	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential - Recreational green space adjacent to sites may be temporarily impacted by changes to air quality, noise, and traffic congestion in immediate area during construction period.
LFCap-251	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - resource not within landfill footprint
LFCap-251	Infrastructure	Recreational Areas	Visual Impact	100	No - resource not within landfill footprint
LFCap-251	Physical	Soils	Change in Grain Size	50	Potential
LFCap-251	Physical	Soils	Change in TOC	50	Potential
LFCap-272	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - unlikely that resource located within this previously disturbed site.
LFCap-272	Cultural	Archaeological Sites	Visual Impact	100	No - unlikely that historic districts are located within this previously disturbed site.
LFCap-272	Cultural	Historic Districts	Direct Destruction/Interference	100	No - unlikely that resource located within this previously disturbed site.
LFCap-272	Cultural	Historic Districts	Visual Impact	100	No - unlikely that historic districts are located within this previously disturbed site.
LFCap-272	Environmental	Air Quality/Noise	Habitat Impairment	0	Yes - On-road truck operation and on-site landfill cover/capping associated construction activities would have adverse impacts in sensitive land uses immediately adjacent to truck routes and around the landfill cover/capping site.
LFCap-272	Environmental	Air Quality/Noise	Harassment	0	Yes - On-road truck operation and on-site landfill cover/capping associated construction activities would have adverse impacts in sensitive land uses immediately adjacent to truck routes and around the landfill cover/capping site.
LFCap-272	Environmental	Bioaccumulation Potential	Habitat Impairment	50	Potential - A landfill cover bioaccumulation pathway exists for terrestrial wildlife depending on management practices.
LFCap-272	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	50	Potential - A landfill cover bioaccumulation pathway exists for terrestrial wildlife depending on management practices.
LFCap-272	Environmental	Birds	Habitat Impairment	100	Unlikely
LFCap-272	Environmental	Birds	Harassment	100	Unlikely - Harassment is unlikely because construction/site operation is not likely to disturb mobile resource.
LFCap-272	Environmental	Birds	Water Quality Impairment	100	Unlikely
LFCap-272	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and located within construction footprint
LFCap-272	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and located within construction footprint
LFCap-272	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential for impairment where habitat is located within construction footprint.
LFCap-272	Environmental	Federal & State Listed Species	Harassment	50	Potential if species are sedentary and present during construction
LFCap-272	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No
LFCap-272	Environmental	Terrestrial Wildlife	Burial	100	No - resources are mobile
LFCap-272	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resources are mobile
LFCap-272	Environmental	Terrestrial Wildlife	Habitat Impairment	50	Potential reduction in habitat during construction.
LFCap-272	Environmental	Terrestrial Wildlife	Harassment	100	Unlikely - Harassment is unlikely because construction/site operation is not likely to disturb mobile resource.
LFCap-272	Environmental	Water Quality	Water Quality Impairment	50	Potential for landfill cover runoff to intersect with surface water resources near landfill sites. The potential for leachate to reach groundwater resources also exists.
LFCap-272	Environmental	Wetlands	Burial	50	Potential
LFCap-272	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	50	Potential
LFCap-272	Environmental	Wetlands	Direct Destruction/Interference	50	Potential
LFCap-272	Environmental	Wetlands	Water Quality Impairment	50	Potential
LFCap-272	Infrastructure	Cable/power/utility crossings	Burial	100	No impacts expected due to pre-existing land use.
LFCap-272	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No impacts expected due to pre-existing land use.
LFCap-272	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No impacts expected due to pre-existing land use.
LFCap-272	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No impacts expected due to pre-existing land use.
LFCap-272	Infrastructure	Commercial & Industrial Facilities	Burial	100	No - resource not within landfill footprint
LFCap-272	Infrastructure	Commercial & Industrial Facilities	Changes in Sedimentation Patterns	100	No - resource not within landfill footprint
LFCap-272	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	50	Potential - Commercial and industrial areas surrounding sites may be termporarily impacted by changes to air quality, noise, and traffic congestion in immediate area during construction period.
LFCap-272	Infrastructure	Commercial & Industrial Facilities	Undermining / Erosion	100	No - resource not within landfill footprint
LFCap-272	Infrastructure	Commercial & Industrial Facilities	Visual Impact	100	No - resource not within landfill footprint
LFCap-272	Infrastructure	Recreational Areas	Burial	100	No - resource not within landfill footprint
LFCap-272	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - resource not within landfill footprint
LFCap-272	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential - Recreational green space adjacent to sites may be temporarily impacted by changes to air quality, noise, and traffic congestion in immediate area during construction period.
LFCap-272	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - resource not within landfill footprint
LFCap-272	Infrastructure	Recreational Areas	Visual Impact	100	No - resource not within landfill footprint
LFCap-272	Physical	Soils	Change in Grain Size	50	Potential
LFCap-272	Physical	Soils	Change in TOC	50	Potential
LFCap-60	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - unlikely that resource located within this previously disturbed site.
LFCap-60	Cultural	Archaeological Sites	Visual Impact	100	No - unlikely that historic districts are located within this previously disturbed site.
LFCap-60	Cultural	Historic Districts	Direct Destruction/Interference	100	No - unlikely that resource located within this previously disturbed site.
LFCap-60	Cultural	Historic Districts	Visual Impact	100	No - unlikely that historic districts are located within this previously disturbed site.
LFCap-60	Environmental	Air Quality/Noise	Habitat Impairment	0	Yes - On-road truck operation and on-site landfill cover/capping associated construction activities would have adverse impacts in sensitive land uses immediately adjacent to truck routes and around the landfill cover/capping site.
LFCap-60	Environmental	Air Quality/Noise	Harassment	0	Yes - On-road truck operation and on-site landfill cover/capping associated construction activities would have adverse impacts in sensitive land uses immediately adjacent to truck routes and around the landfill cover/capping site.
LFCap-60	Environmental	Bioaccumulation Potential	Habitat Impairment	50	Potential - A landfill cover bioaccumulation pathway exists for terrestrial wildlife depending on management practices.
LFCap-60	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	50	Potential - A landfill cover bioaccumulation pathway exists for terrestrial wildlife depending on management practices.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
LFCap-60	Environmental	Birds	Habitat Impairment	100	Unlikely
LFCap-60	Environmental	Birds	Harassment	100	Unlikely - Harassment is unlikely because construction/site operation is not likely to disturb mobile resource.
LFCap-60	Environmental	Birds	Water Quality Impairment	100	Unlikely
LFCap-60	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and located within construction footprint
LFCap-60	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and located within construction footprint
LFCap-60	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential for impairment where habitat is located within construction footprint.
LFCap-60	Environmental	Federal & State Listed Species	Harassment	50	Potential if species are sedentary and present during construction
LFCap-60	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No
LFCap-60	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
LFCap-60	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
LFCap-60	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
LFCap-60	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
LFCap-60	Environmental	Water Quality	Water Quality Impairment	50	Potential for landfill cover runoff to intersect with surface water resources near landfill sites. The potential for leachate to reach groundwater resources also exists.
LFCap-60	Environmental	Wetlands	Burial	100	No - resource is not present
LFCap-60	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
LFCap-60	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
LFCap-60	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
LFCap-60	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
LFCap-60	Infrastructure	Cable/power/utility crossings	Burial	100	No impacts expected due to pre-existing land use.
LFCap-60	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No impacts expected due to pre-existing land use.
LFCap-60	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No impacts expected due to pre-existing land use.
LFCap-60	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No impacts expected due to pre-existing land use.
LFCap-60	Infrastructure	Commercial & Industrial Facilities	Burial	100	No - resource not within landfill footprint
LFCap-60	Infrastructure	Commercial & Industrial Facilities	Changes in Sedimentation Patterns	100	No - resource not within landfill footprint
LFCap-60	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	50	Potential - Commercial and industrial areas surrounding sites may be termporarily impacted by changes to air quality, noise, and traffic congestion in immediate area during construction period.
LFCap-60	Infrastructure	Commercial & Industrial Facilities	Undermining / Erosion	100	No - resource not within landfill footprint
LFCap-60	Infrastructure	Commercial & Industrial Facilities	Visual Impact	100	No - resource not within landfill footprint
LFCap-60	Infrastructure	Recreational Areas	Burial	100	No - resource not within landfill footprint
LFCap-60	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - resource not within landfill footprint
LFCap-60	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential - Recreational green space adjacent to sites may be temporarily impacted by changes to air quality, noise, and traffic congestion in immediate area during construction period.
LFCap-60	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - resource not within landfill footprint
LFCap-60	Infrastructure	Recreational Areas	Visual Impact	100	No - resource not within landfill footprint
LFCap-60	Physical	Soils	Change in Grain Size	50	Potential
LFCap-60	Physical	Soils	Change in TOC	50	Potential
LFCap-61	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - unlikely that resource located within this previously disturbed site.
LFCap-61	Cultural	Archaeological Sites	Visual Impact	100	No - unlikely that historic districts are located within this previously disturbed site.
LFCap-61	Cultural	Historic Districts	Direct Destruction/Interference	100	No - unlikely that resource located within this previously disturbed site.
LFCap-61	Cultural	Historic Districts	Visual Impact	100	No - unlikely that historic districts are located within this previously disturbed site.
LFCap-61	Environmental	Air Quality/Noise	Habitat Impairment	0	Yes - On-road truck operation and on-site landfill cover/capping associated construction activities would have adverse impacts in sensitive land uses immediately adjacent to truck routes and around the landfill cover/capping site.
LFCap-61	Environmental	Air Quality/Noise	Harassment	0	Yes - On-road truck operation and on-site landfill cover/capping associated construction activities would have adverse impacts in sensitive land uses immediately adjacent to truck routes and around the landfill cover/capping site.
LFCap-61	Environmental	Bioaccumulation Potential	Habitat Impairment	50	Potential - A landfill cover bioaccumulation pathway exists for terrestrial wildlife depending on management practices.
LFCap-61	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	50	Potential - A landfill cover bioaccumulation pathway exists for terrestrial wildlife depending on management practices.
LFCap-61	Environmental	Birds	Habitat Impairment	100	Unlikely
LFCap-61	Environmental	Birds	Harassment	100	Unlikely - Harassment is unlikely because construction/site operation is not likely to disturb mobile resource.
LFCap-61	Environmental	Birds	Water Quality Impairment	100	Unlikely
LFCap-61	Environmental	Federal & State Listed Species	Burial	50	Potential - if species are immobile and located within construction footprint
LFCap-61	Environmental	Federal & State Listed Species	Direct Destruction/Interference	50	Potential - if species are immobile and located within construction footprint
LFCap-61	Environmental	Federal & State Listed Species	Habitat Impairment	50	Potential for impairment where habitat is located within construction footprint.
LFCap-61	Environmental	Federal & State Listed Species	Harassment	50	Potential if species are sedentary and present during construction
LFCap-61	Environmental	Federal & State Listed Species	Water Quality Impairment	100	No
LFCap-61	Environmental	Terrestrial Wildlife	Burial	100	No - resource not present
LFCap-61	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource not present
LFCap-61	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource not present
LFCap-61	Environmental	Terrestrial Wildlife	Harassment	100	No - resource not present
LFCap-61	Environmental	Water Quality	Water Quality Impairment	50	Potential for landfill cover runoff to intersect with surface water resources near landfill sites. The potential for leachate to reach groundwater resources also exists.
LFCap-61	Environmental	Wetlands	Burial	100	No - resource is not present
LFCap-61	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource is not present
LFCap-61	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource is not present
LFCap-61	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
LFCap-61	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
LFCap-61	Infrastructure	Cable/power/utility crossings	Burial	100	No impacts expected due to pre-existing land use.
LFCap-61	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No impacts expected due to pre-existing land use.
LFCap-61	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No impacts expected due to pre-existing land use.
LFCap-61	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No impacts expected due to pre-existing land use.
LFCap-61	Infrastructure	Commercial & Industrial Facilities	Burial	100	No - resource not within landfill footprint
LFCap-61	Infrastructure	Commercial & Industrial Facilities	Changes in Sedimentation Patterns	100	No - resource not within landfill footprint
LFCap-61	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	50	Potential - Commercial and industrial areas surrounding sites may be termporarily impacted by changes to air quality, noise, and traffic congestion in immediate area during construction period.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
LFCap-61	Infrastructure	Commercial & Industrial Facilities	Undermining / Erosion	100	No - resource not within landfill footprint
LFCap-61	Infrastructure	Commercial & Industrial Facilities	Visual Impact	100	No - resource not within landfill footprint
LFCap-61	Infrastructure	Recreational Areas	Burial	100	No - resource not within landfill footprint
LFCap-61	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - resource not within landfill footprint
LFCap-61	Infrastructure	Recreational Areas	Direct Destruction/Interference	50	Potential - Recreational green space adjacent to sites may be temporarily impacted by changes to air quality, noise, and traffic congestion in immediate area during construction period.
LFCap-61	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - resource not within landfill footprint
LFCap-61	Infrastructure	Recreational Areas	Visual Impact	100	No - resource not within landfill footprint
LFCap-61	Physical	Soils	Change in Grain Size	50	Potential
LFCap-61	Physical	Soils	Change in TOC	50	Potential
LFPlace-59	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - unlikely that resource located within this previously disturbed site.
LFPlace-59	Cultural	Archaeological Sites	Visual Impact	100	No - unlikely that historic districts are located within this previously disturbed site.
LFPlace-59	Cultural	Historic Districts	Direct Destruction/Interference	100	No - unlikely that resource located within this previously disturbed site.
LFPlace-59	Cultural	Historic Districts	Visual Impact	100	No - unlikely that historic districts are located within this previously disturbed site.
LFPlace-59	Environmental	Air Quality/Noise	Habitat Impairment	0	Yes - On-road truck operation and on-site land fill activities would have adverse impacts in sensitive land uses immediately adjacent to truck routes and around the landfill site.
LFPlace-59	Environmental	Air Quality/Noise	Harassment	0	Yes - On-road truck operation and on-site land fill activities would have adverse impacts in sensitive land uses immediately adjacent to truck routes and around the landfill site.
LFPlace-59	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	No - No impacts because landfill will be covered following placement; bioaccumulation pathway will be omitted.
LFPlace-59	Environmental	Birds	Habitat Impairment	100	Unlikely
LFPlace-59	Environmental	Birds	Harassment	100	Unlikely - unlikely because construction/site operation is not likely to disturb mobile resource
LFPlace-59	Environmental	Birds	Water Quality Impairment	100	Unlikely
LFPlace-59	Environmental	Federal & State Listed Species	Burial	100	No - resource is not within alternative site
LFPlace-59	Environmental	Federal & State Listed Species	Direct Destruction/Interference	100	No - resource is not within alternative site
LFPlace-59	Environmental	Federal & State Listed Species	Habitat Impairment	100	Unlikely
LFPlace-59	Environmental	Federal & State Listed Species	Harassment	100	Unlikely
LFPlace-59	Environmental	Federal & State Listed Species	Water Quality Impairment	100	Unlikely
LFPlace-59	Environmental	Terrestrial Wildlife	Burial	100	No - resource is not present
LFPlace-59	Environmental	Terrestrial Wildlife	Direct Destruction/Interference	100	No - resource is not present
LFPlace-59	Environmental	Terrestrial Wildlife	Habitat Impairment	100	No - resource is not present
LFPlace-59	Environmental	Terrestrial Wildlife	Harassment	100	No - resource is not present
LFPlace-59	Environmental	Water Quality	Water Quality Impairment	50	Potential - There is a potential for leachate to reach groundwater resources
LFPlace-59	Environmental	Wetlands	Burial	100	No - resource not present
LFPlace-59	Environmental	Wetlands	Changes in Local Sedimentation / Erosion	100	No - resource not present
LFPlace-59	Environmental	Wetlands	Direct Destruction/Interference	100	No - resource not present
LFPlace-59	Environmental	Wetlands	Habitat Impairment	100	No - resource is not present
LFPlace-59	Environmental	Wetlands	Water Quality Impairment	100	No - resource is not present
LFPlace-59	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not within landfill footprint
LFPlace-59	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not within landfill footprint
LFPlace-59	Infrastructure	Commercial & Industrial Facilities	Direct Destruction/Interference	100	No - resource not within landfill footprint
LFPlace-59	Infrastructure	Recreational Areas	Burial	100	No - resource not within landfill footprint
LFPlace-59	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not within landfill footprint
LFPlace-59	Infrastructure	Recreational Areas	Visual Impact	100	No - resource not within landfill footprint
LFPlace-59	Physical	Soils	Change in Grain Size	50	Potential
LFPlace-59	Physical	Soils	Change in TOC	50	Potential
UOW-CLDS	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
UOW-CLDS	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
UOW-CLDS	Cultural	Archaeological Sites	Visual Impact	100	No - resource not present
UOW-CLDS	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
UOW-CLDS	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
UOW-CLDS	Cultural	Shipwrecks	Burial	100	No - resource not within site footprint
UOW-CLDS	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - no shipwrecks within influence of site
UOW-CLDS	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not within site footprint
UOW-CLDS	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
UOW-CLDS	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
UOW-CLDS	Environmental	Benthic Invertebrates	Burial	0	Yes - where benthic communities are present at the disposal location.
UOW-CLDS	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - where benthic communities are present at the disposal location.
UOW-CLDS	Environmental	Benthic Invertebrates	Habitat Impairment	50	Potential for habitat impairment.
UOW-CLDS	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential for water quality impairment.
UOW-CLDS	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
UOW-CLDS	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	No - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
UOW-CLDS	Environmental	Birds	Habitat Impairment	100	No - disposal on sea floor would not impact bird habitat
UOW-CLDS	Environmental	Birds	Harassment	100	Unlikely - site operation not likely to disturb mobile resource
UOW-CLDS	Environmental	Birds	Water Quality Impairment	100	Unlikely - short-term turbidity increase during disposal
UOW-CLDS	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
UOW-CLDS	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
UOW-CLDS	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
UOW-CLDS	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
UOW-CLDS	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during disposal

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
UOW-CLDS	Environmental	Marine Mammals	Habitat Impairment	100	No - water column habitat for mammals not altered
UOW-CLDS	Environmental	Marine Mammals	Harassment	50	Potential - during disposal
UOW-CLDS	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during disposal.
UOW-CLDS	Environmental	Marine Protected Areas	Burial	100	No - resource not present
UOW-CLDS	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
UOW-CLDS	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
UOW-CLDS	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
UOW-CLDS	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
UOW-CLDS	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
UOW-CLDS	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
UOW-CLDS	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Contaminants are: 1) similar to reference areas in Long Island Sound and 2) consistently below concentrations considered adverse to organisms Acute toxicity not found in the site or at nearby reference areas. Testing program will minimize exposure o
UOW-CLDS	Environmental	Shellfish	Burial	50	Potential - resource may be within disposal footprint
UOW-CLDS	Environmental	Shellfish	Direct Destruction/Interference	50	Potential - resource may be within disposal footprint
UOW-CLDS	Environmental	Shellfish	Habitat Impairment	50	Potential - sediment type may change
UOW-CLDS	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during disposal
UOW-CLDS	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term impacts to water quality within the residual plumes following disposal.
UOW-CLDS	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
UOW-CLDS	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
UOW-CLDS	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
UOW-CLDS	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
UOW-CLDS	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
UOW-CLDS	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
UOW-CLDS	Infrastructure	Mooring Areas	Burial	100	No - resource not present
UOW-CLDS	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
UOW-CLDS	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
UOW-CLDS	Infrastructure	Navigation Channels & Shipping	Burial	0	Yes
UOW-CLDS	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	0	Yes
UOW-CLDS	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	0	Yes - Vessel traffic impingement and alteration of bottom depth.
UOW-CLDS	Infrastructure	Recreational Areas	Burial	100	No - resource not present within site footprint
UOW-CLDS	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - resource not present within site footprint
UOW-CLDS	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	50	Potential impacts to vessel traffic during disposal activities.
UOW-CLDS	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not present within site footprint
UOW-CLDS	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - resource not present within site footprint
UOW-CLDS	Infrastructure	Recreational Areas	Visual Impact	100	No - alternative is located on sea floor
UOW-CLDS	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - in some cases, modification of ambient tidal currents and sediment transport due to alteration of topography. CLDS interrupt sedimentary furrow development
UOW-CLDS	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - site too far offshore to affect littoral transport processes along shoreline
UOW-CLDS	Physical	Sediments	Change in Grain Size	100	Unlikely - existing silty sediments likely to be covered with silty material
UOW-CLDS	Physical	Sediments	Change in TOC	100	Unlikely - existing finer grained sediments likely similar in TOC to silty material to be disposed of at site.
UOW-CLDS	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - In some cases, modification of local wave refraction and sediment transport due to alteration of topography. If site filled to potential wave base for storm events
UOW-CSDS	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
UOW-CSDS	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
UOW-CSDS	Cultural	Archaeological Sites	Visual Impact	100	No - resource not present
UOW-CSDS	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
UOW-CSDS	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
UOW-CSDS	Cultural	Shipwrecks	Burial	100	No - resource not within site footprint
UOW-CSDS	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - no shipwrecks within influence of site
UOW-CSDS	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not within site footprint
UOW-CSDS	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
UOW-CSDS	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
UOW-CSDS	Environmental	Benthic Invertebrates	Burial	0	Yes - where benthic communities are present at the disposal location.
UOW-CSDS	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - where benthic communities are present at the disposal location.
UOW-CSDS	Environmental	Benthic Invertebrates	Habitat Impairment	50	Potential for habitat impairment.

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
UOW-CSDS	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential for water quality impairment.
UOW-CSDS	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
UOW-CSDS	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	No - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
UOW-CSDS	Environmental	Birds	Habitat Impairment	100	No - disposal on sea floor would not impact bird habitat
UOW-CSDS	Environmental	Birds	Harassment	100	Unlikely - site operation not likely to disturb mobile resource
UOW-CSDS	Environmental	Birds	Water Quality Impairment	100	Unlikely - short-term turbidity increase during disposal
UOW-CSDS	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
UOW-CSDS	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
UOW-CSDS	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
UOW-CSDS	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
UOW-CSDS	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during disposal
UOW-CSDS	Environmental	Marine Mammals	Habitat Impairment	100	No - water column habitat for mammals not altered
UOW-CSDS	Environmental	Marine Mammals	Harassment	50	Potential - during disposal
UOW-CSDS	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during disposal.
UOW-CSDS	Environmental	Marine Protected Areas	Burial	100	No - resource not present
UOW-CSDS	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
UOW-CSDS	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
UOW-CSDS	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
UOW-CSDS	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
UOW-CSDS	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
UOW-CSDS	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
UOW-CSDS	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Contaminants are: 1) similar to reference areas in Long Island Sound and 2) consistently below concentrations considered adverse to organisms Acute toxicity not found in the site or at nearby reference areas. Testing program will minimize exposure o
UOW-CSDS	Environmental	Shellfish	Burial	50	Potential - resource may be within disposal footprint
UOW-CSDS	Environmental	Shellfish	Direct Destruction/Interference	50	Potential - resource may be within disposal footprint
UOW-CSDS	Environmental	Shellfish	Habitat Impairment	50	Potential - sediment type may change
UOW-CSDS	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during disposal
UOW-CSDS	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term impacts to water quality within the residual plumes following disposal.
UOW-CSDS	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
UOW-CSDS	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
UOW-CSDS	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
UOW-CSDS	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
UOW-CSDS	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
UOW-CSDS	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
UOW-CSDS	Infrastructure	Mooring Areas	Burial	100	No - resource not present
UOW-CSDS	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
UOW-CSDS	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
UOW-CSDS	Infrastructure	Navigation Channels & Shipping	Burial	0	Yes
UOW-CSDS	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	0	Yes
UOW-CSDS	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	0	Yes - Vessel traffic impingement and alteration of bottom depth.
UOW-CSDS	Infrastructure	Recreational Areas	Burial	100	No - resource not present within site footprint
UOW-CSDS	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - resource not present within site footprint
UOW-CSDS	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	50	Potential impacts to vessel traffic during disposal activities.
UOW-CSDS	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not present within site footprint
UOW-CSDS	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - resource not present within site footprint
UOW-CSDS	Infrastructure	Recreational Areas	Visual Impact	100	No - alternative is located on sea floor
UOW-CSDS	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - in some cases, modification of ambient tidal currents and sediment transport due to alteration of topography.
UOW-CSDS	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - site too far offshore to affect littoral transport processes along shoreline
UOW-CSDS	Physical	Sediments	Change in Grain Size	0	Yes - site mapped as gravelly sand/sand
UOW-CSDS	Physical	Sediments	Change in TOC	50	Potential - existing granular material low in TOC would be covered with finer grained sediments typically higher in TOC
UOW-CSDS	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - In some cases, modification of local wave refraction and sediment transport due to alteration of topography. If site filled to potential wave base for storm events
UOW-NLDS	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
UOW-NLDS	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
UOW-NLDS	Cultural	Archaeological Sites	Visual Impact	100	No - resource not present
UOW-NLDS	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
UOW-NLDS	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
UOW-NLDS	Cultural	Shipwrecks	Burial	100	No - resource not within site footprint
UOW-NLDS	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - shipwrecks outside of influence of site
UOW-NLDS	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not within site footprint
UOW-NLDS	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
UOW-NLDS	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
UOW-NLDS	Environmental	Benthic Invertebrates	Burial	0	Yes - where benthic communities are present at the disposal location.
UOW-NLDS	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - where benthic communities are present at the disposal location.
UOW-NLDS	Environmental	Benthic Invertebrates	Habitat Impairment	50	Potential for habitat impairment.
UOW-NLDS	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential for water quality impairment.
UOW-NLDS	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
UOW-NLDS	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	No - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
UOW-NLDS	Environmental	Birds	Habitat Impairment	100	No - disposal on sea floor would not impact bird habitat
UOW-NLDS	Environmental	Birds	Harassment	100	Unlikely - site operation not likely to disturb mobile resource
UOW-NLDS	Environmental	Birds	Water Quality Impairment	100	Unlikely - short-term turbidity increase during disposal
UOW-NLDS	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
UOW-NLDS	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
UOW-NLDS	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
UOW-NLDS	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
UOW-NLDS	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during disposal
UOW-NLDS	Environmental	Marine Mammals	Habitat Impairment	100	No - water column habitat for mammals not altered
UOW-NLDS	Environmental	Marine Mammals	Harassment	50	Potential - during disposal
UOW-NLDS	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during disposal.
UOW-NLDS	Environmental	Marine Protected Areas	Burial	100	No - resource not present
UOW-NLDS	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
UOW-NLDS	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
UOW-NLDS	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
UOW-NLDS	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
UOW-NLDS	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
UOW-NLDS	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
UOW-NLDS	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Contaminants are: 1) similar to reference areas in Long Island Sound and 2) consistently below concentrations considered adverse to organisms Acute toxicity not found in the site or at nearby reference areas. Testing program will minimize exposure o
UOW-NLDS	Environmental	Shellfish	Burial	50	Potential - resource may be within disposal footprint
UOW-NLDS	Environmental	Shellfish	Direct Destruction/Interference	50	Potential - resource may be within disposal footprint
UOW-NLDS	Environmental	Shellfish	Habitat Impairment	50	Potential - sediment type may change
UOW-NLDS	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during disposal
UOW-NLDS	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term impacts to water quality within the residual plumes following disposal.
UOW-NLDS	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
UOW-NLDS	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
UOW-NLDS	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present
UOW-NLDS	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
UOW-NLDS	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
UOW-NLDS	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
UOW-NLDS	Infrastructure	Mooring Areas	Burial	100	No - resource not present
UOW-NLDS	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
UOW-NLDS	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
UOW-NLDS	Infrastructure	Navigation Channels & Shipping	Burial	0	Yes
UOW-NLDS	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	0	Yes
UOW-NLDS	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	0	Yes - Vessel traffic impingement and alteration of bottom depth.
UOW-NLDS	Infrastructure	Recreational Areas	Burial	100	No - resource not present within site footprint
UOW-NLDS	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - resource not present within site footprint

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
UOW-NLDS	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	50	Potential impacts to vessel traffic during disposal activities.
UOW-NLDS	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not present within site footprint
UOW-NLDS	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - resource not present within site footprint
UOW-NLDS	Infrastructure	Recreational Areas	Visual Impact	100	No - alternative is located on sea floor
UOW-NLDS	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - in some cases, modification of ambient tidal currents and sediment transport due to alteration of topography.
UOW-NLDS	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - site too far offshore to affect littoral transport processes along shoreline
UOW-NLDS	Physical	Sediments	Change in Grain Size	0	Yes - site mapped as gravelly sand/sand
UOW-NLDS	Physical	Sediments	Change in TOC	50	Potential - existing granular material low in TOC would be covered with finer grained sediments typically higher in TOC
UOW-NLDS	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - In some cases, modification of local wave refraction and sediment transport due to alteration of topography. If site filled to potential wave base for storm events
UOW-WLDS	Cultural	Archaeological Sites	Changes in Local Sedimentation / Erosion	100	No - resource not present
UOW-WLDS	Cultural	Archaeological Sites	Direct Destruction/Interference	100	No - resource not present
UOW-WLDS	Cultural	Archaeological Sites	Visual Impact	100	No - resource not present
UOW-WLDS	Cultural	Historic Districts	Changes in Local Sedimentation / Erosion	100	No - resource not present
UOW-WLDS	Cultural	Historic Districts	Direct Destruction/Interference	100	No - resource not present
UOW-WLDS	Cultural	Shipwrecks	Burial	100	No - resource not within site footprint
UOW-WLDS	Cultural	Shipwrecks	Changes in Local Sedimentation / Erosion	100	Unlikely - shipwrecks outside of influence of site
UOW-WLDS	Cultural	Shipwrecks	Direct Destruction/Interference	100	No - resource not within site footprint
UOW-WLDS	Environmental	Air Quality/Noise	Habitat Impairment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
UOW-WLDS	Environmental	Air Quality/Noise	Harassment	50	Potential - Short-term impacts to air quality or noise during disposal operations. Impacts would cease when disposal operations are complete.
UOW-WLDS	Environmental	Benthic Invertebrates	Burial	0	Yes - where benthic communities are present at the disposal location.
UOW-WLDS	Environmental	Benthic Invertebrates	Direct Destruction/Interference	0	Yes - where benthic communities are present at the disposal location.
UOW-WLDS	Environmental	Benthic Invertebrates	Habitat Impairment	50	Potential for habitat impairment.
UOW-WLDS	Environmental	Benthic Invertebrates	Water Quality Impairment	50	Potential for water quality impairment.
UOW-WLDS	Environmental	Bioaccumulation Potential	Habitat Impairment	100	No - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
UOW-WLDS	Environmental	Bioaccumulation Potential	Sediment Quality Impairment	100	No - Disposal of material deemed acceptable under the ocean disposal regulations is not likely to change the present low risk levels in organisms in or near the site.
UOW-WLDS	Environmental	Birds	Habitat Impairment	100	No - disposal on sea floor would not impact bird habitat
UOW-WLDS	Environmental	Birds	Harassment	100	Unlikely - site operation not likely to disturb mobile resource
UOW-WLDS	Environmental	Birds	Water Quality Impairment	100	Unlikely - short-term turbidity increase during disposal
UOW-WLDS	Environmental	Federally Managed Species	Burial	50	Potential - bottom dwelling species
UOW-WLDS	Environmental	Federally Managed Species	Direct Destruction/Interference	50	Potential - bottom dwelling species
UOW-WLDS	Environmental	Federally Managed Species	Habitat Impairment	50	Potential - physical change in sediment characteristics or water depth
UOW-WLDS	Environmental	Federally Managed Species	Water Quality Impairment	50	Potential - short term impact to sedentary species
UOW-WLDS	Environmental	Marine Mammals	Direct Destruction/Interference	50	Potential - strikes during disposal
UOW-WLDS	Environmental	Marine Mammals	Habitat Impairment	100	No - water column habitat for mammals not altered
UOW-WLDS	Environmental	Marine Mammals	Harassment	50	Potential - during disposal
UOW-WLDS	Environmental	Marine Mammals	Water Quality Impairment	50	Potential - degradation of habitat by increased turbidity during disposal.
UOW-WLDS	Environmental	Marine Protected Areas	Burial	100	No - resource not present
UOW-WLDS	Environmental	Marine Protected Areas	Burial	100	No - resource not present
UOW-WLDS	Environmental	Marine Protected Areas	Changes in Local Sedimentation / Erosion	100	No - resource not present
UOW-WLDS	Environmental	Marine Protected Areas	Direct Destruction/Interference	100	No - resource not present
UOW-WLDS	Environmental	Marine Protected Areas	Habitat Impairment	100	No - resource not present
UOW-WLDS	Environmental	Marine Protected Areas	Water Quality Impairment	100	No - resource not present
UOW-WLDS	Environmental	Plankton	Direct Destruction/Interference	50	Potential impact from small, short-term entrainment losses
UOW-WLDS	Environmental	Plankton	Water Quality Impairment	50	Potential for short-term water quality impacts
UOW-WLDS	Environmental	Sediment Quality	Sediment Quality Impairment	100	No - Contaminants are: 1) similar to reference areas in Long Island Sound and 2) consistently below concentrations considered adverse to organisms Acute toxicity not found in the site or at nearby reference areas. Testing program will minimize exposure o
UOW-WLDS	Environmental	Shellfish	Burial	50	Potential - resource may be within disposal footprint
UOW-WLDS	Environmental	Shellfish	Direct Destruction/Interference	50	Potential - resource may be within disposal footprint
UOW-WLDS	Environmental	Shellfish	Habitat Impairment	50	Potential - sediment type may change
UOW-WLDS	Environmental	Shellfish	Water Quality Impairment	50	Potential - degradation of resource due to increased turbidity during disposal
UOW-WLDS	Environmental	Water Quality	Water Quality Impairment	50	Potential - Intermittent, short-term impacts to water quality within the residual plumes following disposal.
UOW-WLDS	Infrastructure	Cable/power/utility crossings	Burial	100	No - resource not present
UOW-WLDS	Infrastructure	Cable/power/utility crossings	Changes in Sedimentation Patterns	100	No - resource not present
UOW-WLDS	Infrastructure	Cable/power/utility crossings	Direct Destruction/Interference	100	No - resource not present

Table G-6. Impact Data and Scoring for Alternatives.

Screening ID	Resouce Type	Resource/Area	Impact	Score	Impact Description
UOW-WLDS	Infrastructure	Cable/power/utility crossings	Undermining / Erosion	100	No - resource not present
UOW-WLDS	Infrastructure	Dredged Material Disposal Sites	Changes in Sedimentation Patterns	100	No - resource not present
UOW-WLDS	Infrastructure	Dredged Material Disposal Sites	Undermining / Erosion	100	No - resource not present
UOW-WLDS	Infrastructure	Mooring Areas	Burial	100	No - resource not present
UOW-WLDS	Infrastructure	Mooring Areas	Changes in Sedimentation Patterns	100	No - resource not present
UOW-WLDS	Infrastructure	Mooring Areas	Changes in Vessel Traffic Patterns	100	No - resource not present
UOW-WLDS	Infrastructure	Navigation Channels & Shipping	Burial	0	Yes
UOW-WLDS	Infrastructure	Navigation Channels & Shipping	Changes in Sedimentation Patterns	0	Yes
UOW-WLDS	Infrastructure	Navigation Channels & Shipping	Changes in Vessel Traffic Patterns	0	Yes - Vessel traffic impingement and alteration of bottom depth.
UOW-WLDS	Infrastructure	Recreational Areas	Burial	100	No - resource not present within site footprint
UOW-WLDS	Infrastructure	Recreational Areas	Changes in Sedimentation Patterns	100	No - resource not present within site footprint
UOW-WLDS	Infrastructure	Recreational Areas	Changes in Vessel Traffic Patterns	50	Potential impacts to vessel traffic during disposal activities.
UOW-WLDS	Infrastructure	Recreational Areas	Direct Destruction/Interference	100	No - resource not present within site footprint
UOW-WLDS	Infrastructure	Recreational Areas	Undermining / Erosion	100	No - resource not present within site footprint
UOW-WLDS	Infrastructure	Recreational Areas	Visual Impact	100	No - alternative is located on sea floor
UOW-WLDS	Physical	Currents	Change in Direction, Rate, Amplitude, or Period	50	Potential - in some cases, modification of ambient tidal currents and sediment transport due to alteration of topography.
UOW-WLDS	Physical	Littoral Drift	Change in Direction, Rate, Amplitude, or Period	100	No - site too far offshore to affect littoral transport processes along shoreline
UOW-WLDS	Physical	Sediments	Change in Grain Size	100	Unlikely - existing silty sediments likely to be covered with silty material
UOW-WLDS	Physical	Sediments	Change in TOC	100	Unlikely - existing finer grained sediments likely similar in TOC to silty material to be disposed of at site.
UOW-WLDS	Physical	Waves	Change in Direction, Rate, Amplitude, or Period	50	Potential - In some cases, modification of local wave refraction and sediment transport due to alteration of topography. If site filled to potential wave base for storm events

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-600	100	92	100	82.66	375.10	Yes	Yes	$1,008,562	28,800	$35	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-600	100	100	100	70.67	370.67	Yes	Yes	$1,008,562	28,800	$35	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-610	100	94	50	81.25	324.76	Yes	Yes	$1,996,000	28,800	$69	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	UOW-NLDS	100	100	50	72.31	322.31	No	Yes	$1,721,325	28,800	$60	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	IslandCDF-R_cap	100	100	50	67.53	317.53	Yes	Yes	$4,202,479	28,800	$146	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$4,249,249	28,800	$148	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$2,510,335	28,800	$87	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$2,510,335	28,800	$87	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$2,510,335	28,800	$87	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-121/446	100	97	0	84.45	281.74	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-171	100	95	0	82.68	277.79	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-180	100	98	0	78.31	276.43	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$4,249,249	28,800	$148	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$4,249,249	28,800	$148	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	IslandCDF-N_cap	100	100	0	73.28	273.28	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	IslandCDF-P_cap	100	100	0	72.76	272.76	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$2,391,349	28,800	$83	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	IslandCDF-Q_cap	100	100	0	71.51	271.51	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	IslandCDF-L_cap	100	100	0	70.94	270.94	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-O_cap	100	100	0	69.95	269.95	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-J_cap	100	100	0	66.72	266.72	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-454A	100	75	0	83.72	258.29	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	CAD-M_cap	100	69	0	85.16	254.34	Yes	Yes	$2,768,772	28,800	$96	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-323	100	69	0	80.39	249.17	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-365	100	67	0	81.28	248.59	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-D_cap	100	76	0	70.36	246.05	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-445	100	62	0	81.98	244.31	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-179	100	63	0	77.11	240.15	Yes	Yes	$2,510,335	28,800	$87	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-453	100	51	0	84.53	235.08	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-449	100	51	0	82.4	233.33	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-456	100	46	0	80.39	226.63	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-I_cap	100	49	0	71.25	220.34	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-454B	100	35	0	83.23	218.23	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-368	100	35	0	81.61	216.36	Yes	Yes	$2,950,922	28,800	$102	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-620	100	38	0	75	213.46	No	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-337	100	27	0	83.93	210.65	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-440	100	28	0	79.87	207.93	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-367	100	23	0	83.31	206.66	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-447	100	26	0	80.1	206.54	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-Grove Beach	100	30	0	75	205.20	No	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-467	100	22	0	82.19	203.99	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-320	100	15	0	87.24	201.78	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-441	100	14	0	87.76	201.32	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-455/82	100	17	0	83.93	200.82	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-433	100	13	0	82.92	196.01	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-364b/364c	100	12	0	82.6	194.80	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-K_cap	100	24	0	67.68	192.16	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-457	100	4	0	86.95	191.15	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-434	100	10	0	81.35	191.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-438	100	6	0	81.67	187.78	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Berm-451	100	4	0	82.29	186.21	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-441	100	94	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-327	100	54	-1	74.53	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-474	100	0	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-438	100	13	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-330	100	83	-1	74.53	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-480	100	16	-1	72.89	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-121	100	42	-1	73.2	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-329	100	83	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$2,510,335	28,800	$87	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-67	100	17	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$3,326,720	28,800	$116	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$2,950,922	28,800	$102	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-79	100	68	-1	73.2	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$3,326,720	28,800	$116	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-177	100	94	-1	72.89	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-444	100	25	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$1,996,000	28,800	$69	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$3,326,720	28,800	$116	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-457	100	20	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$2,768,772	28,800	$96	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$4,249,249	28,800	$148	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$2,510,335	28,800	$87	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$2,510,335	28,800	$87	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-459	100	25	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-367	100	49	-1	73.59	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-434	100	30	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-337	100	16	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-343	100	6	-1	73.83	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$2,510,335	28,800	$87	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-451	100	2	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-68	100	11	-1	73.2	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-433	100	74	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$2,510,335	28,800	$87	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-344	100	3	-1	74.53	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-333	100	8	-1	74.53	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-381	100	100	-1	72.66	-1.00	Yes	Yes	$2,510,335	28,800	$87	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-364	100	99	-1	73.83	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-348	100	8	-1	73.83	-1.00	Yes	Yes	$2,950,922	28,800	$102	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-339	100	30	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$3,326,720	28,800	$116	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	Beach-620	100	100	-1	75	-1.00	No	Yes	$2,950,922	28,800	$102	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$3,326,720	28,800	$116	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$4,202,479	28,800	$146	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$3,326,720	28,800	$116	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Entrance Channel, Inner Basin, and Anchorage	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$5,076,143	28,800	$176	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	UOW-NLDS	100	100	50	72.31	322.31	No	Yes	$833,279	2,200	$379	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	IslandCDF-R_bse	100	100	50	67.53	317.53	Yes	Yes	$1,040,797	2,200	$473	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	COW-E_bse	100	100	0	85.57	285.57	Yes	Yes	$1,037,985	2,200	$472	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$1,037,985	2,200	$472	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$821,708	2,200	$374	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$804,321	2,200	$366	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$821,708	2,200	$374	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$821,708	2,200	$374	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$1,037,985	2,200	$472	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$1,037,985	2,200	$472	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$1,037,985	2,200	$472	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-O_bse	100	100	0	69.95	269.95	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$1,060,321	2,200	$482	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$821,708	2,200	$374	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$821,708	2,200	$374	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$821,708	2,200	$374	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$1,178,575	2,200	$536	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$919,204	2,200	$418	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$1,178,575	2,200	$536	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$1,178,575	2,200	$536	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$1,178,575	2,200	$536	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$1,178,575	2,200	$536	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$919,204	2,200	$418	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$804,321	2,200	$366	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$1,178,575	2,200	$536	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$1,178,575	2,200	$536	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$717,630	2,200	$326	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$1,178,575	2,200	$536	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$1,178,575	2,200	$536	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-600	-1	0	0	0	-1.00	Yes	Yes	$717,630	2,200	$326	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$1,178,575	2,200	$536	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-620	-1	0	0	0	-1.00	No	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$1,040,797	2,200	$473	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Beach-620	-1	0	-1	0	-1.00	No	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$1,584,386	2,200	$720	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$1,060,321	2,200	$482	
Block Island Harbor of Refuge - Anchorage SW Area and Inner Basin Corners	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$1,060,321	2,200	$482	
Great Salt Pond	Berm-610	100	100	100	81.25	381.25	Yes	Yes	$989,524	14,100	$70	
Great Salt Pond	Beach-610	100	100	100	70.67	370.67	Yes	Yes	$989,524	14,100	$70	
Great Salt Pond	Berm-600	100	100	50	82.66	332.66	Yes	Yes	$1,454,798	14,100	$103	
Great Salt Pond	UOW-NLDS	100	100	50	72.31	322.31	No	Yes	$1,311,600	14,100	$93	
Great Salt Pond	IslandCDF-Q_cap	100	100	50	71.51	321.51	Yes	Yes	$2,575,010	14,100	$183	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Great Salt Pond	IslandCDF-R_cap	100	100	50	67.53	317.53	Yes	Yes	$2,575,010	14,100	$183	
Great Salt Pond	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$2,192,817	14,100	$156	
Great Salt Pond	CAD-M_cap	100	100	0	85.16	285.16	Yes	Yes	$1,712,901	14,100	$121	
Great Salt Pond	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$1,873,995	14,100	$133	
Great Salt Pond	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$1,873,995	14,100	$133	
Great Salt Pond	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$1,873,995	14,100	$133	
Great Salt Pond	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$1,873,995	14,100	$133	
Great Salt Pond	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$2,192,817	14,100	$156	
Great Salt Pond	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$2,192,817	14,100	$156	
Great Salt Pond	Berm-445	100	93	0	81.98	274.58	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	IslandCDF-N_cap	100	100	0	73.28	273.28	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	IslandCDF-P_cap	100	100	0	72.76	272.76	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$1,738,563	14,100	$123	
Great Salt Pond	IslandCDF-L_cap	100	100	0	70.94	270.94	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	Berm-179	100	94	0	77.11	270.77	Yes	Yes	$1,873,995	14,100	$133	
Great Salt Pond	ShoreCDF-D_cap	100	100	0	70.36	270.36	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	ShoreCDF-O_cap	100	100	0	69.95	269.95	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	ShoreCDF-J_cap	100	100	0	66.72	266.72	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	Berm-453	100	75	0	84.53	259.63	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	Berm-449	100	76	0	82.4	258.07	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-456	100	69	0	80.39	249.09	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	ShoreCDF-I_cap	100	73	0	71.25	244.18	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	Berm-454B	100	52	0	83.23	235.23	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-368	100	52	0	81.61	233.24	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-620	100	57	0	75	232.14	No	Yes	$1,873,995	14,100	$133	
Great Salt Pond	Berm-337	100	40	0	83.93	223.63	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-440	100	42	0	79.87	221.55	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-Grove Beach	100	45	0	75	219.87	No	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-447	100	39	0	80.1	219.38	Yes	Yes	$2,290,667	14,100	$162	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Great Salt Pond	Berm-367	100	35	0	83.31	218.01	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-467	100	32	0	82.19	214.58	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-455/82	100	25	0	83.93	209.03	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-320	100	22	0	87.24	208.84	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-441	100	20	0	87.76	207.90	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	ShoreCDF-K_cap	100	36	0	67.68	204.05	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	Berm-433	100	19	0	82.92	202.36	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-364b/364c	100	18	0	82.6	200.73	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-434	100	14	0	81.35	195.69	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-457	100	6	0	86.95	193.18	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-438	100	9	0	81.67	190.75	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Berm-451	100	6	0	82.29	188.12	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-348	100	16	-1	73.83	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	Beach-457	100	40	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-339	100	61	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$1,873,995	14,100	$133	
Great Salt Pond	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-367	100	100	-1	73.59	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$1,873,995	14,100	$133	
Great Salt Pond	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-381	100	100	-1	72.66	-1.00	Yes	Yes	$1,873,995	14,100	$133	
Great Salt Pond	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$1,873,995	14,100	$133	
Great Salt Pond	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$1,454,798	14,100	$103	
Great Salt Pond	Beach-344	100	6	-1	74.53	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$1,982,615	14,100	$141	
Great Salt Pond	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-364	100	100	-1	73.83	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-480	100	32	-1	72.89	-1.00	Yes	Yes	$1,873,995	14,100	$133	
Great Salt Pond	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-68	100	23	-1	73.2	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Great Salt Pond	Beach-459	100	50	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$1,873,995	14,100	$133	
Great Salt Pond	Beach-337	100	33	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-438	100	26	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-79	100	100	-1	73.2	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-329	100	100	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-121	100	87	-1	73.2	-1.00	Yes	Yes	$1,873,995	14,100	$133	
Great Salt Pond	Beach-444	100	50	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-451	100	5	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$1,982,615	14,100	$141	
Great Salt Pond	Beach-434	100	60	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-327	100	100	-1	74.53	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-330	100	100	-1	74.53	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$2,192,817	14,100	$156	
Great Salt Pond	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-343	100	11	-1	73.83	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-333	100	17	-1	74.53	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-67	100	34	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$1,873,995	14,100	$133	
Great Salt Pond	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$1,982,615	14,100	$141	
Great Salt Pond	Beach-474	100	1	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$1,712,901	14,100	$121	
Great Salt Pond	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-433	100	100	-1	74.14	-1.00	Yes	Yes	$2,290,667	14,100	$162	
Great Salt Pond	Beach-620	100	100	-1	75	-1.00	No	Yes	$1,873,995	14,100	$133	
Great Salt Pond	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$3,109,824	14,100	$221	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Great Salt Pond	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$1,982,615	14,100	$141	
Great Salt Pond	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$1,982,615	14,100	$141	
Great Salt Pond	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$1,982,615	14,100	$141	
Great Salt Pond	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$2,575,010	14,100	$183	
Great Salt Pond	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$2,575,010	14,100	$183	
Great Salt Pond	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$3,109,824	14,100	$221	
Great Salt Pond	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$3,109,824	14,100	$221	
Hay West Harbor	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$923,581	12,000	$77	
Hay West Harbor	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$1,005,373	12,000	$84	
Hay West Harbor	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$1,987,775	12,000	$166	
Hay West Harbor	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$1,987,775	12,000	$166	
Hay West Harbor	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$2,351,471	12,000	$196	
Hay West Harbor	ShoreCDF-O_bse	100	100	50	69.95	319.95	Yes	Yes	$2,351,471	12,000	$196	
Hay West Harbor	COW-E_bse	100	100	0	85.57	285.57	Yes	Yes	$1,870,900	12,000	$156	
Hay West Harbor	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$1,870,900	12,000	$156	
Hay West Harbor	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$1,796,481	12,000	$150	
Hay West Harbor	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$1,558,420	12,000	$130	
Hay West Harbor	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$1,796,481	12,000	$150	
Hay West Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$1,796,481	12,000	$150	
Hay West Harbor	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$1,870,900	12,000	$156	
Hay West Harbor	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$1,649,312	12,000	$137	
Hay West Harbor	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$1,796,481	12,000	$150	
Hay West Harbor	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$1,796,481	12,000	$150	
Hay West Harbor	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$1,796,481	12,000	$150	
Hay West Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Hay West Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$1,382,057	12,000	$115	
Hay West Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$1,382,057	12,000	$115	
Hay West Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Hay West Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$1,233,022	12,000	$103	
Hay West Harbor	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$1,382,057	12,000	$115	
Hay West Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$1,382,057	12,000	$115	
Hay West Harbor	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Hay West Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$1,788,100	12,000	$149	
Hay West Harbor	Beach-368	-1	0	0	0	-1.00	Yes	Yes	$1,233,022	12,000	$103	
Hay West Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$1,558,420	12,000	$130	
Hay West Harbor	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$2,204,129	12,000	$184	
Hay West Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$2,351,471	12,000	$196	
Hay West Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$2,204,129	12,000	$184	
Hay West Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$1,987,775	12,000	$166	
Hay West Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$1,987,775	12,000	$166	
Hay West Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$1,382,057	12,000	$115	
Hay West Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$2,839,277	12,000	$237	
Hay West Harbor	Beach-620	-1	0	-1	0	-1.00	No	Yes	$1,382,057	12,000	$115	
Hay West Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$2,351,471	12,000	$196	
Pawcatuck River	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$8,105,833	261,000	$31	
Pawcatuck River	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$31,971,310	261,000	$122	
Pawcatuck River	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$31,971,310	261,000	$122	
Pawcatuck River	UOW-CSDS	100	100	50	72.31	322.31	No	Yes	$9,556,110	261,000	$37	
Pawcatuck River	COW-E_bse	100	100	0	85.57	285.57	Yes	Yes	$25,410,382	261,000	$97	
Pawcatuck River	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$25,410,382	261,000	$97	
Pawcatuck River	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$34,056,743	261,000	$130	
Pawcatuck River	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$17,094,736	261,000	$65	
Pawcatuck River	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$34,056,743	261,000	$130	
Pawcatuck River	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$34,056,743	261,000	$130	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Pawcatuck River	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$25,410,382	261,000	$97	
Pawcatuck River	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$14,420,377	261,000	$55	
Pawcatuck River	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$34,056,743	261,000	$130	
Pawcatuck River	ShoreCDF-O_bse	100	35	0	69.95	204.54	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	BF-422/423	50	81	0	62.03	192.95	Yes	Yes	$34,056,743	261,000	$130	
Pawcatuck River	Habitat-427	50	37	0	59.77	147.00	Yes	Yes	$34,056,743	261,000	$130	
Pawcatuck River	Beach-382	-1	0	0	0	-1.00	Yes	Yes	$4,860,401	261,000	$19	
Pawcatuck River	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$12,070,681	261,000	$46	
Pawcatuck River	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-381	-1	0	0	0	-1.00	Yes	Yes	$4,860,401	261,000	$19	
Pawcatuck River	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Pawcatuck River	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$12,070,681	261,000	$46	
Pawcatuck River	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$17,094,736	261,000	$65	
Pawcatuck River	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$9,101,551	261,000	$35	
Pawcatuck River	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-384	-1	0	0	0	-1.00	Yes	Yes	$9,101,551	261,000	$35	
Pawcatuck River	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Pawcatuck River	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-480	-1	0	0	0	-1.00	Yes	Yes	$9,101,551	261,000	$35	
Pawcatuck River	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$4,860,401	261,000	$19	
Pawcatuck River	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Pawcatuck River	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Pawcatuck River	Beach-620	-1	0	0	0	-1.00	No	Yes	$5,727,738	261,000	$22	
Pawcatuck River	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	Berm-620	-1	0	0	0	-1.00	No	Yes	$5,727,738	261,000	$22	
Pawcatuck River	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$16,191,169	261,000	$62	
Pawcatuck River	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Pawcatuck River	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$31,971,310	261,000	$122	
Pawcatuck River	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$31,971,310	261,000	$122	
Pawcatuck River	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Pawcatuck River	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Entrance Channel	Berm-381/382	100	100	100	82.47	382.47	Yes	Yes	$1,071,819	20,800	$52	
Little Narragansett Bay - Entrance Channel	Beach-620	100	100	100	75	375.00	No	Yes	$905,690	20,800	$44	
Little Narragansett Bay - Entrance Channel	Beach-381	100	100	100	72.66	372.66	Yes	Yes	$1,071,819	20,800	$52	
Little Narragansett Bay - Entrance Channel	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$1,181,571	20,800	$57	
Little Narragansett Bay - Entrance Channel	Beach-382	100	100	100	72.27	372.27	Yes	Yes	$1,071,819	20,800	$52	
Little Narragansett Bay - Entrance Channel	IslandCDF-Q_cap	100	100	100	71.51	371.51	Yes	Yes	$3,212,920	20,800	$154	
Little Narragansett Bay - Entrance Channel	IslandCDF-R_cap	100	100	100	67.53	367.53	Yes	Yes	$2,790,104	20,800	$134	
Little Narragansett Bay - Entrance Channel	Berm-620	100	72	100	75	347.33	No	Yes	$905,690	20,800	$44	
Little Narragansett Bay - Entrance Channel	Berm-384	100	100	50	84.56	334.56	Yes	Yes	$1,437,403	20,800	$69	
Little Narragansett Bay - Entrance Channel	UOW-CSDS	100	100	50	72.31	322.31	No	Yes	$1,489,245	20,800	$72	
Little Narragansett Bay - Entrance Channel	Berm-368	100	65	50	81.61	296.96	Yes	Yes	$1,686,878	20,800	$81	
Little Narragansett Bay - Entrance Channel	Beach-480	100	22	100	72.89	294.52	Yes	Yes	$1,071,819	20,800	$52	
Little Narragansett Bay - Entrance Channel	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$3,219,886	20,800	$155	
Little Narragansett Bay - Entrance Channel	CAD-M_cap	100	100	0	85.16	285.16	Yes	Yes	$2,205,768	20,800	$106	
Little Narragansett Bay - Entrance Channel	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-453	100	95	0	84.53	279.60	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-449	100	96	0	82.4	278.18	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$3,219,886	20,800	$155	
Little Narragansett Bay - Entrance Channel	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$2,023,313	20,800	$97	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Little Narragansett Bay - Entrance Channel	IslandCDF-N_cap	100	100	0	73.28	273.28	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	IslandCDF-P_cap	100	100	0	72.76	272.76	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	IslandCDF-L_cap	100	100	0	70.94	270.94	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	ShoreCDF-D_cap	100	100	0	70.36	270.36	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	ShoreCDF-O_cap	100	100	0	69.95	269.95	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	Berm-456	100	87	0	80.39	267.35	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	ShoreCDF-J_cap	100	100	0	66.72	266.72	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	ShoreCDF-I_cap	100	92	0	71.25	263.56	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	Berm-454B	100	66	0	83.23	249.05	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-337	100	50	0	83.93	234.18	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-440	100	53	0	79.87	232.63	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-Grove Beach	100	57	0	75	231.79	No	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-447	100	50	0	80.1	229.82	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-367	100	44	0	83.31	227.23	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Berm-467	100	41	0	82.19	223.19	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-455/82	100	32	0	83.93	215.70	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-320	100	27	0	87.24	214.58	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	ShoreCDF-K_cap	100	46	0	67.68	213.71	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	Berm-441	100	25	0	87.76	213.25	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-433	100	25	0	82.92	207.53	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-364b/364c	100	23	0	82.6	205.54	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-434	100	18	0	81.35	199.50	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-457	100	8	0	86.95	194.84	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-438	100	11	0	81.67	193.16	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Berm-451	100	7	0	82.29	189.67	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-444	100	34	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$2,576,472	20,800	$124	
Little Narragansett Bay - Entrance Channel	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Beach-68	100	15	-1	73.2	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-121	100	59	-1	73.2	-1.00	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-327	100	75	-1	74.53	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-79	100	94	-1	73.2	-1.00	Yes	Yes	$2,566,766	20,800	$123	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Little Narragansett Bay - Entrance Channel	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$2,576,472	20,800	$124	
Little Narragansett Bay - Entrance Channel	Beach-337	100	22	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-433	100	100	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-434	100	41	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-459	100	34	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Beach-367	100	68	-1	73.59	-1.00	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-329	100	100	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-364	100	100	-1	73.83	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$1,686,878	20,800	$81	
Little Narragansett Bay - Entrance Channel	Beach-343	100	8	-1	73.83	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-330	100	100	-1	74.53	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-333	100	12	-1	74.53	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$3,219,886	20,800	$155	
Little Narragansett Bay - Entrance Channel	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-344	100	4	-1	74.53	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-339	100	41	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-438	100	18	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$2,576,472	20,800	$124	
Little Narragansett Bay - Entrance Channel	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$2,566,766	20,800	$123	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Little Narragansett Bay - Entrance Channel	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Beach-474	100	0	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-348	100	11	-1	73.83	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$2,205,768	20,800	$106	
Little Narragansett Bay - Entrance Channel	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-451	100	3	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-67	100	23	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$2,148,041	20,800	$103	
Little Narragansett Bay - Entrance Channel	Beach-457	100	27	-1	74.14	-1.00	Yes	Yes	$2,566,766	20,800	$123	
Little Narragansett Bay - Entrance Channel	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$2,576,472	20,800	$124	
Little Narragansett Bay - Entrance Channel	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$2,790,104	20,800	$134	
Little Narragansett Bay - Entrance Channel	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$2,576,472	20,800	$124	
Little Narragansett Bay - Entrance Channel	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$2,576,472	20,800	$124	
Little Narragansett Bay - Entrance Channel	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$3,212,920	20,800	$154	
Little Narragansett Bay - Entrance Channel	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Entrance Channel	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$3,972,997	20,800	$191	
Little Narragansett Bay - Inner Bay Channel	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$8,105,833	261,000	$31	
Little Narragansett Bay - Inner Bay Channel	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$31,971,310	261,000	$122	
Little Narragansett Bay - Inner Bay Channel	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$29,291,377	261,000	$112	
Little Narragansett Bay - Inner Bay Channel	UOW-CSDS	100	100	50	72.31	322.31	No	Yes	$9,556,110	261,000	$37	
Little Narragansett Bay - Inner Bay Channel	COW-E_bse	100	100	0	85.57	285.57	Yes	Yes	$25,410,382	261,000	$97	
Little Narragansett Bay - Inner Bay Channel	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$25,410,382	261,000	$97	
Little Narragansett Bay - Inner Bay Channel	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$34,056,743	261,000	$130	
Little Narragansett Bay - Inner Bay Channel	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$17,094,736	261,000	$65	
Little Narragansett Bay - Inner Bay Channel	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$34,056,743	261,000	$130	
Little Narragansett Bay - Inner Bay Channel	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$34,056,743	261,000	$130	
Little Narragansett Bay - Inner Bay Channel	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$14,420,377	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$25,410,382	261,000	$97	
Little Narragansett Bay - Inner Bay Channel	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$40,539,986	261,000	$155	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Little Narragansett Bay - Inner Bay Channel	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-O_bse	100	68	0	69.95	237.96	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$34,056,743	261,000	$130	
Little Narragansett Bay - Inner Bay Channel	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$34,056,743	261,000	$130	
Little Narragansett Bay - Inner Bay Channel	Habitat-427	50	73	0	59.77	182.95	Yes	Yes	$34,056,743	261,000	$130	
Little Narragansett Bay - Inner Bay Channel	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-382	-1	0	0	0	-1.00	Yes	Yes	$5,727,738	261,000	$22	
Little Narragansett Bay - Inner Bay Channel	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-480	-1	0	0	0	-1.00	Yes	Yes	$5,727,738	261,000	$22	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Little Narragansett Bay - Inner Bay Channel	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-381	-1	0	0	0	-1.00	Yes	Yes	$5,727,738	261,000	$22	
Little Narragansett Bay - Inner Bay Channel	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Little Narragansett Bay - Inner Bay Channel	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$17,094,736	261,000	$65	
Little Narragansett Bay - Inner Bay Channel	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$12,070,681	261,000	$46	
Little Narragansett Bay - Inner Bay Channel	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$12,070,681	261,000	$46	
Little Narragansett Bay - Inner Bay Channel	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$5,727,738	261,000	$22	
Little Narragansett Bay - Inner Bay Channel	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$9,101,551	261,000	$35	
Little Narragansett Bay - Inner Bay Channel	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$14,405,987	261,000	$55	
Little Narragansett Bay - Inner Bay Channel	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$16,191,169	261,000	$62	
Little Narragansett Bay - Inner Bay Channel	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$29,291,377	261,000	$112	
Little Narragansett Bay - Inner Bay Channel	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$31,971,310	261,000	$122	
Little Narragansett Bay - Inner Bay Channel	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	Berm-620	-1	0	0	0	-1.00	No	Yes	$4,860,401	261,000	$19	
Little Narragansett Bay - Inner Bay Channel	Beach-620	-1	0	0	0	-1.00	No	Yes	$4,860,401	261,000	$19	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Little Narragansett Bay - Inner Bay Channel	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Little Narragansett Bay - Inner Bay Channel	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$40,539,986	261,000	$155	
Watch Hill Cove	Berm-381/382	100	100	100	82.47	382.47	Yes	Yes	$836,018	12,200	$69	
Watch Hill Cove	Beach-620	100	100	100	75	375.00	No	Yes	$966,187	12,200	$79	
Watch Hill Cove	Berm-620	100	100	100	75	375.00	No	Yes	$966,187	12,200	$79	
Watch Hill Cove	Beach-381	100	100	100	72.66	372.66	Yes	Yes	$836,018	12,200	$69	
Watch Hill Cove	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$1,009,378	12,200	$83	
Watch Hill Cove	Beach-382	100	100	100	72.27	372.27	Yes	Yes	$836,018	12,200	$69	
Watch Hill Cove	IslandCDF-Q_cap	100	100	100	71.51	371.51	Yes	Yes	$2,153,354	12,200	$177	
Watch Hill Cove	IslandCDF-R_cap	100	100	100	67.53	367.53	Yes	Yes	$2,153,354	12,200	$177	
Watch Hill Cove	Berm-384	100	100	50	84.56	334.56	Yes	Yes	$1,237,667	12,200	$101	
Watch Hill Cove	Berm-368	100	100	50	81.61	331.61	Yes	Yes	$1,388,985	12,200	$114	
Watch Hill Cove	UOW-CSDS	100	100	50	72.31	322.31	No	Yes	$1,261,224	12,200	$103	
Watch Hill Cove	Berm-441	100	100	0	87.76	287.76	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-320	100	100	0	87.24	287.24	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$1,901,559	12,200	$156	
Watch Hill Cove	CAD-M_cap	100	100	0	85.16	285.16	Yes	Yes	$1,573,132	12,200	$129	
Watch Hill Cove	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Berm-453	100	100	0	84.53	284.53	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Berm-455/82	100	100	0	83.93	283.93	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-337	100	100	0	83.93	283.93	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-367	100	100	0	83.31	283.31	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-454B	100	100	0	83.23	283.23	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-433	100	100	0	82.92	282.92	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Berm-364b/364c	100	100	0	82.6	282.60	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-449	100	100	0	82.4	282.40	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-467	100	100	0	82.19	282.19	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-434	100	100	0	81.35	281.35	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$2,212,371	12,200	$181	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Watch Hill Cove	Berm-456	100	100	0	80.39	280.39	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-447	100	100	0	80.1	280.10	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-440	100	100	0	79.87	279.87	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-438	100	98	0	81.67	279.41	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$1,901,558	12,200	$156	
Watch Hill Cove	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$1,657,812	12,200	$136	
Watch Hill Cove	Berm-Grove Beach	100	100	0	75	275.00	No	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	IslandCDF-N_cap	100	100	0	73.28	273.28	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	IslandCDF-P_cap	100	100	0	72.76	272.76	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	ShoreCDF-I_cap	100	100	0	71.25	271.25	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	IslandCDF-L_cap	100	100	0	70.94	270.94	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	ShoreCDF-D_cap	100	100	0	70.36	270.36	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	ShoreCDF-O_cap	100	100	0	69.95	269.95	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	ShoreCDF-K_cap	100	100	0	67.68	267.68	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	ShoreCDF-J_cap	100	100	0	66.72	266.72	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	Beach-480	100	37	50	72.89	259.78	Yes	Yes	$1,237,667	12,200	$101	
Watch Hill Cove	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	Berm-457	100	67	0	86.95	254.07	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Berm-451	100	63	0	82.29	245.04	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-329	100	100	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Beach-343	100	13	-1	73.83	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,901,559	12,200	$156	
Watch Hill Cove	Beach-433	100	100	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-333	100	20	-1	74.53	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Beach-457	100	47	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-121	100	100	-1	73.2	-1.00	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$2,212,371	12,200	$181	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Watch Hill Cove	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Beach-348	100	19	-1	73.83	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-364	100	100	-1	73.83	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-367	100	100	-1	73.59	-1.00	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-451	100	6	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-337	100	38	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-444	100	58	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$1,814,208	12,200	$149	
Watch Hill Cove	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-434	100	70	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$1,388,985	12,200	$114	
Watch Hill Cove	Beach-79	100	100	-1	73.2	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-67	100	39	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$1,388,985	12,200	$114	
Watch Hill Cove	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-327	100	100	-1	74.53	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$1,573,132	12,200	$129	
Watch Hill Cove	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$1,814,208	12,200	$149	
Watch Hill Cove	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-459	100	58	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$1,796,281	12,200	$147	
Watch Hill Cove	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$1,814,208	12,200	$149	
Watch Hill Cove	Beach-339	100	70	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-438	100	30	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Watch Hill Cove	Beach-474	100	1	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-330	100	100	-1	74.53	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-344	100	7	-1	74.53	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	Beach-68	100	26	-1	73.2	-1.00	Yes	Yes	$2,212,371	12,200	$181	
Watch Hill Cove	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$1,814,208	12,200	$149	
Watch Hill Cove	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$2,153,354	12,200	$177	
Watch Hill Cove	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$1,814,208	12,200	$149	
Watch Hill Cove	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$2,153,354	12,200	$177	
Watch Hill Cove	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$1,814,208	12,200	$149	
Watch Hill Cove	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$2,865,043	12,200	$235	
Watch Hill Cove	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$2,865,043	12,200	$235	
Stonington Harbor	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$794,520	6,600	$120	
Stonington Harbor	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$1,565,669	6,600	$237	
Stonington Harbor	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$1,372,472	6,600	$208	
Stonington Harbor	UOW-CSDS	100	100	50	72.31	322.31	No	Yes	$1,008,558	6,600	$153	
Stonington Harbor	COW-E_bse	100	100	0	85.57	285.57	Yes	Yes	$1,307,605	6,600	$198	
Stonington Harbor	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$1,307,605	6,600	$198	
Stonington Harbor	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$1,479,901	6,600	$224	
Stonington Harbor	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$1,138,907	6,600	$173	
Stonington Harbor	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$1,479,901	6,600	$224	
Stonington Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$1,479,901	6,600	$224	
Stonington Harbor	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$1,307,605	6,600	$198	
Stonington Harbor	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$1,307,605	6,600	$198	
Stonington Harbor	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	ShoreCDF-O_bse	100	100	0	69.95	269.95	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$1,986,855	6,600	$301	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stonington Harbor	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$1,479,901	6,600	$224	
Stonington Harbor	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$1,479,901	6,600	$224	
Stonington Harbor	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$1,479,901	6,600	$224	
Stonington Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$1,143,121	6,600	$173	
Stonington Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-382	-1	0	0	0	-1.00	Yes	Yes	$1,049,205	6,600	$159	
Stonington Harbor	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stonington Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$1,049,205	6,600	$159	
Stonington Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$1,143,121	6,600	$173	
Stonington Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-480	-1	0	0	0	-1.00	Yes	Yes	$755,416	6,600	$114	
Stonington Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Beach-381	-1	0	0	0	-1.00	Yes	Yes	$1,049,205	6,600	$159	
Stonington Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$1,143,121	6,600	$173	
Stonington Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$1,143,121	6,600	$173	
Stonington Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stonington Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$1,138,907	6,600	$173	
Stonington Harbor	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$1,497,003	6,600	$227	
Stonington Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$1,878,349	6,600	$285	
Stonington Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$1,372,472	6,600	$208	
Stonington Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$1,565,669	6,600	$237	
Stonington Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$755,416	6,600	$114	
Stonington Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	Beach-620	-1	0	0	0	-1.00	No	Yes	$853,140	6,600	$129	
Stonington Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$1,986,855	6,600	$301	
Stonington Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$1,878,349	6,600	$285	
Stonington Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$1,986,855	6,600	$301	
Mystic Harbor - Maintenance	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$3,666,932	133,000	$28	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mystic Harbor - Maintenance	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$15,186,111	133,000	$114	
Mystic Harbor - Maintenance	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$15,186,111	133,000	$114	
Mystic Harbor - Maintenance	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$17,310,957	133,000	$130	
Mystic Harbor - Maintenance	UOW-CSDS	100	100	50	72.31	322.31	No	Yes	$5,211,210	133,000	$39	
Mystic Harbor - Maintenance	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$13,817,902	133,000	$104	
Mystic Harbor - Maintenance	COW-E_bse	100	100	0	85.57	285.57	Yes	Yes	$13,817,902	133,000	$104	
Mystic Harbor - Maintenance	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$15,201,688	133,000	$114	
Mystic Harbor - Maintenance	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$9,640,932	133,000	$72	
Mystic Harbor - Maintenance	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$15,201,688	133,000	$114	
Mystic Harbor - Maintenance	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$15,201,688	133,000	$114	
Mystic Harbor - Maintenance	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$13,817,902	133,000	$104	
Mystic Harbor - Maintenance	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$7,825,823	133,000	$59	
Mystic Harbor - Maintenance	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	ShoreCDF-D_bse	100	91	0	70.36	261.55	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	ShoreCDF-K_bse	100	82	0	67.68	250.04	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	ShoreCDF-I_bse	100	74	0	71.25	245.65	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	ShoreCDF-O_bse	100	22	50	69.95	242.45	Yes	Yes	$17,310,957	133,000	$130	
Mystic Harbor - Maintenance	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$15,201,688	133,000	$114	
Mystic Harbor - Maintenance	BF-422/423	50	53	0	62.03	164.66	Yes	Yes	$15,201,688	133,000	$114	
Mystic Harbor - Maintenance	Habitat-427	50	24	0	59.77	133.98	Yes	Yes	$15,201,688	133,000	$114	
Mystic Harbor - Maintenance	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$6,670,476	133,000	$50	
Mystic Harbor - Maintenance	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mystic Harbor - Maintenance	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$8,008,516	133,000	$60	
Mystic Harbor - Maintenance	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$9,640,932	133,000	$72	
Mystic Harbor - Maintenance	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$8,008,516	133,000	$60	
Mystic Harbor - Maintenance	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$8,008,516	133,000	$60	
Mystic Harbor - Maintenance	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$6,670,476	133,000	$50	
Mystic Harbor - Maintenance	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$8,008,516	133,000	$60	
Mystic Harbor - Maintenance	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$8,008,516	133,000	$60	
Mystic Harbor - Maintenance	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$5,095,566	133,000	$38	
Mystic Harbor - Maintenance	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$6,670,476	133,000	$50	
Mystic Harbor - Maintenance	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mystic Harbor - Maintenance	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$8,008,516	133,000	$60	
Mystic Harbor - Maintenance	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-480	-1	0	0	0	-1.00	Yes	Yes	$5,095,566	133,000	$38	
Mystic Harbor - Maintenance	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$8,008,516	133,000	$60	
Mystic Harbor - Maintenance	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$6,670,476	133,000	$50	
Mystic Harbor - Maintenance	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$8,008,516	133,000	$60	
Mystic Harbor - Maintenance	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$8,008,516	133,000	$60	
Mystic Harbor - Maintenance	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$8,008,516	133,000	$60	
Mystic Harbor - Maintenance	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$6,670,476	133,000	$50	
Mystic Harbor - Maintenance	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$8,008,516	133,000	$60	
Mystic Harbor - Maintenance	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-368	-1	0	0	0	-1.00	Yes	Yes	$5,095,566	133,000	$38	
Mystic Harbor - Maintenance	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mystic Harbor - Maintenance	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$8,008,516	133,000	$60	
Mystic Harbor - Maintenance	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$15,186,111	133,000	$114	
Mystic Harbor - Maintenance	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$17,310,957	133,000	$130	
Mystic Harbor - Maintenance	Beach-620	-1	0	0	0	-1.00	No	Yes	$5,095,566	133,000	$38	
Mystic Harbor - Maintenance	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$17,310,957	133,000	$130	
Mystic Harbor - Maintenance	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	Berm-620	-1	0	0	0	-1.00	No	Yes	$5,095,566	133,000	$38	
Mystic Harbor - Maintenance	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$9,056,233	133,000	$68	
Mystic Harbor - Maintenance	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$15,186,111	133,000	$114	
Mystic Harbor - Maintenance	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Maintenance	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$21,479,789	133,000	$162	
Mystic Harbor - Improvement	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$8,313,328	450,000	$18	
Mystic Harbor - Improvement	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$50,020,791	450,000	$111	
Mystic Harbor - Improvement	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$50,020,791	450,000	$111	
Mystic Harbor - Improvement	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$56,511,912	450,000	$126	
Mystic Harbor - Improvement	UOW-CSDS	100	100	50	72.31	322.31	No	Yes	$17,089,519	450,000	$38	
Mystic Harbor - Improvement	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$35,834,016	450,000	$80	
Mystic Harbor - Improvement	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$53,645,445	450,000	$119	
Mystic Harbor - Improvement	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$30,024,757	450,000	$67	
Mystic Harbor - Improvement	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$53,645,445	450,000	$119	
Mystic Harbor - Improvement	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$53,645,445	450,000	$119	
Mystic Harbor - Improvement	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$23,007,601	450,000	$51	
Mystic Harbor - Improvement	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$35,834,016	450,000	$80	
Mystic Harbor - Improvement	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	COW-E_bse	100	59	0	85.57	244.68	Yes	Yes	$35,834,016	450,000	$80	
Mystic Harbor - Improvement	ShoreCDF-O_bse	100	13	50	69.95	233.25	Yes	Yes	$56,511,912	450,000	$126	
Mystic Harbor - Improvement	ShoreCDF-D_bse	100	54	0	70.36	224.26	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	ShoreCDF-K_bse	100	49	0	67.68	216.37	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	ShoreCDF-I_bse	100	44	0	71.25	215.23	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$53,645,445	450,000	$119	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mystic Harbor - Improvement	BF-422/423	50	31	0	62.03	143.14	Yes	Yes	$53,645,445	450,000	$119	
Mystic Harbor - Improvement	Habitat-427	50	14	0	59.77	124.08	Yes	Yes	$53,645,445	450,000	$119	
Mystic Harbor - Improvement	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$14,569,246	450,000	$32	
Mystic Harbor - Improvement	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$14,569,246	450,000	$32	
Mystic Harbor - Improvement	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$14,569,246	450,000	$32	
Mystic Harbor - Improvement	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$14,569,246	450,000	$32	
Mystic Harbor - Improvement	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$14,569,246	450,000	$32	
Mystic Harbor - Improvement	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$14,569,246	450,000	$32	
Mystic Harbor - Improvement	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mystic Harbor - Improvement	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$14,569,246	450,000	$32	
Mystic Harbor - Improvement	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$14,975,884	450,000	$33	
Mystic Harbor - Improvement	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$14,975,884	450,000	$33	
Mystic Harbor - Improvement	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$14,569,246	450,000	$32	
Mystic Harbor - Improvement	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-368	-1	0	0	0	-1.00	Yes	Yes	$12,114,484	450,000	$27	
Mystic Harbor - Improvement	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$14,569,246	450,000	$32	
Mystic Harbor - Improvement	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$14,975,884	450,000	$33	
Mystic Harbor - Improvement	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$14,569,246	450,000	$32	
Mystic Harbor - Improvement	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$14,975,884	450,000	$33	
Mystic Harbor - Improvement	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mystic Harbor - Improvement	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$14,569,246	450,000	$32	
Mystic Harbor - Improvement	Beach-480	-1	0	0	0	-1.00	Yes	Yes	$12,114,484	450,000	$27	
Mystic Harbor - Improvement	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$12,114,484	450,000	$27	
Mystic Harbor - Improvement	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$14,569,246	450,000	$32	
Mystic Harbor - Improvement	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$30,024,757	450,000	$67	
Mystic Harbor - Improvement	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$14,975,884	450,000	$33	
Mystic Harbor - Improvement	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$56,511,912	450,000	$126	
Mystic Harbor - Improvement	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$21,424,569	450,000	$48	
Mystic Harbor - Improvement	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$50,020,791	450,000	$111	
Mystic Harbor - Improvement	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$56,511,912	450,000	$126	
Mystic Harbor - Improvement	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$50,020,791	450,000	$111	
Mystic Harbor - Improvement	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	Beach-620	-1	0	0	0	-1.00	No	Yes	$12,114,484	450,000	$27	
Mystic Harbor - Improvement	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$65,071,306	450,000	$145	
Mystic Harbor - Improvement	Berm-620	-1	0	0	0	-1.00	No	Yes	$12,114,484	450,000	$27	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$10,252,068	785,000	$13	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$21,415,680	785,000	$27	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$85,440,546	785,000	$109	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$69,115,954	785,000	$88	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$97,164,724	785,000	$124	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$99,364,029	785,000	$127	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$99,364,029	785,000	$127	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$50,705,379	785,000	$65	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$37,949,407	785,000	$48	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	LFCap-61	100	89	0	77.41	266.55	Yes	Yes	$99,364,029	785,000	$127	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	COW-E_cap	100	62	0	85.57	247.20	Yes	Yes	$50,705,379	785,000	$65	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	CAD-M_bse	100	59	0	85.16	244.51	Yes	Yes	$51,793,545	785,000	$66	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-C_bse	100	71	0	66.9	237.44	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	IslandCDF-B_bse	100	63	0	68.28	231.72	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-O_bse	100	8	50	69.95	227.57	Yes	Yes	$97,164,724	785,000	$124	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	COW-E_bse	100	34	0	85.57	219.44	Yes	Yes	$50,705,379	785,000	$65	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Habitat-429	50	96	0	61.33	206.83	Yes	Yes	$99,364,029	785,000	$127	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-D_bse	100	31	0	70.36	201.25	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-I_bse	100	25	0	71.25	196.45	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-K_bse	100	28	0	67.68	195.58	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	BF-422/423	50	18	0	62.03	129.86	Yes	Yes	$99,364,029	785,000	$127	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Habitat-427	50	8	0	59.77	117.97	Yes	Yes	$99,364,029	785,000	$127	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	785,000	$20	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	785,000	$20	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	785,000	$20	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	785,000	$16	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$51,793,545	785,000	$66	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-368	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	785,000	$16	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$69,115,954	785,000	$88	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-620	-1	0	0	0	-1.00	No	Yes	$15,744,456	785,000	$20	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$97,164,724	785,000	$124	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Beach-620	-1	0	-1	0	-1.00	No	Yes	$14,612,436	785,000	$19	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$22,809,066	785,000	$29	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$110,797,040	785,000	$141	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$97,164,724	785,000	$124	
New London Harbor - Main Channel and Anchorage, 23-Foot Channel	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$85,440,546	785,000	$109	
New London Harbor - 15-foot Shaws Cove	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$3,831,440	30,900	$124	
New London Harbor - 15-foot Shaws Cove	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$3,459,707	30,900	$112	
New London Harbor - 15-foot Shaws Cove	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$4,473,041	30,900	$145	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-O_bse	100	100	50	69.95	319.95	Yes	Yes	$4,473,041	30,900	$145	
New London Harbor - 15-foot Shaws Cove	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$2,904,131	30,900	$94	
New London Harbor - 15-foot Shaws Cove	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New London Harbor - 15-foot Shaws Cove	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-368	-1	0	0	0	-1.00	Yes	Yes	$1,726,528	30,900	$56	
New London Harbor - 15-foot Shaws Cove	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$2,092,750	30,900	$68	
New London Harbor - 15-foot Shaws Cove	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$2,904,131	30,900	$94	
New London Harbor - 15-foot Shaws Cove	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$4,423,425	30,900	$143	
New London Harbor - 15-foot Shaws Cove	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$3,543,728	30,900	$115	
New London Harbor - 15-foot Shaws Cove	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$1,726,528	30,900	$56	
New London Harbor - 15-foot Shaws Cove	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New London Harbor - 15-foot Shaws Cove	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$3,543,728	30,900	$115	
New London Harbor - 15-foot Shaws Cove	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$3,543,728	30,900	$115	
New London Harbor - 15-foot Shaws Cove	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$2,092,750	30,900	$68	
New London Harbor - 15-foot Shaws Cove	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$2,092,750	30,900	$68	
New London Harbor - 15-foot Shaws Cove	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	COW-E_cap	-1	0	0	0	-1.00	Yes	Yes	$4,423,425	30,900	$143	
New London Harbor - 15-foot Shaws Cove	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New London Harbor - 15-foot Shaws Cove	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$3,543,728	30,900	$115	
New London Harbor - 15-foot Shaws Cove	Berm-620	-1	0	0	0	-1.00	No	Yes	$2,092,750	30,900	$68	
New London Harbor - 15-foot Shaws Cove	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$3,078,326	30,900	$100	
New London Harbor - 15-foot Shaws Cove	UOW-CSDS	-1	0	0	0	-1.00	No	Yes	$1,468,938	30,900	$48	
New London Harbor - 15-foot Shaws Cove	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$3,459,707	30,900	$112	
New London Harbor - 15-foot Shaws Cove	UOW-NLDS	-1	0	0	0	-1.00	No	Yes	$1,281,272	30,900	$41	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	UOW-CLDS	-1	0	0	0	-1.00	No	Yes	$2,501,625	30,900	$81	
New London Harbor - 15-foot Shaws Cove	UOW-WLDS	-1	0	0	0	-1.00	No	Yes	$4,423,425	30,900	$143	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$3,543,728	30,900	$115	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$4,473,041	30,900	$145	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$5,401,058	30,900	$175	
New London Harbor - 15-foot Shaws Cove	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$3,543,728	30,900	$115	
New London Harbor - 15-foot Shaws Cove	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$3,831,440	30,900	$124	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$4,473,041	30,900	$145	
New London Harbor - 15-foot Shaws Cove	Beach-620	-1	0	-1	0	-1.00	No	Yes	$2,622,537	30,900	$85	
New London Harbor - 15-foot Shaws Cove	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$5,401,058	30,900	$175	
Thames River - Lower Channels, Navy Base to Harbor	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$22,013,312	832,000	$26	
Thames River - Lower Channels, Navy Base to Harbor	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$14,447,154	832,000	$17	
Thames River - Lower Channels, Navy Base to Harbor	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$89,166,509	832,000	$107	
Thames River - Lower Channels, Navy Base to Harbor	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$89,166,509	832,000	$107	
Thames River - Lower Channels, Navy Base to Harbor	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$101,914,771	832,000	$122	
Thames River - Lower Channels, Navy Base to Harbor	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$103,870,585	832,000	$125	
Thames River - Lower Channels, Navy Base to Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$103,870,585	832,000	$125	
Thames River - Lower Channels, Navy Base to Harbor	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$52,789,631	832,000	$63	
Thames River - Lower Channels, Navy Base to Harbor	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$38,732,586	832,000	$47	
Thames River - Lower Channels, Navy Base to Harbor	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$115,928,753	832,000	$139	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	LFCap-61	100	84	0	77.41	261.54	Yes	Yes	$103,870,585	832,000	$125	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	COW-E_cap	100	58	0	85.57	243.74	Yes	Yes	$52,789,631	832,000	$63	
Thames River - Lower Channels, Navy Base to Harbor	CAD-M_bse	100	56	0	85.16	241.18	Yes	Yes	$54,477,167	832,000	$65	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-C_bse	100	67	0	66.9	233.48	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	IslandCDF-B_bse	100	60	0	68.28	228.16	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-O_bse	100	7	50	69.95	227.14	Yes	Yes	$101,914,771	832,000	$122	
Thames River - Lower Channels, Navy Base to Harbor	COW-E_bse	100	32	0	85.57	217.54	Yes	Yes	$52,789,631	832,000	$63	
Thames River - Lower Channels, Navy Base to Harbor	Habitat-429	50	90	0	61.33	201.47	Yes	Yes	$103,870,585	832,000	$125	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-D_bse	100	29	0	70.36	199.51	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-I_bse	100	24	0	71.25	195.04	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-K_bse	100	26	0	67.68	194.01	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	BF-422/423	50	17	0	62.03	128.86	Yes	Yes	$103,870,585	832,000	$125	
Thames River - Lower Channels, Navy Base to Harbor	Habitat-427	50	8	0	59.77	117.51	Yes	Yes	$103,870,585	832,000	$125	
Thames River - Lower Channels, Navy Base to Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$54,477,167	832,000	$65	
Thames River - Lower Channels, Navy Base to Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	832,000	$18	
Thames River - Lower Channels, Navy Base to Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	832,000	$18	
Thames River - Lower Channels, Navy Base to Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	832,000	$18	
Thames River - Lower Channels, Navy Base to Harbor	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	832,000	$19	
Thames River - Lower Channels, Navy Base to Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Thames River - Lower Channels, Navy Base to Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	832,000	$19	
Thames River - Lower Channels, Navy Base to Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	832,000	$18	
Thames River - Lower Channels, Navy Base to Harbor	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	832,000	$18	
Thames River - Lower Channels, Navy Base to Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Thames River - Lower Channels, Navy Base to Harbor	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	832,000	$18	
Thames River - Lower Channels, Navy Base to Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	832,000	$18	
Thames River - Lower Channels, Navy Base to Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	832,000	$16	
Thames River - Lower Channels, Navy Base to Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	832,000	$18	
Thames River - Lower Channels, Navy Base to Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	832,000	$18	
Thames River - Lower Channels, Navy Base to Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-368	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	832,000	$16	
Thames River - Lower Channels, Navy Base to Harbor	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	832,000	$18	
Thames River - Lower Channels, Navy Base to Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	832,000	$19	
Thames River - Lower Channels, Navy Base to Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$22,809,066	832,000	$27	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$14,612,436	832,000	$18	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$101,914,771	832,000	$122	
Thames River - Lower Channels, Navy Base to Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$89,166,509	832,000	$107	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$115,928,753	832,000	$139	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	Beach-620	-1	0	-1	0	-1.00	No	Yes	$14,612,436	832,000	$18	
Thames River - Lower Channels, Navy Base to Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Lower Channels, Navy Base to Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$89,166,509	832,000	$107	
Thames River - Lower Channels, Navy Base to Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$101,914,771	832,000	$122	
Thames River - Lower Channels, Navy Base to Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$115,928,753	832,000	$139	
Thames River - Upper Channel, to Norwich	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$66,664,924	2,902,500	$23	
Thames River - Upper Channel, to Norwich	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$290,805,372	2,902,500	$100	
Thames River - Upper Channel, to Norwich	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$290,805,372	2,902,500	$100	
Thames River - Upper Channel, to Norwich	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$171,555,421	2,902,500	$59	
Thames River - Upper Channel, to Norwich	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$171,555,421	2,902,500	$59	
Thames River - Upper Channel, to Norwich	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$118,054,717	2,902,500	$41	
Thames River - Upper Channel, to Norwich	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	IslandCDF-P_bse	100	47	50	72.76	270.17	Yes	Yes	$350,833,851	2,902,500	$121	
Thames River - Upper Channel, to Norwich	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	ShoreCDF-A_bse	100	96	0	67.58	263.63	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	ShoreCDF-O_bse	100	2	50	69.95	222.01	Yes	Yes	$350,833,851	2,902,500	$121	
Thames River - Upper Channel, to Norwich	LFPlace-59	100	34	0	85.27	219.72	Yes	Yes	$346,142,068	2,902,500	$119	
Thames River - Upper Channel, to Norwich	LFCap-251	100	41	0	77.41	218.75	Yes	Yes	$346,142,068	2,902,500	$119	
Thames River - Upper Channel, to Norwich	COW-E_cap	100	17	0	85.57	202.25	Yes	Yes	$171,555,421	2,902,500	$59	
Thames River - Upper Channel, to Norwich	LFCap-61	100	24	0	77.41	201.53	Yes	Yes	$346,142,068	2,902,500	$119	
Thames River - Upper Channel, to Norwich	CAD-M_bse	100	16	0	85.16	201.22	Yes	Yes	$184,106,959	2,902,500	$63	
Thames River - Upper Channel, to Norwich	COW-E_bse	100	9	0	85.57	194.73	Yes	Yes	$171,555,421	2,902,500	$59	
Thames River - Upper Channel, to Norwich	ShoreCDF-C_bse	100	19	0	66.9	185.99	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	IslandCDF-B_bse	100	17	0	68.28	185.44	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	ShoreCDF-D_bse	100	8	0	70.36	178.72	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	ShoreCDF-I_bse	100	7	0	71.25	178.07	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	ShoreCDF-K_bse	100	8	0	67.68	175.23	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	Habitat-429	50	26	0	61.33	137.17	Yes	Yes	$346,142,068	2,902,500	$119	
Thames River - Upper Channel, to Norwich	BF-422/423	50	5	0	62.03	116.85	Yes	Yes	$346,142,068	2,902,500	$119	
Thames River - Upper Channel, to Norwich	Habitat-427	50	2	0	59.77	111.99	Yes	Yes	$346,142,068	2,902,500	$119	
Thames River - Upper Channel, to Norwich	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	2,902,500	$5	
Thames River - Upper Channel, to Norwich	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	2,902,500	$5	
Thames River - Upper Channel, to Norwich	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Thames River - Upper Channel, to Norwich	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	2,902,500	$5	
Thames River - Upper Channel, to Norwich	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	2,902,500	$5	
Thames River - Upper Channel, to Norwich	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	2,902,500	$5	
Thames River - Upper Channel, to Norwich	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	2,902,500	$5	
Thames River - Upper Channel, to Norwich	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	2,902,500	$5	
Thames River - Upper Channel, to Norwich	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	2,902,500	$5	
Thames River - Upper Channel, to Norwich	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	2,902,500	$5	
Thames River - Upper Channel, to Norwich	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	2,902,500	$5	
Thames River - Upper Channel, to Norwich	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	2,902,500	$5	
Thames River - Upper Channel, to Norwich	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Thames River - Upper Channel, to Norwich	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	2,902,500	$5	
Thames River - Upper Channel, to Norwich	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$184,106,959	2,902,500	$63	
Thames River - Upper Channel, to Norwich	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Thames River - Upper Channel, to Norwich	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$350,833,851	2,902,500	$121	
Thames River - Upper Channel, to Norwich	Beach-620	-1	0	-1	0	-1.00	No	Yes	$14,612,436	2,902,500	$5	
Thames River - Upper Channel, to Norwich	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$22,809,066	2,902,500	$8	
Thames River - Upper Channel, to Norwich	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$290,805,372	2,902,500	$100	
Thames River - Upper Channel, to Norwich	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$350,833,851	2,902,500	$121	
Thames River - Upper Channel, to Norwich	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$290,805,372	2,902,500	$100	
Thames River - Upper Channel, to Norwich	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$386,663,205	2,902,500	$133	
Thames River - Upper Channel, to Norwich	Berm-620	-1	0	0	0	-1.00	No	Yes	$14,612,436	2,902,500	$5	
U.S. Navy New London - Maintenance - Suitable	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$2,321,591	75,000	$31	
U.S. Navy New London - Maintenance - Suitable	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$2,872,781	75,000	$38	
U.S. Navy New London - Maintenance - Suitable	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$8,788,362	75,000	$117	
U.S. Navy New London - Maintenance - Suitable	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$8,788,362	75,000	$117	
U.S. Navy New London - Maintenance - Suitable	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$10,047,948	75,000	$134	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-O_bse	100	80	50	69.95	299.75	Yes	Yes	$10,047,948	75,000	$134	
U.S. Navy New London - Maintenance - Suitable	COW-E_bse	100	100	0	85.57	285.57	Yes	Yes	$8,323,121	75,000	$111	
U.S. Navy New London - Maintenance - Suitable	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$8,323,121	75,000	$111	
U.S. Navy New London - Maintenance - Suitable	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$7,780,069	75,000	$104	
U.S. Navy New London - Maintenance - Suitable	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$6,071,966	75,000	$81	
U.S. Navy New London - Maintenance - Suitable	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$7,780,069	75,000	$104	
U.S. Navy New London - Maintenance - Suitable	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$7,780,069	75,000	$104	
U.S. Navy New London - Maintenance - Suitable	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$8,323,121	75,000	$111	
U.S. Navy New London - Maintenance - Suitable	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$4,781,597	75,000	$64	
U.S. Navy New London - Maintenance - Suitable	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$12,107,586	75,000	$161	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Navy New London - Maintenance - Suitable	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$4,990,926	75,000	$67	
U.S. Navy New London - Maintenance - Suitable	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$4,990,926	75,000	$67	
U.S. Navy New London - Maintenance - Suitable	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$4,990,926	75,000	$67	
U.S. Navy New London - Maintenance - Suitable	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$4,083,600	75,000	$54	
U.S. Navy New London - Maintenance - Suitable	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Navy New London - Maintenance - Suitable	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$4,990,926	75,000	$67	
U.S. Navy New London - Maintenance - Suitable	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$4,083,600	75,000	$54	
U.S. Navy New London - Maintenance - Suitable	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$4,990,926	75,000	$67	
U.S. Navy New London - Maintenance - Suitable	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$4,990,926	75,000	$67	
U.S. Navy New London - Maintenance - Suitable	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$4,990,926	75,000	$67	
U.S. Navy New London - Maintenance - Suitable	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$4,990,926	75,000	$67	
U.S. Navy New London - Maintenance - Suitable	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$4,990,926	75,000	$67	
U.S. Navy New London - Maintenance - Suitable	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$6,071,966	75,000	$81	
U.S. Navy New London - Maintenance - Suitable	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$7,780,069	75,000	$104	
U.S. Navy New London - Maintenance - Suitable	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$7,780,069	75,000	$104	
U.S. Navy New London - Maintenance - Suitable	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Navy New London - Maintenance - Suitable	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$4,083,600	75,000	$54	
U.S. Navy New London - Maintenance - Suitable	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$7,780,069	75,000	$104	
U.S. Navy New London - Maintenance - Suitable	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$4,990,926	75,000	$67	
U.S. Navy New London - Maintenance - Suitable	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$4,990,926	75,000	$67	
U.S. Navy New London - Maintenance - Suitable	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$4,083,600	75,000	$54	
U.S. Navy New London - Maintenance - Suitable	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$10,047,948	75,000	$134	
U.S. Navy New London - Maintenance - Suitable	Berm-620	-1	0	0	0	-1.00	No	Yes	$4,990,926	75,000	$67	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$8,788,362	75,000	$117	
U.S. Navy New London - Maintenance - Suitable	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$8,788,362	75,000	$117	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$10,047,948	75,000	$134	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	Beach-620	-1	0	-1	0	-1.00	No	Yes	$4,990,926	75,000	$67	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$12,107,586	75,000	$161	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Navy New London - Maintenance - Suitable	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$5,683,362	75,000	$76	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Suitable	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$12,107,586	75,000	$161	
U.S. Navy New London - Maintenance - Unsuitable	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$6,042,492	50,000	$121	
U.S. Navy New London - Maintenance - Unsuitable	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$6,042,492	50,000	$121	
U.S. Navy New London - Maintenance - Unsuitable	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$6,933,858	50,000	$139	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-O_bse	100	100	50	69.95	319.95	Yes	Yes	$6,933,858	50,000	$139	
U.S. Navy New London - Maintenance - Unsuitable	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$4,135,260	50,000	$83	
U.S. Navy New London - Maintenance - Unsuitable	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$3,643,037	50,000	$73	
U.S. Navy New London - Maintenance - Unsuitable	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$6,007,600	50,000	$120	
U.S. Navy New London - Maintenance - Unsuitable	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$2,972,717	50,000	$59	
U.S. Navy New London - Maintenance - Unsuitable	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$2,972,717	50,000	$59	
U.S. Navy New London - Maintenance - Unsuitable	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$3,643,037	50,000	$73	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Navy New London - Maintenance - Unsuitable	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$3,643,037	50,000	$73	
U.S. Navy New London - Maintenance - Unsuitable	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$2,972,717	50,000	$59	
U.S. Navy New London - Maintenance - Unsuitable	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$3,643,037	50,000	$73	
U.S. Navy New London - Maintenance - Unsuitable	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$4,135,260	50,000	$83	
U.S. Navy New London - Maintenance - Unsuitable	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$3,643,037	50,000	$73	
U.S. Navy New London - Maintenance - Unsuitable	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$5,517,467	50,000	$110	
U.S. Navy New London - Maintenance - Unsuitable	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$3,643,037	50,000	$73	
U.S. Navy New London - Maintenance - Unsuitable	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$3,643,037	50,000	$73	
U.S. Navy New London - Maintenance - Unsuitable	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$3,643,037	50,000	$73	
U.S. Navy New London - Maintenance - Unsuitable	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$3,643,037	50,000	$73	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Navy New London - Maintenance - Unsuitable	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	COW-E_cap	-1	0	0	0	-1.00	Yes	Yes	$6,007,600	50,000	$120	
U.S. Navy New London - Maintenance - Unsuitable	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$5,517,467	50,000	$110	
U.S. Navy New London - Maintenance - Unsuitable	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$3,643,037	50,000	$73	
U.S. Navy New London - Maintenance - Unsuitable	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$2,972,717	50,000	$59	
U.S. Navy New London - Maintenance - Unsuitable	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$3,643,037	50,000	$73	
U.S. Navy New London - Maintenance - Unsuitable	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$5,517,467	50,000	$110	
U.S. Navy New London - Maintenance - Unsuitable	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$8,356,236	50,000	$167	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Navy New London - Maintenance - Unsuitable	Beach-620	-1	0	-1	0	-1.00	No	Yes	$3,643,037	50,000	$73	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$6,933,858	50,000	$139	
U.S. Navy New London - Maintenance - Unsuitable	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$5,517,467	50,000	$110	
U.S. Navy New London - Maintenance - Unsuitable	UOW-NLDS	-1	0	0	0	-1.00	No	Yes	$1,769,992	50,000	$35	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	Berm-620	-1	0	0	0	-1.00	No	Yes	$3,643,037	50,000	$73	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	UOW-CSDS	-1	0	0	0	-1.00	No	Yes	$2,183,242	50,000	$44	
U.S. Navy New London - Maintenance - Unsuitable	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$4,237,091	50,000	$85	
U.S. Navy New London - Maintenance - Unsuitable	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	UOW-CLDS	-1	0	0	0	-1.00	No	Yes	$3,504,616	50,000	$70	
U.S. Navy New London - Maintenance - Unsuitable	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$6,042,492	50,000	$121	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	UOW-WLDS	-1	0	0	0	-1.00	No	Yes	$6,007,600	50,000	$120	
U.S. Navy New London - Maintenance - Unsuitable	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$5,517,467	50,000	$110	
U.S. Navy New London - Maintenance - Unsuitable	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$6,042,492	50,000	$121	
U.S. Navy New London - Maintenance - Unsuitable	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$5,517,467	50,000	$110	
U.S. Navy New London - Maintenance - Unsuitable	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$8,356,236	50,000	$167	
U.S. Navy New London - Maintenance - Unsuitable	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$6,933,858	50,000	$139	
U.S. Navy New London - Improvement	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$4,625,080	175,000	$26	
U.S. Navy New London - Improvement	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$5,618,305	175,000	$32	
U.S. Navy New London - Improvement	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$19,816,447	175,000	$113	
U.S. Navy New London - Improvement	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$19,816,447	175,000	$113	
U.S. Navy New London - Improvement	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$22,563,733	175,000	$129	
U.S. Navy New London - Improvement	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$17,761,528	175,000	$101	
U.S. Navy New London - Improvement	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$21,560,909	175,000	$123	
U.S. Navy New London - Improvement	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$12,046,514	175,000	$69	
U.S. Navy New London - Improvement	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$21,560,909	175,000	$123	
U.S. Navy New London - Improvement	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$21,560,909	175,000	$123	
U.S. Navy New London - Improvement	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$17,761,528	175,000	$101	
U.S. Navy New London - Improvement	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$10,013,689	175,000	$57	
U.S. Navy New London - Improvement	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	COW-E_bse	100	76	0	85.57	261.57	Yes	Yes	$17,761,528	175,000	$101	
U.S. Navy New London - Improvement	Habitat-429	100	100	0	61.33	261.33	Yes	Yes	$21,560,909	175,000	$123	
U.S. Navy New London - Improvement	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$27,809,386	175,000	$159	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Navy New London - Improvement	ShoreCDF-D_bse	100	69	0	70.36	239.67	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	ShoreCDF-O_bse	100	17	50	69.95	237.05	Yes	Yes	$22,563,733	175,000	$129	
U.S. Navy New London - Improvement	ShoreCDF-K_bse	100	63	0	67.68	230.28	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	ShoreCDF-I_bse	100	57	0	71.25	227.79	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	BF-422/423	100	40	0	62.03	202.03	Yes	Yes	$21,560,909	175,000	$123	
U.S. Navy New London - Improvement	Habitat-427	100	18	0	59.77	178.17	Yes	Yes	$21,560,909	175,000	$123	
U.S. Navy New London - Improvement	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$10,301,633	175,000	$59	
U.S. Navy New London - Improvement	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$8,548,313	175,000	$49	
U.S. Navy New London - Improvement	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$10,301,633	175,000	$59	
U.S. Navy New London - Improvement	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$12,046,514	175,000	$69	
U.S. Navy New London - Improvement	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$8,548,313	175,000	$49	
U.S. Navy New London - Improvement	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$8,548,313	175,000	$49	
U.S. Navy New London - Improvement	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$10,301,633	175,000	$59	
U.S. Navy New London - Improvement	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Navy New London - Improvement	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$10,301,633	175,000	$59	
U.S. Navy New London - Improvement	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$10,301,633	175,000	$59	
U.S. Navy New London - Improvement	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$10,301,633	175,000	$59	
U.S. Navy New London - Improvement	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$10,301,633	175,000	$59	
U.S. Navy New London - Improvement	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$10,301,633	175,000	$59	
U.S. Navy New London - Improvement	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$10,301,633	175,000	$59	
U.S. Navy New London - Improvement	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$10,301,633	175,000	$59	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Navy New London - Improvement	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$8,548,313	175,000	$49	
U.S. Navy New London - Improvement	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$10,301,633	175,000	$59	
U.S. Navy New London - Improvement	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$22,563,733	175,000	$129	
U.S. Navy New London - Improvement	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$11,508,152	175,000	$66	
U.S. Navy New London - Improvement	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$22,563,733	175,000	$129	
U.S. Navy New London - Improvement	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$19,816,447	175,000	$113	
U.S. Navy New London - Improvement	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$27,809,386	175,000	$159	
U.S. Navy New London - Improvement	Beach-620	-1	0	-1	0	-1.00	No	Yes	$10,301,633	175,000	$59	
U.S. Navy New London - Improvement	Berm-620	-1	0	0	0	-1.00	No	Yes	$10,301,633	175,000	$59	
U.S. Navy New London - Improvement	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$19,816,447	175,000	$113	
U.S. Navy New London - Improvement	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$27,809,386	175,000	$159	
U.S. Coast Guard Station, New London	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$1,048,418	4,000	$262	
U.S. Coast Guard Station, New London	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$1,048,418	4,000	$262	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard Station, New London	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$1,280,780	4,000	$320	
U.S. Coast Guard Station, New London	UOW-CSDS	50	100	100	72.31	322.31	No	Yes	$769,621	4,000	$192	
U.S. Coast Guard Station, New London	UOW-NLDS	50	100	100	72.31	322.31	No	Yes	$699,477	4,000	$175	
U.S. Coast Guard Station, New London	ShoreCDF-O_bse	100	100	50	69.95	319.95	Yes	Yes	$1,280,780	4,000	$320	
U.S. Coast Guard Station, New London	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$1,202,689	4,000	$301	
U.S. Coast Guard Station, New London	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$937,008	4,000	$234	
U.S. Coast Guard Station, New London	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$1,202,689	4,000	$301	
U.S. Coast Guard Station, New London	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$1,202,689	4,000	$301	
U.S. Coast Guard Station, New London	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	COW-E_cap	50	100	0	85.57	235.57	Yes	Yes	$1,133,653	4,000	$283	
U.S. Coast Guard Station, New London	COW-E_bse	50	100	0	85.57	235.57	Yes	Yes	$1,133,653	4,000	$283	
U.S. Coast Guard Station, New London	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$1,133,653	4,000	$283	
U.S. Coast Guard Station, New London	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$1,133,653	4,000	$283	
U.S. Coast Guard Station, New London	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$1,202,689	4,000	$301	
U.S. Coast Guard Station, New London	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$1,202,689	4,000	$301	
U.S. Coast Guard Station, New London	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$1,202,689	4,000	$301	
U.S. Coast Guard Station, New London	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$1,319,964	4,000	$330	
U.S. Coast Guard Station, New London	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$1,319,964	4,000	$330	
U.S. Coast Guard Station, New London	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$1,319,964	4,000	$330	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard Station, New London	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$1,011,825	4,000	$253	
U.S. Coast Guard Station, New London	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$1,319,964	4,000	$330	
U.S. Coast Guard Station, New London	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$1,011,825	4,000	$253	
U.S. Coast Guard Station, New London	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$1,011,825	4,000	$253	
U.S. Coast Guard Station, New London	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$1,319,964	4,000	$330	
U.S. Coast Guard Station, New London	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$1,319,964	4,000	$330	
U.S. Coast Guard Station, New London	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$1,319,964	4,000	$330	
U.S. Coast Guard Station, New London	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$1,319,964	4,000	$330	
U.S. Coast Guard Station, New London	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard Station, New London	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$1,319,964	4,000	$330	
U.S. Coast Guard Station, New London	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$1,319,964	4,000	$330	
U.S. Coast Guard Station, New London	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$937,008	4,000	$234	
U.S. Coast Guard Station, New London	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-368	-1	0	0	0	-1.00	Yes	Yes	$948,806	4,000	$237	
U.S. Coast Guard Station, New London	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$948,806	4,000	$237	
U.S. Coast Guard Station, New London	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$1,319,964	4,000	$330	
U.S. Coast Guard Station, New London	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$1,319,964	4,000	$330	
U.S. Coast Guard Station, New London	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard Station, New London	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$1,699,740	4,000	$425	
U.S. Coast Guard Station, New London	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$1,280,780	4,000	$320	
U.S. Coast Guard Station, New London	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$1,048,418	4,000	$262	
U.S. Coast Guard Station, New London	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	Berm-620	-1	0	0	0	-1.00	No	Yes	$1,319,964	4,000	$330	
U.S. Coast Guard Station, New London	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$1,280,780	4,000	$320	
U.S. Coast Guard Station, New London	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$1,048,418	4,000	$262	
U.S. Coast Guard Station, New London	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$1,476,023	4,000	$369	
U.S. Coast Guard Station, New London	Beach-620	-1	0	-1	0	-1.00	No	Yes	$1,319,964	4,000	$330	
U.S. Coast Guard Academy	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$6,591,666	55,000	$120	
U.S. Coast Guard Academy	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$6,591,666	55,000	$120	
U.S. Coast Guard Academy	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$7,556,676	55,000	$137	
U.S. Coast Guard Academy	UOW-CSDS	50	100	100	72.31	322.31	No	Yes	$2,321,150	55,000	$42	
U.S. Coast Guard Academy	UOW-NLDS	50	100	100	72.31	322.31	No	Yes	$1,880,312	55,000	$34	
U.S. Coast Guard Academy	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$5,969,987	55,000	$109	
U.S. Coast Guard Academy	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$4,522,601	55,000	$82	
U.S. Coast Guard Academy	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$5,969,987	55,000	$109	
U.S. Coast Guard Academy	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$5,969,987	55,000	$109	
U.S. Coast Guard Academy	ShoreCDF-O_bse	100	54	50	69.95	274.36	Yes	Yes	$7,556,676	55,000	$137	
U.S. Coast Guard Academy	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	COW-E_bse	50	100	0	85.57	235.57	Yes	Yes	$6,470,704	55,000	$118	
U.S. Coast Guard Academy	COW-E_cap	50	100	0	85.57	235.57	Yes	Yes	$6,470,704	55,000	$118	
U.S. Coast Guard Academy	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$3,760,012	55,000	$68	
U.S. Coast Guard Academy	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$6,470,704	55,000	$118	
U.S. Coast Guard Academy	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$5,969,987	55,000	$109	
U.S. Coast Guard Academy	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$5,969,987	55,000	$109	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard Academy	Habitat-427	50	59	0	59.77	168.32	Yes	Yes	$5,969,987	55,000	$109	
U.S. Coast Guard Academy	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$2,545,938	55,000	$46	
U.S. Coast Guard Academy	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$3,912,615	55,000	$71	
U.S. Coast Guard Academy	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$3,912,615	55,000	$71	
U.S. Coast Guard Academy	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$3,912,615	55,000	$71	
U.S. Coast Guard Academy	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$4,522,601	55,000	$82	
U.S. Coast Guard Academy	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$3,194,894	55,000	$58	
U.S. Coast Guard Academy	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-368	-1	0	0	0	-1.00	Yes	Yes	$2,545,938	55,000	$46	
U.S. Coast Guard Academy	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard Academy	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$3,912,615	55,000	$71	
U.S. Coast Guard Academy	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$3,912,615	55,000	$71	
U.S. Coast Guard Academy	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$3,912,615	55,000	$71	
U.S. Coast Guard Academy	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$3,912,615	55,000	$71	
U.S. Coast Guard Academy	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$3,912,615	55,000	$71	
U.S. Coast Guard Academy	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard Academy	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$3,912,615	55,000	$71	
U.S. Coast Guard Academy	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$3,912,615	55,000	$71	
U.S. Coast Guard Academy	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$3,912,615	55,000	$71	
U.S. Coast Guard Academy	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$3,194,894	55,000	$58	
U.S. Coast Guard Academy	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	Beach-620	-1	0	-1	0	-1.00	No	Yes	$3,912,615	55,000	$71	
U.S. Coast Guard Academy	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$7,556,676	55,000	$137	
U.S. Coast Guard Academy	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$7,556,676	55,000	$137	
U.S. Coast Guard Academy	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$4,526,346	55,000	$82	
U.S. Coast Guard Academy	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$6,591,666	55,000	$120	
U.S. Coast Guard Academy	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$9,106,506	55,000	$166	
U.S. Coast Guard Academy	Berm-620	-1	0	0	0	-1.00	No	Yes	$3,912,615	55,000	$71	
U.S. Coast Guard Academy	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$6,591,666	55,000	$120	
U.S. Coast Guard Academy	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$9,106,506	55,000	$166	
Niantic Bay and Harbor - Entrance Channel	IslandCDF-P_cap	100	100	100	72.76	372.76	Yes	Yes	$1,835,739	9,500	$193	
Niantic Bay and Harbor - Entrance Channel	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$912,909	9,500	$96	
Niantic Bay and Harbor - Entrance Channel	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$943,969	9,500	$99	
Niantic Bay and Harbor - Entrance Channel	IslandCDF-Q_cap	100	100	100	71.51	371.51	Yes	Yes	$1,741,757	9,500	$183	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-O_cap	100	100	100	69.95	369.95	Yes	Yes	$1,835,739	9,500	$193	
Niantic Bay and Harbor - Entrance Channel	IslandCDF-R_cap	100	100	100	67.53	367.53	Yes	Yes	$1,741,757	9,500	$183	
Niantic Bay and Harbor - Entrance Channel	Berm-367	100	100	50	83.31	333.31	Yes	Yes	$1,166,371	9,500	$123	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Niantic Bay and Harbor - Entrance Channel	Berm-368	100	100	50	81.61	331.61	Yes	Yes	$1,287,830	9,500	$136	
Niantic Bay and Harbor - Entrance Channel	IslandCDF-N_cap	100	100	50	73.28	323.28	Yes	Yes	$2,066,129	9,500	$217	
Niantic Bay and Harbor - Entrance Channel	Berm-441	100	100	0	87.76	287.76	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-320	100	100	0	87.24	287.24	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$1,526,561	9,500	$161	
Niantic Bay and Harbor - Entrance Channel	CAD-M_cap	100	100	0	85.16	285.16	Yes	Yes	$1,371,238	9,500	$144	
Niantic Bay and Harbor - Entrance Channel	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Berm-453	100	100	0	84.53	284.53	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-455/82	100	100	0	83.93	283.93	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-337	100	100	0	83.93	283.93	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-454B	100	100	0	83.23	283.23	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-433	100	100	0	82.92	282.92	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-364b/364c	100	100	0	82.6	282.60	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Berm-449	100	100	0	82.4	282.40	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-467	100	100	0	82.19	282.19	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-438	100	100	0	81.67	281.67	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-434	100	100	0	81.35	281.35	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-456	100	100	0	80.39	280.39	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-447	100	100	0	80.1	280.10	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-440	100	100	0	79.87	279.87	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-457	100	92	0	86.95	278.80	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$1,526,561	9,500	$161	
Niantic Bay and Harbor - Entrance Channel	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$1,526,561	9,500	$161	
Niantic Bay and Harbor - Entrance Channel	Berm-Grove Beach	100	100	0	75	275.00	No	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Berm-620	100	100	0	75	275.00	No	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-I_cap	100	100	0	71.25	271.25	Yes	Yes	$2,494,148	9,500	$263	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Niantic Bay and Harbor - Entrance Channel	IslandCDF-L_cap	100	100	0	70.94	270.94	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-D_cap	100	100	0	70.36	270.36	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	Berm-451	100	86	0	82.29	268.15	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-K_cap	100	100	0	67.68	267.68	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-J_cap	100	100	0	66.72	266.72	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-433	100	100	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-474	100	1	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-381	100	100	-1	72.66	-1.00	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$1,287,830	9,500	$136	
Niantic Bay and Harbor - Entrance Channel	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Beach-327	100	100	-1	74.53	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-339	100	91	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-333	100	25	-1	74.53	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$1,371,238	9,500	$144	
Niantic Bay and Harbor - Entrance Channel	Beach-459	100	75	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-329	100	100	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$1,598,723	9,500	$168	
Niantic Bay and Harbor - Entrance Channel	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,526,561	9,500	$161	
Niantic Bay and Harbor - Entrance Channel	Beach-444	100	75	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-451	100	7	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-68	100	34	-1	73.2	-1.00	Yes	Yes	$2,085,923	9,500	$220	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Niantic Bay and Harbor - Entrance Channel	Beach-434	100	89	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Beach-457	100	60	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-337	100	48	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-364	100	100	-1	73.83	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-480	100	47	-1	72.89	-1.00	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-438	100	39	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$1,598,723	9,500	$168	
Niantic Bay and Harbor - Entrance Channel	Beach-344	100	9	-1	74.53	-1.00	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-343	100	17	-1	73.83	-1.00	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-348	100	24	-1	73.83	-1.00	Yes	Yes	$1,287,830	9,500	$136	
Niantic Bay and Harbor - Entrance Channel	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$1,598,723	9,500	$168	
Niantic Bay and Harbor - Entrance Channel	Beach-367	100	100	-1	73.59	-1.00	Yes	Yes	$1,287,830	9,500	$136	
Niantic Bay and Harbor - Entrance Channel	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-67	100	51	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-121	100	100	-1	73.2	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-330	100	100	-1	74.53	-1.00	Yes	Yes	$2,085,923	9,500	$220	
Niantic Bay and Harbor - Entrance Channel	Beach-79	100	100	-1	73.2	-1.00	Yes	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$1,598,723	9,500	$168	
Niantic Bay and Harbor - Entrance Channel	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$1,835,739	9,500	$193	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$1,598,723	9,500	$168	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$1,835,739	9,500	$193	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	Beach-620	100	100	-1	75	-1.00	No	Yes	$1,675,517	9,500	$176	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$2,066,129	9,500	$217	
Niantic Bay and Harbor - Entrance Channel	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$1,741,757	9,500	$183	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$1,598,723	9,500	$168	
Niantic Bay and Harbor - Entrance Channel	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$2,494,148	9,500	$263	
Niantic Bay and Harbor - Entrance Channel	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$1,741,757	9,500	$183	
Niantic Bay and Harbor - Upper Channel	IslandCDF-P_bse	100	100	100	72.76	372.76	Yes	Yes	$1,742,611	8,500	$205	
Niantic Bay and Harbor - Upper Channel	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$1,614,418	8,500	$190	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-O_bse	100	100	100	69.95	369.95	Yes	Yes	$1,742,611	8,500	$205	
Niantic Bay and Harbor - Upper Channel	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$1,614,418	8,500	$190	
Niantic Bay and Harbor - Upper Channel	IslandCDF-N_bse	100	100	50	73.28	323.28	Yes	Yes	$1,921,235	8,500	$226	
Niantic Bay and Harbor - Upper Channel	UOW-NLDS	50	100	100	72.31	322.31	No	Yes	$872,085	8,500	$103	
Niantic Bay and Harbor - Upper Channel	UOW-CSDS	50	100	100	72.31	322.31	No	Yes	$901,249	8,500	$106	
Niantic Bay and Harbor - Upper Channel	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$1,557,750	8,500	$183	
Niantic Bay and Harbor - Upper Channel	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$1,291,124	8,500	$152	
Niantic Bay and Harbor - Upper Channel	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$1,557,750	8,500	$183	
Niantic Bay and Harbor - Upper Channel	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$1,557,750	8,500	$183	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	COW-E_cap	50	100	0	85.57	235.57	Yes	Yes	$1,451,059	8,500	$171	
Niantic Bay and Harbor - Upper Channel	COW-E_bse	50	100	0	85.57	235.57	Yes	Yes	$1,451,059	8,500	$171	
Niantic Bay and Harbor - Upper Channel	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$1,451,059	8,500	$171	
Niantic Bay and Harbor - Upper Channel	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$1,451,059	8,500	$171	
Niantic Bay and Harbor - Upper Channel	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$1,557,750	8,500	$183	
Niantic Bay and Harbor - Upper Channel	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$1,557,750	8,500	$183	
Niantic Bay and Harbor - Upper Channel	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$1,557,750	8,500	$183	
Niantic Bay and Harbor - Upper Channel	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Niantic Bay and Harbor - Upper Channel	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$1,237,930	8,500	$146	
Niantic Bay and Harbor - Upper Channel	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Niantic Bay and Harbor - Upper Channel	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$1,291,124	8,500	$152	
Niantic Bay and Harbor - Upper Channel	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$1,237,930	8,500	$146	
Niantic Bay and Harbor - Upper Channel	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$1,125,969	8,500	$132	
Niantic Bay and Harbor - Upper Channel	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Niantic Bay and Harbor - Upper Channel	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$1,237,930	8,500	$146	
Niantic Bay and Harbor - Upper Channel	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$2,014,346	8,500	$237	
Niantic Bay and Harbor - Upper Channel	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$1,237,930	8,500	$146	
Niantic Bay and Harbor - Upper Channel	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$1,614,418	8,500	$190	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	Beach-620	-1	0	-1	0	-1.00	No	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$1,742,611	8,500	$205	
Niantic Bay and Harbor - Upper Channel	Berm-620	-1	0	0	0	-1.00	No	Yes	$1,613,961	8,500	$190	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$1,742,611	8,500	$205	
Niantic Bay and Harbor - Upper Channel	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$1,921,235	8,500	$226	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$2,319,219	8,500	$273	
Niantic Bay and Harbor - Upper Channel	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$1,614,418	8,500	$190	
North Cove	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$35,466,640	291,000	$122	
North Cove	IslandCDF-P_bse	100	100	100	72.76	372.76	Yes	Yes	$32,581,760	291,000	$112	
North Cove	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$6,741,398	291,000	$23	
North Cove	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$8,766,311	291,000	$30	
North Cove	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$35,466,640	291,000	$122	
North Cove	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$35,466,640	291,000	$122	
North Cove	UOW-CLDS	100	100	50	75.43	325.43	No	Yes	$10,751,889	291,000	$37	
North Cove	IslandCDF-L_bse	100	100	50	70.94	320.94	Yes	Yes	$36,980,175	291,000	$127	
North Cove	CAD-M_bse	100	53	50	85.16	288.57	Yes	Yes	$19,147,120	291,000	$66	
North Cove	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$37,166,060	291,000	$128	
North Cove	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$37,166,060	291,000	$128	
North Cove	ShoreCDF-O_bse	100	7	100	69.95	276.81	Yes	Yes	$32,581,760	291,000	$112	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
North Cove	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$27,064,927	291,000	$93	
North Cove	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$44,433,846	291,000	$153	
North Cove	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$44,433,846	291,000	$153	
North Cove	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$44,433,846	291,000	$153	
North Cove	LFCap-61	100	80	0	77.41	257.62	Yes	Yes	$37,166,060	291,000	$128	
North Cove	COW-E_cap	100	55	0	85.57	241.03	Yes	Yes	$15,783,428	291,000	$54	
North Cove	ShoreCDF-C_bse	100	63	0	66.9	230.38	Yes	Yes	$44,433,846	291,000	$153	
North Cove	IslandCDF-B_bse	100	57	0	68.28	225.36	Yes	Yes	$44,433,846	291,000	$153	
North Cove	COW-E_bse	100	30	0	85.57	216.05	Yes	Yes	$15,783,428	291,000	$54	
North Cove	ShoreCDF-D_bse	100	28	0	70.36	198.16	Yes	Yes	$44,433,846	291,000	$153	
North Cove	Habitat-429	50	86	0	61.33	197.27	Yes	Yes	$37,166,060	291,000	$128	
North Cove	ShoreCDF-I_bse	100	23	0	71.25	193.93	Yes	Yes	$44,433,846	291,000	$153	
North Cove	ShoreCDF-K_bse	100	25	0	67.68	192.78	Yes	Yes	$44,433,846	291,000	$153	
North Cove	BF-422/423	50	16	0	62.03	128.07	Yes	Yes	$37,166,060	291,000	$128	
North Cove	Habitat-427	50	7	0	59.77	117.15	Yes	Yes	$37,166,060	291,000	$128	
North Cove	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$12,531,824	291,000	$43	
North Cove	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$12,531,824	291,000	$43	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
North Cove	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$19,147,120	291,000	$66	
North Cove	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-348	-1	0	0	0	-1.00	Yes	Yes	$9,579,794	291,000	$33	
North Cove	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
North Cove	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$12,531,824	291,000	$43	
North Cove	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$12,531,824	291,000	$43	
North Cove	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$12,531,824	291,000	$43	
North Cove	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$17,021,867	291,000	$58	
North Cove	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$14,431,901	291,000	$50	
North Cove	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$44,433,846	291,000	$153	
North Cove	Beach-344	-1	0	0	0	-1.00	Yes	Yes	$9,579,794	291,000	$33	
North Cove	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$44,433,846	291,000	$153	
North Cove	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$12,531,824	291,000	$43	
North Cove	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$35,466,640	291,000	$122	
North Cove	Berm-620	-1	0	0	0	-1.00	No	Yes	$17,021,867	291,000	$58	
North Cove	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$44,433,846	291,000	$153	
North Cove	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$32,581,760	291,000	$112	
North Cove	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$44,433,846	291,000	$153	
North Cove	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$35,466,640	291,000	$122	
North Cove	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$44,433,846	291,000	$153	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
North Cove	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$44,433,846	291,000	$153	
North Cove	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$35,466,640	291,000	$122	
North Cove	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$36,980,175	291,000	$127	
North Cove	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$44,433,846	291,000	$153	
North Cove	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$32,581,760	291,000	$112	
North Cove	Beach-620	-1	0	-1	0	-1.00	No	Yes	$17,021,867	291,000	$58	
North Cove	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$44,433,846	291,000	$153	
Essex Cove	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$3,730,382	25,000	$149	
Essex Cove	IslandCDF-P_bse	100	100	100	72.76	372.76	Yes	Yes	$3,173,034	25,000	$127	
Essex Cove	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$3,730,382	25,000	$149	
Essex Cove	ShoreCDF-O_bse	100	100	100	69.95	369.95	Yes	Yes	$3,173,034	25,000	$127	
Essex Cove	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$3,730,382	25,000	$149	
Essex Cove	CAD-M_bse	100	100	50	85.16	335.16	Yes	Yes	$2,514,730	25,000	$101	
Essex Cove	UOW-CSDS	50	100	100	72.31	322.31	No	Yes	$1,201,677	25,000	$48	
Essex Cove	UOW-NLDS	50	100	100	72.31	322.31	No	Yes	$1,265,665	25,000	$51	
Essex Cove	IslandCDF-L_bse	100	100	50	70.94	320.94	Yes	Yes	$3,735,284	25,000	$149	
Essex Cove	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$2,948,740	25,000	$118	
Essex Cove	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$2,948,740	25,000	$118	
Essex Cove	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$2,948,740	25,000	$118	
Essex Cove	UOW-CLDS	50	100	50	75.43	275.43	No	Yes	$1,600,604	25,000	$64	
Essex Cove	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	COW-E_cap	50	100	0	85.57	235.57	Yes	Yes	$2,201,814	25,000	$88	
Essex Cove	COW-E_bse	50	100	0	85.57	235.57	Yes	Yes	$2,201,814	25,000	$88	
Essex Cove	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$3,863,720	25,000	$155	
Essex Cove	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$2,948,740	25,000	$118	
Essex Cove	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$2,948,740	25,000	$118	
Essex Cove	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$2,948,740	25,000	$118	
Essex Cove	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Essex Cove	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$2,514,730	25,000	$101	
Essex Cove	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$1,832,360	25,000	$73	
Essex Cove	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$1,832,360	25,000	$73	
Essex Cove	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$1,832,360	25,000	$73	
Essex Cove	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$1,832,360	25,000	$73	
Essex Cove	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$1,832,360	25,000	$73	
Essex Cove	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Essex Cove	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$1,832,360	25,000	$73	
Essex Cove	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Essex Cove	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$2,739,842	25,000	$110	
Essex Cove	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$2,319,831	25,000	$93	
Essex Cove	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$3,735,284	25,000	$149	
Essex Cove	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$3,173,034	25,000	$127	
Essex Cove	Beach-620	-1	0	-1	0	-1.00	No	Yes	$2,739,842	25,000	$110	
Essex Cove	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$3,730,382	25,000	$149	
Essex Cove	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$1,832,360	25,000	$73	
Essex Cove	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$3,173,034	25,000	$127	
Essex Cove	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$3,730,382	25,000	$149	
Essex Cove	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$3,730,382	25,000	$149	
Essex Cove	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$4,514,091	25,000	$181	
Essex Cove	Berm-620	-1	0	0	0	-1.00	No	Yes	$2,739,842	25,000	$110	
Essex Cove	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$4,514,091	25,000	$181	
Eightmile River	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$6,116,708	45,200	$135	
Eightmile River	IslandCDF-P_bse	100	100	100	72.76	372.76	Yes	Yes	$6,116,708	45,200	$135	
Eightmile River	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$6,116,708	45,200	$135	
Eightmile River	ShoreCDF-O_bse	100	100	100	69.95	369.95	Yes	Yes	$6,116,708	45,200	$135	
Eightmile River	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$6,116,708	45,200	$135	
Eightmile River	CAD-M_bse	100	100	50	85.16	335.16	Yes	Yes	$3,825,866	45,200	$85	
Eightmile River	UOW-CSDS	50	100	100	72.31	322.31	No	Yes	$2,003,731	45,200	$44	
Eightmile River	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$5,021,449	45,200	$111	
Eightmile River	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$5,021,449	45,200	$111	
Eightmile River	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$5,021,449	45,200	$111	
Eightmile River	UOW-NLDS	50	100	50	72.31	272.31	No	Yes	$2,273,113	45,200	$50	
Eightmile River	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$7,613,573	45,200	$168	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Eightmile River	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	COW-E_bse	50	100	0	85.57	235.57	Yes	Yes	$3,252,555	45,200	$72	
Eightmile River	COW-E_cap	50	100	0	85.57	235.57	Yes	Yes	$3,252,555	45,200	$72	
Eightmile River	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$5,609,483	45,200	$124	
Eightmile River	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$3,252,555	45,200	$72	
Eightmile River	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$5,021,449	45,200	$111	
Eightmile River	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$5,021,449	45,200	$111	
Eightmile River	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$5,021,449	45,200	$111	
Eightmile River	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$2,751,574	45,200	$61	
Eightmile River	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Eightmile River	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Eightmile River	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$2,751,574	45,200	$61	
Eightmile River	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$3,825,866	45,200	$85	
Eightmile River	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$2,751,574	45,200	$61	
Eightmile River	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$2,751,574	45,200	$61	
Eightmile River	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$3,386,577	45,200	$75	
Eightmile River	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$2,751,574	45,200	$61	
Eightmile River	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$3,945,883	45,200	$87	
Eightmile River	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$6,116,708	45,200	$135	
Eightmile River	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$6,116,708	45,200	$135	
Eightmile River	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	Berm-620	-1	0	0	0	-1.00	No	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$3,386,577	45,200	$75	
Eightmile River	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$6,116,708	45,200	$135	
Eightmile River	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	Berm-620	-1	0	0	0	-1.00	No	Yes	$3,945,883	45,200	$87	
Eightmile River	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$6,116,708	45,200	$135	
Eightmile River	Berm-620	-1	0	0	0	-1.00	No	Yes	$3,945,883	45,200	$87	
Eightmile River	Berm-620	-1	0	0	0	-1.00	No	Yes	$3,945,883	45,200	$87	
Eightmile River	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$7,613,573	45,200	$168	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Eightmile River	Beach-620	-1	0	-1	0	-1.00	No	Yes	$3,945,883	45,200	$87	
Eightmile River	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$7,613,573	45,200	$168	
Eightmile River	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$6,116,708	45,200	$135	
Connecticut River Main Channels - Entrance Bars	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$52,710,268	439,000	$120	
Connecticut River Main Channels - Entrance Bars	IslandCDF-P_bse	100	100	100	72.76	372.76	Yes	Yes	$48,814,317	439,000	$111	
Connecticut River Main Channels - Entrance Bars	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$12,024,673	439,000	$27	
Connecticut River Main Channels - Entrance Bars	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$6,194,985	439,000	$14	
Connecticut River Main Channels - Entrance Bars	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$48,814,317	439,000	$111	
Connecticut River Main Channels - Entrance Bars	IslandCDF-R_bse	100	100	100	67.53	367.53	Yes	Yes	$52,710,268	439,000	$120	
Connecticut River Main Channels - Entrance Bars	UOW-CLDS	100	100	50	75.43	325.43	No	Yes	$16,651,066	439,000	$38	
Connecticut River Main Channels - Entrance Bars	CAD-M_bse	100	53	50	85.16	288.25	Yes	Yes	$29,272,216	439,000	$67	
Connecticut River Main Channels - Entrance Bars	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$52,505,361	439,000	$120	
Connecticut River Main Channels - Entrance Bars	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$52,505,361	439,000	$120	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-O_bse	100	7	100	69.95	276.77	Yes	Yes	$48,814,317	439,000	$111	
Connecticut River Main Channels - Entrance Bars	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$35,227,349	439,000	$80	
Connecticut River Main Channels - Entrance Bars	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	LFCap-61	100	80	0	77.41	257.14	Yes	Yes	$52,505,361	439,000	$120	
Connecticut River Main Channels - Entrance Bars	Habitat-429	100	85	0	61.33	246.75	Yes	Yes	$52,505,361	439,000	$120	
Connecticut River Main Channels - Entrance Bars	COW-E_cap	100	55	0	85.57	240.70	Yes	Yes	$22,507,815	439,000	$51	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-C_bse	100	63	0	66.9	230.00	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	IslandCDF-B_bse	100	57	0	68.28	225.02	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	COW-E_bse	100	30	0	85.57	215.87	Yes	Yes	$22,507,815	439,000	$51	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-D_bse	100	28	0	70.36	197.99	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-I_bse	100	23	0	71.25	193.79	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-K_bse	100	25	0	67.68	192.63	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	Berm-367	50	6	50	83.31	188.84	Yes	Yes	$14,806,798	439,000	$34	
Connecticut River Main Channels - Entrance Bars	Berm-Grove Beach	50	7	50	75	182.15	No	Yes	$14,806,798	439,000	$34	
Connecticut River Main Channels - Entrance Bars	BF-422/423	100	16	0	62.03	177.98	Yes	Yes	$52,505,361	439,000	$120	
Connecticut River Main Channels - Entrance Bars	Berm-381/382	50	35	0	82.47	167.76	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Habitat-427	100	7	0	59.77	167.10	Yes	Yes	$52,505,361	439,000	$120	
Connecticut River Main Channels - Entrance Bars	Berm-173	50	31	0	83.2	164.64	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-63	50	28	0	83.57	161.85	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-170	50	28	0	82.37	160.02	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-327/333/330	50	24	0	83.23	157.68	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-121/446	50	23	0	84.45	157.50	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-171	50	23	0	82.68	155.21	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-600	50	22	0	82.66	154.56	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-610	50	22	0	81.25	153.40	Yes	Yes	$21,119,979	439,000	$48	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Connecticut River Main Channels - Entrance Bars	Berm-180	50	23	0	78.31	151.55	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Berm-454A	50	18	0	83.72	151.39	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Berm-178	50	19	0	82.14	151.35	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-384	50	16	0	84.56	150.61	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-365	50	16	0	81.28	147.23	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Berm-445	50	15	0	81.98	146.75	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-323	50	16	0	80.39	146.68	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-453	50	12	0	84.53	146.51	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-449	50	12	0	82.4	144.47	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-177	50	8	0	84.64	142.32	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-179	50	15	0	77.11	142.04	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-454B	50	8	0	83.23	141.52	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Berm-456	50	11	0	80.39	141.34	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-441	50	3	0	87.76	140.97	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-320	50	3	0	87.24	140.68	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-337	50	6	0	83.93	140.26	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-368	50	8	0	81.61	139.84	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Berm-457	50	1	0	86.95	137.94	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Berm-455/82	50	4	0	83.93	137.93	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-467	50	5	0	82.19	137.35	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-440	50	7	0	79.87	136.52	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-447	50	6	0	80.1	136.36	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-433	50	3	0	82.92	136.02	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-364b/364c	50	3	0	82.6	135.49	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-620	50	9	0	75	134.11	No	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-434	50	2	0	81.35	133.64	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-451	50	1	0	82.29	133.22	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Berm-438	50	1	0	81.67	133.12	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-348	-1	0	0	0	-1.00	Yes	Yes	$11,939,128	439,000	$27	
Connecticut River Main Channels - Entrance Bars	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$29,272,216	439,000	$67	
Connecticut River Main Channels - Entrance Bars	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Connecticut River Main Channels - Entrance Bars	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$14,806,798	439,000	$34	
Connecticut River Main Channels - Entrance Bars	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$14,806,798	439,000	$34	
Connecticut River Main Channels - Entrance Bars	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$14,806,798	439,000	$34	
Connecticut River Main Channels - Entrance Bars	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$14,806,798	439,000	$34	
Connecticut River Main Channels - Entrance Bars	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$14,806,798	439,000	$34	
Connecticut River Main Channels - Entrance Bars	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Connecticut River Main Channels - Entrance Bars	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Entrance Bars	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$14,559,744	439,000	$33	
Connecticut River Main Channels - Entrance Bars	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$48,814,317	439,000	$111	
Connecticut River Main Channels - Entrance Bars	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$52,710,268	439,000	$120	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$63,643,557	439,000	$145	
Connecticut River Main Channels - Entrance Bars	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$52,710,268	439,000	$120	
Connecticut River Main Channels - Entrance Bars	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$48,814,317	439,000	$111	
Connecticut River Main Channels - Entrance Bars	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$48,814,317	439,000	$111	
Connecticut River Main Channels - Entrance Bars	Beach-620	-1	0	-1	0	-1.00	No	Yes	$21,119,979	439,000	$48	
Connecticut River Main Channels - Lower Bars	IslandCDF-N_cap	100	100	100	73.28	373.28	Yes	Yes	$34,301,530	281,000	$122	
Connecticut River Main Channels - Lower Bars	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$8,546,152	281,000	$30	
Connecticut River Main Channels - Lower Bars	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$5,377,629	281,000	$19	
Connecticut River Main Channels - Lower Bars	IslandCDF-Q_cap	100	100	100	71.51	371.51	Yes	Yes	$31,484,966	281,000	$112	
Connecticut River Main Channels - Lower Bars	ShoreCDF-O_cap	100	100	100	69.95	369.95	Yes	Yes	$31,484,966	281,000	$112	
Connecticut River Main Channels - Lower Bars	IslandCDF-R_cap	100	100	100	67.53	367.53	Yes	Yes	$34,301,530	281,000	$122	
Connecticut River Main Channels - Lower Bars	IslandCDF-P_cap	100	83	100	72.76	355.99	Yes	Yes	$31,484,966	281,000	$112	
Connecticut River Main Channels - Lower Bars	UOW-CLDS	100	100	50	75.43	325.43	No	Yes	$10,353,296	281,000	$37	
Connecticut River Main Channels - Lower Bars	CAD-M_cap	100	51	50	85.16	286.37	Yes	Yes	$18,462,992	281,000	$66	
Connecticut River Main Channels - Lower Bars	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$15,329,078	281,000	$55	
Connecticut River Main Channels - Lower Bars	Berm-173	100	98	0	83.2	281.44	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$26,513,412	281,000	$94	
Connecticut River Main Channels - Lower Bars	Berm-63	100	88	0	83.57	271.93	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	IslandCDF-L_cap	100	100	0	70.94	270.94	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	Berm-170	100	86	0	82.37	268.78	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	ShoreCDF-J_cap	100	100	0	66.72	266.72	Yes	Yes	$43,135,893	281,000	$154	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Connecticut River Main Channels - Lower Bars	Berm-327/333/330	100	76	0	83.23	259.64	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	Berm-121/446	100	72	0	84.45	256.46	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-171	100	70	0	82.68	253.08	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-600	100	68	0	82.66	251.08	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-180	100	73	0	78.31	250.94	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	Berm-367	100	17	50	83.31	250.60	Yes	Yes	$12,378,110	281,000	$44	
Connecticut River Main Channels - Lower Bars	Berm-610	100	69	0	81.25	250.47	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-Grove Beach	100	22	50	75	247.35	No	Yes	$12,378,110	281,000	$44	
Connecticut River Main Channels - Lower Bars	Berm-454A	100	55	0	83.72	238.92	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	Berm-381/382	100	55	0	82.47	237.60	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-323	100	51	0	80.39	231.30	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-365	100	50	0	81.28	231.11	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	Berm-445	100	46	0	81.98	228.12	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	ShoreCDF-D_cap	100	56	0	70.36	226.39	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	Beach-348	100	1	50	73.83	224.65	Yes	Yes	$9,420,380	281,000	$34	
Connecticut River Main Channels - Lower Bars	Berm-179	100	47	0	77.11	223.77	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-453	100	37	0	84.53	221.95	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-449	100	38	0	82.4	220.10	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-456	100	34	0	80.39	214.62	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-178	100	30	0	82.14	212.15	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-384	100	25	0	84.56	209.63	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-454B	100	26	0	83.23	209.14	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	ShoreCDF-I_cap	100	36	0	71.25	207.58	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	Berm-368	100	26	0	81.61	207.33	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	Berm-337	100	20	0	83.93	203.71	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-620	100	28	0	75	203.47	No	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-440	100	21	0	79.87	200.64	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-447	100	20	0	80.1	199.67	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-467	100	16	0	82.19	198.33	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-320	100	11	0	87.24	198.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-441	100	10	0	87.76	197.79	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-177	100	12	0	84.64	196.63	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-455/82	100	13	0	83.93	196.43	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-433	100	10	0	82.92	192.61	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-364b/364c	100	9	0	82.6	191.63	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-457	100	3	0	86.95	190.06	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	Berm-434	100	7	0	81.35	188.49	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Berm-438	100	5	0	81.67	186.19	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	ShoreCDF-K_cap	100	18	0	67.68	185.80	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	Berm-451	100	3	0	82.29	185.19	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-171	100	79	-1	72.89	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-331	100	14	-1	74.53	-1.00	Yes	Yes	$16,744,968	281,000	$60	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Connecticut River Main Channels - Lower Bars	Beach-327	100	6	-1	74.53	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-367	100	5	-1	73.59	-1.00	Yes	Yes	$12,378,110	281,000	$44	
Connecticut River Main Channels - Lower Bars	Beach-320	100	15	-1	73.83	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-179	100	71	-1	72.89	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-177	100	10	-1	72.89	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-170	100	77	-1	72.89	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-474	100	0	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-330	100	9	-1	74.53	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-437	100	20	-1	72.27	-1.00	Yes	Yes	$12,378,110	281,000	$44	
Connecticut River Main Channels - Lower Bars	Beach-436	100	12	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-447	100	30	-1	74.53	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-67	100	2	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-384	100	15	-1	72.89	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-456	100	37	-1	72.89	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-329	100	9	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$36,129,621	281,000	$129	
Connecticut River Main Channels - Lower Bars	Beach-467	100	11	-1	73.83	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-64	100	62	-1	73.2	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-333	100	1	-1	74.53	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$18,462,992	281,000	$66	
Connecticut River Main Channels - Lower Bars	Beach-364	100	10	-1	73.83	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-454 East	100	78	-1	70.45	-1.00	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$36,129,621	281,000	$129	
Connecticut River Main Channels - Lower Bars	Beach-440	100	32	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-323	100	63	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-445	100	58	-1	73.2	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-434	100	3	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-444	100	3	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-76	100	11	-1	74.14	-1.00	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	Beach-449	100	34	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-459	100	3	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-332	100	13	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-345	100	20	-1	74.14	-1.00	Yes	Yes	$12,378,110	281,000	$44	
Connecticut River Main Channels - Lower Bars	Beach-79	100	7	-1	73.2	-1.00	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	Beach-457	100	2	-1	74.14	-1.00	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	Beach-438	100	1	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-325	100	25	-1	74.53	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-433	100	8	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-180	100	58	-1	72.89	-1.00	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$36,129,621	281,000	$129	
Connecticut River Main Channels - Lower Bars	Beach-381	100	11	-1	72.66	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-455/82	100	36	-1	70.43	-1.00	Yes	Yes	$16,744,968	281,000	$60	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Connecticut River Main Channels - Lower Bars	Beach-111	100	11	-1	73.2	-1.00	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-68	100	1	-1	73.2	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-368	100	63	-1	72.89	-1.00	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	Beach-339	100	3	-1	74.14	-1.00	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	Beach-121	100	4	-1	73.2	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-178	100	37	-1	72.89	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-181	100	12	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-451	100	0	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-468	100	15	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	Beach-337	100	2	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-344	100	0	-1	74.53	-1.00	Yes	Yes	$12,378,110	281,000	$44	
Connecticut River Main Channels - Lower Bars	Beach-610	100	24	-1	70.67	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$15,329,078	281,000	$55	
Connecticut River Main Channels - Lower Bars	Beach-343	100	1	-1	73.83	-1.00	Yes	Yes	$12,378,110	281,000	$44	
Connecticut River Main Channels - Lower Bars	Beach-441	100	10	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-442	100	19	-1	74.53	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-480	100	2	-1	72.89	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-600	100	24	-1	70.67	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-450	100	26	-1	74.14	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-382	100	33	-1	72.27	-1.00	Yes	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	Beach-454 West	100	24	-1	73.2	-1.00	Yes	Yes	$14,423,263	281,000	$51	
Connecticut River Main Channels - Lower Bars	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$36,129,621	281,000	$129	
Connecticut River Main Channels - Lower Bars	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$36,129,621	281,000	$129	
Connecticut River Main Channels - Lower Bars	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$36,129,621	281,000	$129	
Connecticut River Main Channels - Lower Bars	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$31,484,966	281,000	$112	
Connecticut River Main Channels - Lower Bars	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$31,484,966	281,000	$112	
Connecticut River Main Channels - Lower Bars	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$34,301,530	281,000	$122	
Connecticut River Main Channels - Lower Bars	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$34,301,530	281,000	$122	
Connecticut River Main Channels - Lower Bars	Beach-620	100	28	-1	75	-1.00	No	Yes	$16,744,968	281,000	$60	
Connecticut River Main Channels - Lower Bars	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$43,135,893	281,000	$154	
Connecticut River Main Channels - Lower Bars	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$31,484,966	281,000	$112	
Connecticut River Main Channels - Lower Bars	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$43,135,893	281,000	$154	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Patchogue River - Entrance Channel	Beach-345	100	100	100	74.14	374.14	Yes	Yes	$853,031	14,300	$60	
Patchogue River - Entrance Channel	IslandCDF-N_cap	100	100	100	73.28	373.28	Yes	Yes	$2,412,085	14,300	$169	
Patchogue River - Entrance Channel	IslandCDF-P_cap	100	100	100	72.76	372.76	Yes	Yes	$2,197,474	14,300	$154	
Patchogue River - Entrance Channel	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$1,010,250	14,300	$71	
Patchogue River - Entrance Channel	IslandCDF-Q_cap	100	100	100	71.51	371.51	Yes	Yes	$2,412,085	14,300	$169	
Patchogue River - Entrance Channel	ShoreCDF-O_cap	100	100	100	69.95	369.95	Yes	Yes	$2,197,474	14,300	$154	
Patchogue River - Entrance Channel	Berm-Grove Beach	100	73	100	75	348.21	No	Yes	$853,031	14,300	$60	
Patchogue River - Entrance Channel	CAD-M_cap	100	100	50	85.16	335.16	Yes	Yes	$1,727,613	14,300	$121	
Patchogue River - Entrance Channel	Berm-365	100	100	50	81.28	331.28	Yes	Yes	$1,286,440	14,300	$90	
Patchogue River - Entrance Channel	UOW-CLDS	100	100	50	75.43	325.43	No	Yes	$1,316,903	14,300	$92	
Patchogue River - Entrance Channel	Beach-365	100	100	50	73.83	323.83	Yes	Yes	$1,286,440	14,300	$90	
Patchogue River - Entrance Channel	UOW-NLDS	100	100	50	72.31	322.31	No	Yes	$1,316,903	14,300	$92	
Patchogue River - Entrance Channel	IslandCDF-L_cap	100	100	50	70.94	320.94	Yes	Yes	$2,596,299	14,300	$182	
Patchogue River - Entrance Channel	IslandCDF-R_cap	100	100	50	67.53	317.53	Yes	Yes	$2,596,299	14,300	$182	
Patchogue River - Entrance Channel	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$1,747,063	14,300	$122	
Patchogue River - Entrance Channel	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-453	100	100	0	84.53	284.53	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-449	100	100	0	82.4	282.40	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-344	100	6	100	74.53	280.82	Yes	Yes	$991,980	14,300	$69	
Patchogue River - Entrance Channel	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-456	100	100	0	80.39	280.39	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$1,747,063	14,300	$122	
Patchogue River - Entrance Channel	ShoreCDF-I_cap	100	100	0	71.25	271.25	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	ShoreCDF-D_cap	100	100	0	70.36	270.36	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	Berm-620	100	93	0	75	268.24	No	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-454B	100	85	0	83.23	268.08	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$3,135,590	14,300	$219	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Patchogue River - Entrance Channel	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	ShoreCDF-J_cap	100	100	0	66.72	266.72	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	Berm-368	100	84	0	81.61	265.85	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	Berm-337	100	65	0	83.93	248.71	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-440	100	68	0	79.87	247.88	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-457	100	10	50	86.95	247.12	Yes	Yes	$1,461,726	14,300	$102	
Patchogue River - Entrance Channel	Berm-447	100	64	0	80.1	244.19	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-367	100	57	0	83.31	239.93	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Berm-467	100	53	0	82.19	235.04	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-343	100	11	50	73.83	235.02	Yes	Yes	$1,286,440	14,300	$90	
Patchogue River - Entrance Channel	ShoreCDF-K_cap	100	59	0	67.68	227.02	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	Berm-455/82	100	41	0	83.93	224.88	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Berm-320	100	35	0	87.24	222.49	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-441	100	33	0	87.76	220.62	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-433	100	32	0	82.92	214.64	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-364b/364c	100	30	0	82.6	212.17	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-434	100	23	0	81.35	204.75	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-438	100	15	0	81.67	196.48	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Berm-451	100	10	0	82.29	191.80	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Beach-330	100	100	-1	74.53	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-480	100	31	-1	72.89	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-474	100	1	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-457	100	40	-1	74.14	-1.00	Yes	Yes	$1,461,726	14,300	$102	
Patchogue River - Entrance Channel	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-327	100	100	-1	74.53	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-381	100	100	-1	72.66	-1.00	Yes	Yes	$2,298,909	14,300	$161	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Patchogue River - Entrance Channel	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-438	100	26	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-459	100	50	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$2,000,342	14,300	$140	
Patchogue River - Entrance Channel	Beach-434	100	59	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$2,000,342	14,300	$140	
Patchogue River - Entrance Channel	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-364	100	100	-1	73.83	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-348	100	16	-1	73.83	-1.00	Yes	Yes	$1,461,726	14,300	$102	
Patchogue River - Entrance Channel	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,747,063	14,300	$122	
Patchogue River - Entrance Channel	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Beach-329	100	100	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-444	100	50	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-333	100	17	-1	74.53	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-339	100	60	-1	74.14	-1.00	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Beach-433	100	100	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Beach-121	100	85	-1	73.2	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-68	100	22	-1	73.2	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-367	100	99	-1	73.59	-1.00	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-451	100	5	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-79	100	100	-1	73.2	-1.00	Yes	Yes	$1,882,175	14,300	$132	
Patchogue River - Entrance Channel	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$2,000,342	14,300	$140	
Patchogue River - Entrance Channel	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$1,727,613	14,300	$121	
Patchogue River - Entrance Channel	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-337	100	32	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Patchogue River - Entrance Channel	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	Beach-67	100	34	-1	74.14	-1.00	Yes	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$2,412,085	14,300	$169	
Patchogue River - Entrance Channel	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	Beach-620	100	100	-1	75	-1.00	No	Yes	$2,298,909	14,300	$161	
Patchogue River - Entrance Channel	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$2,596,299	14,300	$182	
Patchogue River - Entrance Channel	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$2,000,342	14,300	$140	
Patchogue River - Entrance Channel	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$2,197,474	14,300	$154	
Patchogue River - Entrance Channel	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$2,000,342	14,300	$140	
Patchogue River - Entrance Channel	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$3,135,590	14,300	$219	
Patchogue River - Entrance Channel	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$2,197,474	14,300	$154	
Patchogue River - Entrance Channel	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$2,000,342	14,300	$140	
Patchogue River - Entrance Channel	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$2,412,085	14,300	$169	
Patchogue River - Entrance Channel	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$2,596,299	14,300	$182	
Patchogue River - Inner Harbor	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$2,054,790	11,400	$180	
Patchogue River - Inner Harbor	IslandCDF-P_bse	100	100	100	72.76	372.76	Yes	Yes	$1,933,070	11,400	$170	
Patchogue River - Inner Harbor	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$958,367	11,400	$84	
Patchogue River - Inner Harbor	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$2,054,790	11,400	$180	
Patchogue River - Inner Harbor	ShoreCDF-O_bse	100	100	100	69.95	369.95	Yes	Yes	$1,933,070	11,400	$170	
Patchogue River - Inner Harbor	CAD-M_bse	100	100	50	85.16	335.16	Yes	Yes	$1,514,283	11,400	$133	
Patchogue River - Inner Harbor	UOW-CLDS	100	100	50	75.43	325.43	No	Yes	$1,240,012	11,400	$109	
Patchogue River - Inner Harbor	UOW-NLDS	100	100	50	72.31	322.31	No	Yes	$1,240,012	11,400	$109	
Patchogue River - Inner Harbor	IslandCDF-L_bse	100	100	50	70.94	320.94	Yes	Yes	$2,287,603	11,400	$201	
Patchogue River - Inner Harbor	IslandCDF-R_bse	100	100	50	67.53	317.53	Yes	Yes	$2,287,603	11,400	$201	
Patchogue River - Inner Harbor	COW-E_bse	100	100	0	85.57	285.57	Yes	Yes	$1,623,812	11,400	$142	
Patchogue River - Inner Harbor	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$1,623,812	11,400	$142	
Patchogue River - Inner Harbor	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$1,743,299	11,400	$153	
Patchogue River - Inner Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$1,743,299	11,400	$153	
Patchogue River - Inner Harbor	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$1,743,299	11,400	$153	
Patchogue River - Inner Harbor	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$1,623,812	11,400	$142	
Patchogue River - Inner Harbor	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	BF-422/423	100	100	0	62.03	262.03	Yes	Yes	$1,743,299	11,400	$153	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Patchogue River - Inner Harbor	Habitat-429	100	100	0	61.33	261.33	Yes	Yes	$1,743,299	11,400	$153	
Patchogue River - Inner Harbor	Habitat-427	100	100	0	59.77	259.77	Yes	Yes	$1,743,299	11,400	$153	
Patchogue River - Inner Harbor	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Beach-343	-1	0	0	0	-1.00	Yes	Yes	$1,219,087	11,400	$107	
Patchogue River - Inner Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$1,219,087	11,400	$107	
Patchogue River - Inner Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$1,361,274	11,400	$119	
Patchogue River - Inner Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$1,361,274	11,400	$119	
Patchogue River - Inner Harbor	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-365	-1	0	0	0	-1.00	Yes	Yes	$1,219,087	11,400	$107	
Patchogue River - Inner Harbor	Beach-344	-1	0	0	0	-1.00	Yes	Yes	$956,360	11,400	$84	
Patchogue River - Inner Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$1,514,283	11,400	$133	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Patchogue River - Inner Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-345	-1	0	0	0	-1.00	Yes	Yes	$829,537	11,400	$73	
Patchogue River - Inner Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$1,361,274	11,400	$119	
Patchogue River - Inner Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Patchogue River - Inner Harbor	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$1,763,559	11,400	$155	
Patchogue River - Inner Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	Beach-620	-1	0	-1	0	-1.00	No	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$829,537	11,400	$73	
Patchogue River - Inner Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$2,054,790	11,400	$180	
Patchogue River - Inner Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$2,054,790	11,400	$180	
Patchogue River - Inner Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$2,179,404	11,400	$191	
Patchogue River - Inner Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$1,933,070	11,400	$170	
Patchogue River - Inner Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$2,761,977	11,400	$242	
Patchogue River - Inner Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$2,287,603	11,400	$201	
Patchogue River - Inner Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$1,933,070	11,400	$170	
Patchogue River - Inner Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$2,287,603	11,400	$201	
Patchogue River - Inner Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$2,761,977	11,400	$242	
Duck Island Harbor of Refuge	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$29,151,261	1,948,000	$15	
Duck Island Harbor of Refuge	IslandCDF-N_cap	100	60	100	73.28	333.33	Yes	Yes	$196,029,090	1,948,000	$101	
Duck Island Harbor of Refuge	UOW-CLDS	100	100	50	75.43	325.43	No	Yes	$67,029,962	1,948,000	$34	
Duck Island Harbor of Refuge	UOW-NLDS	100	100	50	72.31	322.31	No	Yes	$67,029,962	1,948,000	$34	
Duck Island Harbor of Refuge	IslandCDF-L_cap	100	100	50	70.94	320.94	Yes	Yes	$235,682,543	1,948,000	$121	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Duck Island Harbor of Refuge	ShoreCDF-O_cap	100	33	100	69.95	302.81	Yes	Yes	$196,029,090	1,948,000	$101	
Duck Island Harbor of Refuge	IslandCDF-Q_cap	100	22	100	71.51	293.78	Yes	Yes	$226,196,848	1,948,000	$116	
Duck Island Harbor of Refuge	Berm-Grove Beach	100	3	100	75	278.22	No	Yes	$7,233,630	1,948,000	$4	
Duck Island Harbor of Refuge	Beach-345	100	3	100	74.14	277.07	Yes	Yes	$8,827,236	1,948,000	$5	
Duck Island Harbor of Refuge	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$79,691,789	1,948,000	$41	
Duck Island Harbor of Refuge	ShoreCDF-J_cap	100	100	0	66.72	266.72	Yes	Yes	$260,055,037	1,948,000	$133	
Duck Island Harbor of Refuge	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$260,055,037	1,948,000	$133	
Duck Island Harbor of Refuge	Beach-365	100	29	50	73.83	252.72	Yes	Yes	$12,911,556	1,948,000	$7	
Duck Island Harbor of Refuge	IslandCDF-R_cap	100	29	50	67.53	246.79	Yes	Yes	$235,682,543	1,948,000	$121	
Duck Island Harbor of Refuge	CAD-M_cap	100	7	50	85.16	242.55	Yes	Yes	$123,900,380	1,948,000	$64	
Duck Island Harbor of Refuge	Berm-365	100	7	50	81.28	238.47	Yes	Yes	$12,911,556	1,948,000	$7	
Duck Island Harbor of Refuge	Berm-457	100	0	50	86.95	237.40	Yes	Yes	$15,744,456	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-344	100	0	50	74.53	224.58	Yes	Yes	$12,911,556	1,948,000	$7	
Duck Island Harbor of Refuge	Beach-343	100	0	50	73.83	223.91	Yes	Yes	$12,911,556	1,948,000	$7	
Duck Island Harbor of Refuge	ShoreCDF-K_cap	100	3	50	67.68	220.29	Yes	Yes	$235,682,543	1,948,000	$121	
Duck Island Harbor of Refuge	COW-E_cap	100	25	0	85.57	210.42	Yes	Yes	$79,691,789	1,948,000	$41	
Duck Island Harbor of Refuge	ShoreCDF-A_cap	100	37	0	67.58	204.14	Yes	Yes	$260,055,037	1,948,000	$133	
Duck Island Harbor of Refuge	Berm-173	100	14	0	83.2	197.37	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-63	100	13	0	83.57	196.32	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-121/446	100	10	0	84.45	194.84	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-170	100	12	0	82.37	194.83	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-327/333/330	100	11	0	83.23	194.25	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-171	100	10	0	82.68	192.84	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-600	100	10	0	82.66	192.53	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-454A	100	8	0	83.72	191.68	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Berm-610	100	10	0	81.25	191.23	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-381/382	100	8	0	82.47	190.42	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-453	100	5	0	84.53	189.93	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-441	100	1	0	87.76	189.21	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-320	100	2	0	87.24	188.79	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-180	100	10	0	78.31	188.79	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Berm-445	100	7	0	81.98	188.64	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Berm-384	100	4	0	84.56	188.18	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-449	100	5	0	82.4	187.84	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-323	100	7	0	80.39	187.73	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-454B	100	4	0	83.23	186.97	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Berm-337	100	3	0	83.93	186.78	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-178	100	4	0	82.14	186.47	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-177	100	2	0	84.64	186.37	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	ShoreCDF-C_cap	100	19	0	66.9	186.20	Yes	Yes	$260,055,037	1,948,000	$133	
Duck Island Harbor of Refuge	Berm-367	100	2	0	83.31	185.80	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Berm-455/82	100	2	0	83.93	185.73	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Berm-456	100	5	0	80.39	185.33	Yes	Yes	$22,809,066	1,948,000	$12	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Duck Island Harbor of Refuge	Berm-368	100	4	0	81.61	185.32	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	IslandCDF-B_cap	100	17	0	68.28	185.31	Yes	Yes	$260,055,037	1,948,000	$133	
Duck Island Harbor of Refuge	Berm-467	100	2	0	82.19	184.52	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-433	100	1	0	82.92	184.32	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-364b/364c	100	1	0	82.6	183.90	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-179	100	7	0	77.11	183.84	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-447	100	3	0	80.1	182.92	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-440	100	3	0	79.87	182.87	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-451	100	0	0	82.29	182.71	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-434	100	1	0	81.35	182.38	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-438	100	1	0	81.67	182.32	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Berm-620	100	4	0	75	179.11	No	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	ShoreCDF-D_cap	100	8	0	70.36	178.44	Yes	Yes	$260,055,037	1,948,000	$133	
Duck Island Harbor of Refuge	ShoreCDF-I_cap	100	5	0	71.25	176.49	Yes	Yes	$260,055,037	1,948,000	$133	
Duck Island Harbor of Refuge	Beach-329	100	1	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-181	100	2	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-438	100	0	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-173	100	22	-1	72.89	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-330	100	1	-1	74.53	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-455/82	100	5	-1	70.43	-1.00	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-327	100	1	-1	74.53	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$123,900,380	1,948,000	$64	
Duck Island Harbor of Refuge	Beach-180	100	8	-1	72.89	-1.00	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-467	100	2	-1	73.83	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$79,691,789	1,948,000	$41	
Duck Island Harbor of Refuge	Beach-64	100	9	-1	73.2	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-457	100	0	-1	74.14	-1.00	Yes	Yes	$15,744,456	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-325	100	4	-1	74.53	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-440	100	5	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-610	100	3	-1	70.67	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-177	100	1	-1	72.89	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$235,682,543	1,948,000	$121	
Duck Island Harbor of Refuge	Beach-364	100	1	-1	73.83	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-178	100	5	-1	72.89	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$232,758,771	1,948,000	$119	
Duck Island Harbor of Refuge	Beach-444	100	0	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-367	100	1	-1	73.59	-1.00	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-453	100	21	-1	73.2	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$232,758,771	1,948,000	$119	
Duck Island Harbor of Refuge	Beach-474	100	0	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-111	100	2	-1	73.2	-1.00	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-441	100	1	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-320	100	2	-1	73.83	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Duck Island Harbor of Refuge	Beach-447	100	4	-1	74.53	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-442	100	3	-1	74.53	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-468	100	2	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-323	100	9	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-454 East	100	11	-1	70.45	-1.00	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-381	100	2	-1	72.66	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-76	100	2	-1	74.14	-1.00	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-446	100	30	-1	72.89	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-121	100	1	-1	73.2	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-368	100	9	-1	72.89	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-450	100	4	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$260,055,037	1,948,000	$133	
Duck Island Harbor of Refuge	Beach-445	100	8	-1	73.2	-1.00	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-436	100	2	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$232,758,771	1,948,000	$119	
Duck Island Harbor of Refuge	Beach-451	100	0	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-433	100	1	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-384	100	2	-1	72.89	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-434	100	0	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-449	100	5	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-170	100	11	-1	72.89	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-79	100	1	-1	73.2	-1.00	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-459	100	0	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-68	100	0	-1	73.2	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-348	100	0	-1	73.83	-1.00	Yes	Yes	$15,744,456	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-456	100	5	-1	72.89	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-339	100	0	-1	74.14	-1.00	Yes	Yes	$15,744,456	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-382	100	5	-1	72.27	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-67	100	0	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-333	100	0	-1	74.53	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-179	100	10	-1	72.89	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-63	100	31	-1	73.2	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-332	100	2	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-331	100	2	-1	74.53	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-600	100	3	-1	70.67	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-454 West	100	4	-1	73.2	-1.00	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-437	100	3	-1	72.27	-1.00	Yes	Yes	$14,612,436	1,948,000	$8	
Duck Island Harbor of Refuge	Beach-480	100	0	-1	72.89	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-337	100	0	-1	74.14	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-171	100	11	-1	72.89	-1.00	Yes	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	Beach-620	100	4	-1	75	-1.00	No	Yes	$22,809,066	1,948,000	$12	
Duck Island Harbor of Refuge	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$232,758,771	1,948,000	$119	
Duck Island Harbor of Refuge	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$196,029,090	1,948,000	$101	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Duck Island Harbor of Refuge	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$235,682,543	1,948,000	$121	
Duck Island Harbor of Refuge	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$260,055,037	1,948,000	$133	
Duck Island Harbor of Refuge	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$226,196,848	1,948,000	$116	
Duck Island Harbor of Refuge	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$260,055,037	1,948,000	$133	
Duck Island Harbor of Refuge	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$260,055,037	1,948,000	$133	
Duck Island Harbor of Refuge	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$260,055,037	1,948,000	$133	
Duck Island Harbor of Refuge	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$232,758,771	1,948,000	$119	
Duck Island Harbor of Refuge	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$260,055,037	1,948,000	$133	
Duck Island Harbor of Refuge	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$232,758,771	1,948,000	$119	
Duck Island Harbor of Refuge	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$235,682,543	1,948,000	$121	
Duck Island Harbor of Refuge	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$196,029,090	1,948,000	$101	
Duck Island Harbor of Refuge	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$260,055,037	1,948,000	$133	
Clinton Harbor - Entrance Channel	CAD-M_cap	100	100	100	85.16	385.16	Yes	Yes	$2,249,906	21,400	$105	
Clinton Harbor - Entrance Channel	Berm-365	100	100	100	81.28	381.28	Yes	Yes	$1,079,188	21,400	$50	
Clinton Harbor - Entrance Channel	Beach-365	100	100	100	73.83	373.83	Yes	Yes	$1,079,188	21,400	$50	
Clinton Harbor - Entrance Channel	IslandCDF-N_cap	100	100	100	73.28	373.28	Yes	Yes	$2,844,808	21,400	$133	
Clinton Harbor - Entrance Channel	IslandCDF-P_cap	100	100	100	72.76	372.76	Yes	Yes	$2,632,706	21,400	$123	
Clinton Harbor - Entrance Channel	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$1,137,272	21,400	$53	
Clinton Harbor - Entrance Channel	IslandCDF-Q_cap	100	100	100	71.51	371.51	Yes	Yes	$3,286,843	21,400	$154	
Clinton Harbor - Entrance Channel	ShoreCDF-O_cap	100	100	100	69.95	369.95	Yes	Yes	$2,632,706	21,400	$123	
Clinton Harbor - Entrance Channel	UOW-CLDS	100	100	50	75.43	325.43	No	Yes	$1,505,153	21,400	$70	
Clinton Harbor - Entrance Channel	Beach-345	100	100	50	74.14	324.14	Yes	Yes	$1,451,338	21,400	$68	
Clinton Harbor - Entrance Channel	UOW-NLDS	100	100	50	72.31	322.31	No	Yes	$1,505,153	21,400	$70	
Clinton Harbor - Entrance Channel	IslandCDF-L_cap	100	100	50	70.94	320.94	Yes	Yes	$3,352,074	21,400	$157	
Clinton Harbor - Entrance Channel	IslandCDF-R_cap	100	100	50	67.53	317.53	Yes	Yes	$3,352,074	21,400	$157	
Clinton Harbor - Entrance Channel	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$2,048,813	21,400	$96	
Clinton Harbor - Entrance Channel	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Berm-Grove Beach	100	57	50	75	281.79	No	Yes	$1,451,338	21,400	$68	
Clinton Harbor - Entrance Channel	Beach-343	100	7	100	73.83	281.31	Yes	Yes	$910,551	21,400	$43	
Clinton Harbor - Entrance Channel	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$2,591,491	21,400	$121	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Clinton Harbor - Entrance Channel	Berm-453	100	95	0	84.53	279.60	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Berm-449	100	96	0	82.4	278.18	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$2,048,813	21,400	$96	
Clinton Harbor - Entrance Channel	ShoreCDF-D_cap	100	100	0	70.36	270.36	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	Berm-456	100	87	0	80.39	267.35	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	ShoreCDF-J_cap	100	100	0	66.72	266.72	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	ShoreCDF-K_cap	100	46	50	67.68	263.71	Yes	Yes	$3,352,074	21,400	$157	
Clinton Harbor - Entrance Channel	ShoreCDF-I_cap	100	92	0	71.25	263.56	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	Beach-457	100	27	50	74.14	250.78	Yes	Yes	$1,451,338	21,400	$68	
Clinton Harbor - Entrance Channel	Berm-454B	100	66	0	83.23	249.05	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Berm-620	100	72	0	75	247.33	No	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-368	100	65	0	81.61	246.96	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-457	100	8	50	86.95	244.84	Yes	Yes	$1,451,338	21,400	$68	
Clinton Harbor - Entrance Channel	Berm-337	100	50	0	83.93	234.18	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Berm-440	100	53	0	79.87	232.63	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-447	100	50	0	80.1	229.82	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-344	100	4	50	74.53	228.74	Yes	Yes	$1,451,338	21,400	$68	
Clinton Harbor - Entrance Channel	Berm-367	100	44	0	83.31	227.23	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Berm-467	100	41	0	82.19	223.19	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-455/82	100	32	0	83.93	215.70	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Berm-320	100	27	0	87.24	214.58	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-441	100	25	0	87.76	213.25	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-433	100	25	0	82.92	207.53	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-364b/364c	100	23	0	82.6	205.54	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-434	100	18	0	81.35	199.50	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-438	100	11	0	81.67	193.16	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Berm-451	100	7	0	82.29	189.67	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$2,629,653	21,400	$123	
Clinton Harbor - Entrance Channel	Beach-480	100	21	-1	72.89	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-451	100	3	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Clinton Harbor - Entrance Channel	Beach-327	100	73	-1	74.53	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$2,629,653	21,400	$123	
Clinton Harbor - Entrance Channel	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-381	100	100	-1	72.66	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-121	100	57	-1	73.2	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-348	100	11	-1	73.83	-1.00	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Beach-434	100	40	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$3,352,074	21,400	$157	
Clinton Harbor - Entrance Channel	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$2,048,813	21,400	$96	
Clinton Harbor - Entrance Channel	Beach-68	100	15	-1	73.2	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-444	100	33	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-333	100	11	-1	74.53	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-330	100	100	-1	74.53	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$2,249,906	21,400	$105	
Clinton Harbor - Entrance Channel	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-67	100	22	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Beach-337	100	21	-1	74.14	-1.00	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-79	100	91	-1	73.2	-1.00	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Beach-438	100	17	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-329	100	100	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Clinton Harbor - Entrance Channel	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$2,629,653	21,400	$123	
Clinton Harbor - Entrance Channel	Beach-339	100	40	-1	74.14	-1.00	Yes	Yes	$1,707,661	21,400	$80	
Clinton Harbor - Entrance Channel	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-459	100	33	-1	74.14	-1.00	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-433	100	99	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-367	100	66	-1	73.59	-1.00	Yes	Yes	$2,172,582	21,400	$102	
Clinton Harbor - Entrance Channel	Beach-474	100	0	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-364	100	100	-1	73.83	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$3,352,074	21,400	$157	
Clinton Harbor - Entrance Channel	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$2,632,706	21,400	$123	
Clinton Harbor - Entrance Channel	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$3,286,843	21,400	$154	
Clinton Harbor - Entrance Channel	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$2,844,808	21,400	$133	
Clinton Harbor - Entrance Channel	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$2,629,653	21,400	$123	
Clinton Harbor - Entrance Channel	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$2,629,653	21,400	$123	
Clinton Harbor - Entrance Channel	Beach-620	100	100	-1	75	-1.00	No	Yes	$2,591,491	21,400	$121	
Clinton Harbor - Entrance Channel	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$2,629,653	21,400	$123	
Clinton Harbor - Entrance Channel	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$4,050,297	21,400	$189	
Clinton Harbor - Entrance Channel	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$3,352,074	21,400	$157	
Clinton Harbor - Entrance Channel	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$2,632,706	21,400	$123	
Clinton Harbor - Inner Harbor	CAD-M_bse	100	100	100	85.16	385.16	Yes	Yes	$2,073,356	19,000	$109	
Clinton Harbor - Inner Harbor	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$2,625,991	19,000	$138	
Clinton Harbor - Inner Harbor	IslandCDF-P_bse	100	100	100	72.76	372.76	Yes	Yes	$2,444,071	19,000	$129	
Clinton Harbor - Inner Harbor	IslandCDF-Q_bse	100	100	100	71.51	371.51	Yes	Yes	$2,991,150	19,000	$157	
Clinton Harbor - Inner Harbor	ShoreCDF-O_bse	100	100	100	69.95	369.95	Yes	Yes	$2,444,071	19,000	$129	
Clinton Harbor - Inner Harbor	UOW-CSDS	50	100	100	72.31	322.31	No	Yes	$1,094,335	19,000	$58	
Clinton Harbor - Inner Harbor	IslandCDF-L_bse	100	100	50	70.94	320.94	Yes	Yes	$3,096,601	19,000	$163	
Clinton Harbor - Inner Harbor	ShoreCDF-K_bse	100	100	50	67.68	317.68	Yes	Yes	$3,096,601	19,000	$163	
Clinton Harbor - Inner Harbor	IslandCDF-R_bse	100	100	50	67.53	317.53	Yes	Yes	$3,096,601	19,000	$163	
Clinton Harbor - Inner Harbor	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$2,416,928	19,000	$127	
Clinton Harbor - Inner Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$2,416,928	19,000	$127	
Clinton Harbor - Inner Harbor	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$2,416,928	19,000	$127	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Clinton Harbor - Inner Harbor	UOW-CLDS	50	100	50	75.43	275.43	No	Yes	$1,441,519	19,000	$76	
Clinton Harbor - Inner Harbor	UOW-NLDS	50	100	50	72.31	272.31	No	Yes	$1,441,519	19,000	$76	
Clinton Harbor - Inner Harbor	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$3,741,100	19,000	$197	
Clinton Harbor - Inner Harbor	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$3,741,100	19,000	$197	
Clinton Harbor - Inner Harbor	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$3,741,100	19,000	$197	
Clinton Harbor - Inner Harbor	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$3,741,100	19,000	$197	
Clinton Harbor - Inner Harbor	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$3,741,100	19,000	$197	
Clinton Harbor - Inner Harbor	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$3,741,100	19,000	$197	
Clinton Harbor - Inner Harbor	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$3,741,100	19,000	$197	
Clinton Harbor - Inner Harbor	COW-E_bse	50	100	0	85.57	235.57	Yes	Yes	$1,946,813	19,000	$102	
Clinton Harbor - Inner Harbor	COW-E_cap	50	100	0	85.57	235.57	Yes	Yes	$1,946,813	19,000	$102	
Clinton Harbor - Inner Harbor	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$1,946,813	19,000	$102	
Clinton Harbor - Inner Harbor	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$2,416,928	19,000	$127	
Clinton Harbor - Inner Harbor	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$2,416,928	19,000	$127	
Clinton Harbor - Inner Harbor	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$2,416,928	19,000	$127	
Clinton Harbor - Inner Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-345	-1	0	0	0	-1.00	Yes	Yes	$1,395,598	19,000	$73	
Clinton Harbor - Inner Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Clinton Harbor - Inner Harbor	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$1,624,528	19,000	$86	
Clinton Harbor - Inner Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-343	-1	0	0	0	-1.00	Yes	Yes	$891,108	19,000	$47	
Clinton Harbor - Inner Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-365	-1	0	0	0	-1.00	Yes	Yes	$1,049,710	19,000	$55	
Clinton Harbor - Inner Harbor	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$1,049,710	19,000	$55	
Clinton Harbor - Inner Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$2,073,356	19,000	$109	
Clinton Harbor - Inner Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-344	-1	0	0	0	-1.00	Yes	Yes	$1,395,598	19,000	$73	
Clinton Harbor - Inner Harbor	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Clinton Harbor - Inner Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$2,074,417	19,000	$109	
Clinton Harbor - Inner Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$3,741,100	19,000	$197	
Clinton Harbor - Inner Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$1,395,598	19,000	$73	
Clinton Harbor - Inner Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	Beach-457	-1	0	0	0	-1.00	Yes	Yes	$1,395,598	19,000	$73	
Clinton Harbor - Inner Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$2,492,590	19,000	$131	
Clinton Harbor - Inner Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$3,096,601	19,000	$163	
Clinton Harbor - Inner Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$2,991,150	19,000	$157	
Clinton Harbor - Inner Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$3,741,100	19,000	$197	
Clinton Harbor - Inner Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$2,444,071	19,000	$129	
Clinton Harbor - Inner Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$3,096,601	19,000	$163	
Clinton Harbor - Inner Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$3,741,100	19,000	$197	
Clinton Harbor - Inner Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$3,741,100	19,000	$197	
Clinton Harbor - Inner Harbor	Beach-620	-1	0	-1	0	-1.00	No	Yes	$2,492,590	19,000	$131	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Clinton Harbor - Inner Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$3,741,100	19,000	$197	
Clinton Harbor - Inner Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$2,444,071	19,000	$129	
Clinton Harbor - Inner Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$2,625,991	19,000	$138	
Clinton Harbor - Inner Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$3,096,601	19,000	$163	
Clinton Harbor - Inner Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$3,741,100	19,000	$197	
Clinton Harbor - Inner Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$1,395,598	19,000	$73	
Clinton Harbor - Inner Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$3,741,100	19,000	$197	
Guilford Harbor - Middle	CAD-M_cap	100	100	100	85.16	385.16	Yes	Yes	$4,995,157	61,100	$82	
Guilford Harbor - Middle	UOW-CLDS	100	100	100	75.43	375.43	No	Yes	$2,489,397	61,100	$41	
Guilford Harbor - Middle	IslandCDF-N_cap	100	100	100	73.28	373.28	Yes	Yes	$7,261,658	61,100	$119	
Guilford Harbor - Middle	IslandCDF-P_cap	100	100	100	72.76	372.76	Yes	Yes	$7,261,658	61,100	$119	
Guilford Harbor - Middle	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$2,489,397	61,100	$41	
Guilford Harbor - Middle	IslandCDF-L_cap	100	100	100	70.94	370.94	Yes	Yes	$7,858,631	61,100	$129	
Guilford Harbor - Middle	ShoreCDF-O_cap	100	100	100	69.95	369.95	Yes	Yes	$7,261,658	61,100	$119	
Guilford Harbor - Middle	Berm-365	100	100	50	81.28	331.28	Yes	Yes	$3,465,949	61,100	$57	
Guilford Harbor - Middle	IslandCDF-Q_cap	100	100	50	71.51	321.51	Yes	Yes	$8,316,514	61,100	$136	
Guilford Harbor - Middle	ShoreCDF-J_cap	100	100	50	66.72	316.72	Yes	Yes	$8,316,514	61,100	$136	
Guilford Harbor - Middle	ShoreCDF-I_cap	100	84	50	71.25	304.80	Yes	Yes	$8,316,514	61,100	$136	
Guilford Harbor - Middle	Beach-339	100	14	100	74.14	288.22	Yes	Yes	$1,668,552	61,100	$27	
Guilford Harbor - Middle	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$4,071,595	61,100	$67	
Guilford Harbor - Middle	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-Grove Beach	100	51	50	75	276.40	No	Yes	$3,465,949	61,100	$57	
Guilford Harbor - Middle	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$4,071,595	61,100	$67	
Guilford Harbor - Middle	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$4,071,595	61,100	$67	
Guilford Harbor - Middle	Berm-453	100	86	0	84.53	270.57	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	ShoreCDF-D_cap	100	100	0	70.36	270.36	Yes	Yes	$10,021,835	61,100	$164	
Guilford Harbor - Middle	Berm-449	100	87	0	82.4	269.09	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$10,021,835	61,100	$164	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Guilford Harbor - Middle	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$10,021,835	61,100	$164	
Guilford Harbor - Middle	IslandCDF-R_cap	100	100	0	67.53	267.53	Yes	Yes	$10,021,835	61,100	$164	
Guilford Harbor - Middle	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$10,021,835	61,100	$164	
Guilford Harbor - Middle	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$10,021,835	61,100	$164	
Guilford Harbor - Middle	ShoreCDF-K_cap	100	42	50	67.68	259.34	Yes	Yes	$8,316,514	61,100	$136	
Guilford Harbor - Middle	Berm-456	100	79	0	80.39	259.10	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-457	100	7	50	86.95	244.09	Yes	Yes	$2,745,005	61,100	$45	
Guilford Harbor - Middle	Berm-454B	100	60	0	83.23	242.80	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Berm-368	100	59	0	81.61	240.76	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-620	100	65	0	75	240.47	No	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-177	100	55	0	84.64	239.80	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-457	100	9	50	74.14	233.47	Yes	Yes	$2,745,005	61,100	$45	
Guilford Harbor - Middle	Berm-337	100	45	0	83.93	229.41	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Berm-440	100	48	0	79.87	227.62	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-447	100	45	0	80.1	225.10	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Berm-367	100	40	0	83.31	223.06	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-467	100	37	0	82.19	219.30	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-455/82	100	29	0	83.93	212.68	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Berm-320	100	25	0	87.24	211.99	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-441	100	23	0	87.76	210.83	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-433	100	22	0	82.92	205.19	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-364b/364c	100	21	0	82.6	203.37	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-434	100	16	0	81.35	197.78	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-438	100	10	0	81.67	192.07	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Berm-451	100	7	0	82.29	188.97	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-343	100	3	-1	73.83	-1.00	Yes	Yes	$3,465,949	61,100	$57	
Guilford Harbor - Middle	Beach-67	100	8	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-68	100	5	-1	73.2	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-468	100	70	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-337	100	8	-1	74.14	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-345	100	93	-1	74.14	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-442	100	85	-1	74.53	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$6,522,062	61,100	$107	
Guilford Harbor - Middle	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-320	100	70	-1	73.83	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-444	100	12	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$4,241,500	61,100	$69	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Guilford Harbor - Middle	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-330	100	39	-1	74.53	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-79	100	32	-1	73.2	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$4,071,595	61,100	$67	
Guilford Harbor - Middle	Beach-437	100	92	-1	72.27	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-348	100	4	-1	73.83	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-177	100	44	-1	72.89	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-434	100	14	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-384	100	71	-1	72.89	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-121	100	20	-1	73.2	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-111	100	53	-1	73.2	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$3,465,949	61,100	$57	
Guilford Harbor - Middle	Beach-333	100	4	-1	74.53	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-459	100	12	-1	74.14	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-76	100	51	-1	74.14	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-332	100	61	-1	74.14	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-327	100	26	-1	74.53	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-433	100	35	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-480	100	7	-1	72.89	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-344	100	1	-1	74.53	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-467	100	51	-1	73.83	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-438	100	6	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-181	100	55	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-451	100	1	-1	74.14	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$4,995,157	61,100	$82	
Guilford Harbor - Middle	Beach-436	100	55	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$6,522,062	61,100	$107	
Guilford Harbor - Middle	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$7,858,631	61,100	$129	
Guilford Harbor - Middle	Beach-474	100	0	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-381	100	50	-1	72.66	-1.00	Yes	Yes	$4,879,236	61,100	$80	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Guilford Harbor - Middle	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-364	100	46	-1	73.83	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-367	100	23	-1	73.59	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$10,021,835	61,100	$164	
Guilford Harbor - Middle	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	Beach-329	100	39	-1	74.14	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$6,522,062	61,100	$107	
Guilford Harbor - Middle	Beach-441	100	44	-1	74.14	-1.00	Yes	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	Beach-331	100	66	-1	74.53	-1.00	Yes	Yes	$4,241,500	61,100	$69	
Guilford Harbor - Middle	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$7,261,658	61,100	$119	
Guilford Harbor - Middle	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$8,316,514	61,100	$136	
Guilford Harbor - Middle	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$6,522,062	61,100	$107	
Guilford Harbor - Middle	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$10,021,835	61,100	$164	
Guilford Harbor - Middle	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$8,316,514	61,100	$136	
Guilford Harbor - Middle	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$10,021,835	61,100	$164	
Guilford Harbor - Middle	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$8,316,514	61,100	$136	
Guilford Harbor - Middle	Beach-620	100	100	-1	75	-1.00	No	Yes	$4,879,236	61,100	$80	
Guilford Harbor - Middle	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$10,021,835	61,100	$164	
Guilford Harbor - Middle	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$7,261,658	61,100	$119	
Guilford Harbor - Middle	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$6,522,062	61,100	$107	
Guilford Harbor - Middle	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$10,021,835	61,100	$164	
Guilford Harbor - Middle	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$8,316,514	61,100	$136	
Guilford Harbor - Middle	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$10,021,835	61,100	$164	
Guilford Harbor - Middle	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$6,522,062	61,100	$107	
Guilford Harbor - Middle	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$7,261,658	61,100	$119	
Guilford Harbor - Entrance and Inner	CAD-M_bse	100	100	100	85.16	385.16	Yes	Yes	$1,154,930	6,800	$170	
Guilford Harbor - Entrance and Inner	UOW-CLDS	100	100	100	75.43	375.43	No	Yes	$828,625	6,800	$122	
Guilford Harbor - Entrance and Inner	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$1,397,940	6,800	$206	
Guilford Harbor - Entrance and Inner	IslandCDF-P_bse	100	100	100	72.76	372.76	Yes	Yes	$1,397,940	6,800	$206	
Guilford Harbor - Entrance and Inner	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$828,625	6,800	$122	
Guilford Harbor - Entrance and Inner	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$1,584,294	6,800	$233	
Guilford Harbor - Entrance and Inner	ShoreCDF-O_bse	100	100	100	69.95	369.95	Yes	Yes	$1,397,940	6,800	$206	
Guilford Harbor - Entrance and Inner	IslandCDF-Q_bse	100	100	50	71.51	321.51	Yes	Yes	$1,674,914	6,800	$246	
Guilford Harbor - Entrance and Inner	ShoreCDF-I_bse	100	100	50	71.25	321.25	Yes	Yes	$1,674,914	6,800	$246	
Guilford Harbor - Entrance and Inner	ShoreCDF-K_bse	100	100	50	67.68	317.68	Yes	Yes	$1,674,914	6,800	$246	
Guilford Harbor - Entrance and Inner	ShoreCDF-J_bse	100	100	50	66.72	316.72	Yes	Yes	$1,674,914	6,800	$246	
Guilford Harbor - Entrance and Inner	COW-E_bse	100	100	0	85.57	285.57	Yes	Yes	$1,322,706	6,800	$195	
Guilford Harbor - Entrance and Inner	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$1,322,706	6,800	$195	
Guilford Harbor - Entrance and Inner	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$1,488,096	6,800	$219	
Guilford Harbor - Entrance and Inner	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$1,488,096	6,800	$219	
Guilford Harbor - Entrance and Inner	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$1,488,096	6,800	$219	
Guilford Harbor - Entrance and Inner	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$1,322,706	6,800	$195	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Guilford Harbor - Entrance and Inner	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$1,322,706	6,800	$195	
Guilford Harbor - Entrance and Inner	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$2,021,840	6,800	$297	
Guilford Harbor - Entrance and Inner	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$2,021,840	6,800	$297	
Guilford Harbor - Entrance and Inner	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$2,021,840	6,800	$297	
Guilford Harbor - Entrance and Inner	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$2,021,840	6,800	$297	
Guilford Harbor - Entrance and Inner	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$2,021,840	6,800	$297	
Guilford Harbor - Entrance and Inner	BF-422/423	100	100	0	62.03	262.03	Yes	Yes	$1,488,096	6,800	$219	
Guilford Harbor - Entrance and Inner	Habitat-429	100	100	0	61.33	261.33	Yes	Yes	$1,488,096	6,800	$219	
Guilford Harbor - Entrance and Inner	Habitat-427	100	100	0	59.77	259.77	Yes	Yes	$1,488,096	6,800	$219	
Guilford Harbor - Entrance and Inner	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$2,021,840	6,800	$297	
Guilford Harbor - Entrance and Inner	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$1,153,101	6,800	$170	
Guilford Harbor - Entrance and Inner	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$1,154,930	6,800	$170	
Guilford Harbor - Entrance and Inner	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$1,153,101	6,800	$170	
Guilford Harbor - Entrance and Inner	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$1,153,101	6,800	$170	
Guilford Harbor - Entrance and Inner	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$2,021,840	6,800	$297	
Guilford Harbor - Entrance and Inner	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$1,057,285	6,800	$155	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Guilford Harbor - Entrance and Inner	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-457	-1	0	0	0	-1.00	Yes	Yes	$1,057,285	6,800	$155	
Guilford Harbor - Entrance and Inner	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Guilford Harbor - Entrance and Inner	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-339	-1	0	0	0	-1.00	Yes	Yes	$759,109	6,800	$112	
Guilford Harbor - Entrance and Inner	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$1,509,315	6,800	$222	
Guilford Harbor - Entrance and Inner	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$2,021,840	6,800	$297	
Guilford Harbor - Entrance and Inner	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$2,021,840	6,800	$297	
Guilford Harbor - Entrance and Inner	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$1,153,101	6,800	$170	
Guilford Harbor - Entrance and Inner	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$1,674,914	6,800	$246	
Guilford Harbor - Entrance and Inner	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$1,674,914	6,800	$246	
Guilford Harbor - Entrance and Inner	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$1,674,914	6,800	$246	
Guilford Harbor - Entrance and Inner	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$2,021,840	6,800	$297	
Guilford Harbor - Entrance and Inner	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$2,021,840	6,800	$297	
Guilford Harbor - Entrance and Inner	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$1,397,940	6,800	$206	
Guilford Harbor - Entrance and Inner	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$1,584,294	6,800	$233	
Guilford Harbor - Entrance and Inner	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$2,021,840	6,800	$297	
Guilford Harbor - Entrance and Inner	Beach-620	-1	0	-1	0	-1.00	No	Yes	$1,892,664	6,800	$278	
Guilford Harbor - Entrance and Inner	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$1,674,914	6,800	$246	
Guilford Harbor - Entrance and Inner	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$1,397,940	6,800	$206	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Guilford Harbor - Entrance and Inner	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$1,397,940	6,800	$206	
Guilford Harbor - Entrance and Inner	Berm-620	-1	0	0	0	-1.00	No	Yes	$1,892,664	6,800	$278	
Stony Creek Harbor	CAD-M_bse	100	100	100	85.16	385.16	Yes	Yes	$5,297,284	65,000	$81	
Stony Creek Harbor	UOW-CLDS	100	100	100	75.43	375.43	No	Yes	$2,596,965	65,000	$40	
Stony Creek Harbor	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$7,690,014	65,000	$118	
Stony Creek Harbor	IslandCDF-P_bse	100	100	100	72.76	372.76	Yes	Yes	$8,271,870	65,000	$127	
Stony Creek Harbor	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$7,690,014	65,000	$118	
Stony Creek Harbor	ShoreCDF-K_bse	100	100	100	67.68	367.68	Yes	Yes	$8,271,870	65,000	$127	
Stony Creek Harbor	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$8,271,870	65,000	$127	
Stony Creek Harbor	UOW-CSDS	100	100	50	72.31	322.31	No	Yes	$2,923,233	65,000	$45	
Stony Creek Harbor	ShoreCDF-I_bse	100	100	50	71.25	321.25	Yes	Yes	$8,802,312	65,000	$135	
Stony Creek Harbor	ShoreCDF-O_bse	100	45	100	69.95	315.05	Yes	Yes	$8,271,870	65,000	$127	
Stony Creek Harbor	ShoreCDF-F_bse	100	100	50	59.43	309.43	Yes	Yes	$8,802,312	65,000	$135	
Stony Creek Harbor	COW-E_bse	100	100	0	85.57	285.57	Yes	Yes	$4,270,804	65,000	$66	
Stony Creek Harbor	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$4,270,804	65,000	$66	
Stony Creek Harbor	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$6,875,028	65,000	$106	
Stony Creek Harbor	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$6,875,028	65,000	$106	
Stony Creek Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$6,875,028	65,000	$106	
Stony Creek Harbor	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$4,270,804	65,000	$66	
Stony Creek Harbor	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$4,270,804	65,000	$66	
Stony Creek Harbor	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$10,607,046	65,000	$163	
Stony Creek Harbor	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$10,607,046	65,000	$163	
Stony Creek Harbor	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$10,607,046	65,000	$163	
Stony Creek Harbor	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$10,607,046	65,000	$163	
Stony Creek Harbor	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$10,607,046	65,000	$163	
Stony Creek Harbor	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$10,607,046	65,000	$163	
Stony Creek Harbor	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$6,875,028	65,000	$106	
Stony Creek Harbor	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$6,875,028	65,000	$106	
Stony Creek Harbor	Habitat-427	50	49	0	59.77	158.30	Yes	Yes	$6,875,028	65,000	$106	
Stony Creek Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$5,297,284	65,000	$81	
Stony Creek Harbor	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$3,639,247	65,000	$56	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stony Creek Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Beach-339	-1	0	0	0	-1.00	Yes	Yes	$2,872,278	65,000	$44	
Stony Creek Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$3,639,247	65,000	$56	
Stony Creek Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$3,639,247	65,000	$56	
Stony Creek Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$3,639,247	65,000	$56	
Stony Creek Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$3,639,247	65,000	$56	
Stony Creek Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$3,639,247	65,000	$56	
Stony Creek Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$10,607,046	65,000	$163	
Stony Creek Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stony Creek Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$3,639,247	65,000	$56	
Stony Creek Harbor	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$3,639,247	65,000	$56	
Stony Creek Harbor	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$3,639,247	65,000	$56	
Stony Creek Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$3,639,247	65,000	$56	
Stony Creek Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stony Creek Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$8,271,870	65,000	$127	
Stony Creek Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$10,607,046	65,000	$163	
Stony Creek Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$8,802,312	65,000	$135	
Stony Creek Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$5,104,854	65,000	$79	
Stony Creek Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$8,271,870	65,000	$127	
Stony Creek Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$4,451,771	65,000	$68	
Stony Creek Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$8,271,870	65,000	$127	
Stony Creek Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$8,271,870	65,000	$127	
Stony Creek Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$8,802,312	65,000	$135	
Stony Creek Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$10,607,046	65,000	$163	
Stony Creek Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$10,607,046	65,000	$163	
Stony Creek Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$7,690,014	65,000	$118	
Stony Creek Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$10,607,046	65,000	$163	
Stony Creek Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$7,690,014	65,000	$118	
Stony Creek Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$10,607,046	65,000	$163	
Stony Creek Harbor	Beach-620	-1	0	-1	0	-1.00	No	Yes	$5,104,854	65,000	$79	
Branford Harbor	CAD-M_bse	100	100	100	85.16	385.16	Yes	Yes	$10,293,876	144,400	$71	
Branford Harbor	UOW-CLDS	100	100	100	75.43	375.43	No	Yes	$3,927,001	144,400	$27	
Branford Harbor	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$16,442,917	144,400	$114	
Branford Harbor	IslandCDF-P_bse	100	100	100	72.76	372.76	Yes	Yes	$18,010,795	144,400	$125	
Branford Harbor	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$16,442,917	144,400	$114	
Branford Harbor	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$18,010,795	144,400	$125	
Branford Harbor	ShoreCDF-K_bse	100	76	100	67.68	343.44	Yes	Yes	$18,010,795	144,400	$125	
Branford Harbor	ShoreCDF-I_bse	100	68	100	71.25	339.68	Yes	Yes	$18,010,795	144,400	$125	
Branford Harbor	COW-E_cap	100	100	50	85.57	335.57	Yes	Yes	$5,591,838	144,400	$39	
Branford Harbor	COW-E_bse	100	92	50	85.57	327.55	Yes	Yes	$5,591,838	144,400	$39	
Branford Harbor	UOW-CSDS	100	100	50	72.31	322.31	No	Yes	$5,591,838	144,400	$39	
Branford Harbor	ShoreCDF-F_bse	100	100	50	59.43	309.43	Yes	Yes	$18,736,711	144,400	$130	
Branford Harbor	ShoreCDF-O_bse	100	21	100	69.95	290.64	Yes	Yes	$18,010,795	144,400	$125	
Branford Harbor	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$16,927,762	144,400	$117	
Branford Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$16,927,762	144,400	$117	
Branford Harbor	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$16,927,762	144,400	$117	
Branford Harbor	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$8,419,672	144,400	$58	
Branford Harbor	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$8,419,672	144,400	$58	
Branford Harbor	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$23,197,822	144,400	$161	
Branford Harbor	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$23,197,822	144,400	$161	
Branford Harbor	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$23,197,822	144,400	$161	
Branford Harbor	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$23,197,822	144,400	$161	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Branford Harbor	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$23,197,822	144,400	$161	
Branford Harbor	ShoreCDF-D_bse	100	84	0	70.36	254.24	Yes	Yes	$23,197,822	144,400	$161	
Branford Harbor	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$16,927,762	144,400	$117	
Branford Harbor	BF-422/423	50	48	0	62.03	160.44	Yes	Yes	$16,927,762	144,400	$117	
Branford Harbor	Habitat-427	50	22	0	59.77	132.04	Yes	Yes	$16,927,762	144,400	$117	
Branford Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$7,180,174	144,400	$50	
Branford Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$7,180,174	144,400	$50	
Branford Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$23,197,822	144,400	$161	
Branford Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$7,180,174	144,400	$50	
Branford Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$7,180,174	144,400	$50	
Branford Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$7,180,174	144,400	$50	
Branford Harbor	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Branford Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$7,180,174	144,400	$50	
Branford Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$7,180,174	144,400	$50	
Branford Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-337	-1	0	0	0	-1.00	Yes	Yes	$5,468,806	144,400	$38	
Branford Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$7,180,174	144,400	$50	
Branford Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$5,468,806	144,400	$38	
Branford Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$7,180,174	144,400	$50	
Branford Harbor	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$7,180,174	144,400	$50	
Branford Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$10,293,876	144,400	$71	
Branford Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$7,180,174	144,400	$50	
Branford Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$7,180,174	144,400	$50	
Branford Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Branford Harbor	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Beach-459	-1	0	0	0	-1.00	Yes	Yes	$5,468,806	144,400	$38	
Branford Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$7,180,174	144,400	$50	
Branford Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$8,630,934	144,400	$60	
Branford Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$9,721,754	144,400	$67	
Branford Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$16,442,917	144,400	$114	
Branford Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$18,736,711	144,400	$130	
Branford Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$18,010,795	144,400	$125	
Branford Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$23,197,822	144,400	$161	
Branford Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$23,197,822	144,400	$161	
Branford Harbor	Beach-620	-1	0	-1	0	-1.00	No	Yes	$9,721,754	144,400	$67	
Branford Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$18,010,795	144,400	$125	
Branford Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$23,197,822	144,400	$161	
Branford Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$23,197,822	144,400	$161	
Branford Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$9,721,754	144,400	$67	
Branford Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$18,010,795	144,400	$125	
Branford Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$16,442,917	144,400	$114	
Branford Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$18,010,795	144,400	$125	
Branford Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$23,197,822	144,400	$161	
Branford Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$18,010,795	144,400	$125	
Branford Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$8,630,934	144,400	$60	
New Haven Harbor - Maintenance	UOW-CLDS	100	100	100	75.43	375.43	No	Yes	$14,837,447	880,000	$17	
New Haven Harbor - Maintenance	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$103,297,498	880,000	$117	
New Haven Harbor - Maintenance	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$77,385,583	880,000	$88	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Maintenance	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$103,297,498	880,000	$117	
New Haven Harbor - Maintenance	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$103,297,498	880,000	$117	
New Haven Harbor - Maintenance	UOW-CSDS	100	100	50	72.31	322.31	No	Yes	$30,727,777	880,000	$35	
New Haven Harbor - Maintenance	CAD-M_bse	100	18	100	85.16	302.82	Yes	Yes	$56,567,421	880,000	$64	
New Haven Harbor - Maintenance	ShoreCDF-I_bse	100	7	100	71.25	278.75	Yes	Yes	$103,297,498	880,000	$117	
New Haven Harbor - Maintenance	ShoreCDF-K_bse	100	8	100	67.68	275.98	Yes	Yes	$92,971,749	880,000	$106	
New Haven Harbor - Maintenance	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$39,532,429	880,000	$45	
New Haven Harbor - Maintenance	IslandCDF-P_bse	100	52	50	72.76	274.89	Yes	Yes	$106,765,884	880,000	$121	
New Haven Harbor - Maintenance	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$39,532,429	880,000	$45	
New Haven Harbor - Maintenance	ShoreCDF-O_bse	100	2	100	69.95	272.22	Yes	Yes	$103,297,498	880,000	$117	
New Haven Harbor - Maintenance	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$121,169,650	880,000	$138	
New Haven Harbor - Maintenance	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$121,169,650	880,000	$138	
New Haven Harbor - Maintenance	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$121,169,650	880,000	$138	
New Haven Harbor - Maintenance	COW-E_cap	100	18	50	85.57	253.90	Yes	Yes	$30,727,777	880,000	$35	
New Haven Harbor - Maintenance	COW-E_bse	100	10	50	85.57	245.65	Yes	Yes	$30,727,777	880,000	$35	
New Haven Harbor - Maintenance	ShoreCDF-C_bse	100	21	50	66.9	237.88	Yes	Yes	$106,765,884	880,000	$121	
New Haven Harbor - Maintenance	ShoreCDF-D_bse	100	9	50	70.36	229.55	Yes	Yes	$106,765,884	880,000	$121	
New Haven Harbor - Maintenance	LFPlace-59	100	38	0	85.27	223.15	Yes	Yes	$108,473,025	880,000	$123	
New Haven Harbor - Maintenance	LFCap-251	100	45	0	77.41	222.86	Yes	Yes	$108,473,025	880,000	$123	
New Haven Harbor - Maintenance	LFCap-61	100	27	0	77.41	203.93	Yes	Yes	$108,473,025	880,000	$123	
New Haven Harbor - Maintenance	IslandCDF-B_bse	100	19	0	68.28	187.15	Yes	Yes	$121,169,650	880,000	$138	
New Haven Harbor - Maintenance	Habitat-429	50	28	0	61.33	139.74	Yes	Yes	$108,473,025	880,000	$123	
New Haven Harbor - Maintenance	BF-422/423	50	5	0	62.03	117.33	Yes	Yes	$108,473,025	880,000	$123	
New Haven Harbor - Maintenance	Habitat-427	50	2	0	59.77	112.21	Yes	Yes	$108,473,025	880,000	$123	
New Haven Harbor - Maintenance	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	880,000	$17	
New Haven Harbor - Maintenance	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-330	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	880,000	$10	
New Haven Harbor - Maintenance	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	880,000	$17	
New Haven Harbor - Maintenance	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-332	-1	0	0	0	-1.00	Yes	Yes	$7,233,630	880,000	$8	
New Haven Harbor - Maintenance	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-329	-1	0	0	0	-1.00	Yes	Yes	$7,233,630	880,000	$8	
New Haven Harbor - Maintenance	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Maintenance	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	880,000	$15	
New Haven Harbor - Maintenance	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	880,000	$18	
New Haven Harbor - Maintenance	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$121,169,650	880,000	$138	
New Haven Harbor - Maintenance	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	880,000	$18	
New Haven Harbor - Maintenance	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	880,000	$17	
New Haven Harbor - Maintenance	Beach-451	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	880,000	$15	
New Haven Harbor - Maintenance	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	880,000	$17	
New Haven Harbor - Maintenance	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-333	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	880,000	$10	
New Haven Harbor - Maintenance	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	880,000	$15	
New Haven Harbor - Maintenance	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	880,000	$10	
New Haven Harbor - Maintenance	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-337	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	880,000	$10	
New Haven Harbor - Maintenance	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	880,000	$17	
New Haven Harbor - Maintenance	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	880,000	$15	
New Haven Harbor - Maintenance	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	880,000	$17	
New Haven Harbor - Maintenance	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	880,000	$17	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Maintenance	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	880,000	$17	
New Haven Harbor - Maintenance	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	880,000	$17	
New Haven Harbor - Maintenance	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	880,000	$17	
New Haven Harbor - Maintenance	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-325	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	880,000	$10	
New Haven Harbor - Maintenance	Beach-331	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	880,000	$10	
New Haven Harbor - Maintenance	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	880,000	$17	
New Haven Harbor - Maintenance	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	880,000	$17	
New Haven Harbor - Maintenance	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-447	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	880,000	$15	
New Haven Harbor - Maintenance	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-327	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	880,000	$15	
New Haven Harbor - Maintenance	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$56,567,421	880,000	$64	
New Haven Harbor - Maintenance	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-459	-1	0	0	0	-1.00	Yes	Yes	$7,233,630	880,000	$8	
New Haven Harbor - Maintenance	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	880,000	$18	
New Haven Harbor - Maintenance	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	880,000	$26	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Maintenance	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$121,169,650	880,000	$138	
New Haven Harbor - Maintenance	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$77,385,583	880,000	$88	
New Haven Harbor - Maintenance	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$103,297,498	880,000	$117	
New Haven Harbor - Maintenance	Berm-620	-1	0	0	0	-1.00	No	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$103,297,498	880,000	$117	
New Haven Harbor - Maintenance	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$121,169,650	880,000	$138	
New Haven Harbor - Maintenance	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$106,765,884	880,000	$121	
New Haven Harbor - Maintenance	Beach-620	-1	0	-1	0	-1.00	No	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$22,809,066	880,000	$26	
New Haven Harbor - Maintenance	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$121,169,650	880,000	$138	
New Haven Harbor - Maintenance	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$106,765,884	880,000	$121	
New Haven Harbor - Maintenance	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$92,971,749	880,000	$106	
New Haven Harbor - Maintenance	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$103,297,498	880,000	$117	
New Haven Harbor - Maintenance	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$103,297,498	880,000	$117	
New Haven Harbor - Maintenance	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$103,297,498	880,000	$117	
New Haven Harbor - Maintenance	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$106,765,884	880,000	$121	
New Haven Harbor - Improvement	UOW-CLDS	100	100	100	75.43	375.43	No	Yes	$57,801,532	5,100,000	$11	highest estimated volume
New Haven Harbor - Improvement	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$463,537,464	5,100,000	$91	highest estimated volume
New Haven Harbor - Improvement	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$334,628,071	5,100,000	$66	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$463,537,464	5,100,000	$91	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$463,537,464	5,100,000	$91	highest estimated volume
New Haven Harbor - Improvement	UOW-CSDS	100	100	50	72.31	322.31	No	Yes	$136,415,074	5,100,000	$27	highest estimated volume
New Haven Harbor - Improvement	CAD-M_bse	100	9	100	85.16	294.30	Yes	Yes	$250,892,021	5,100,000	$49	highest estimated volume
New Haven Harbor - Improvement	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$162,161,177	5,100,000	$32	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-I_bse	100	4	100	71.25	275.13	Yes	Yes	$463,537,464	5,100,000	$91	highest estimated volume

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Improvement	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$162,161,177	5,100,000	$32	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-K_bse	100	4	100	67.68	271.98	Yes	Yes	$399,819,850	5,100,000	$78	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-O_bse	100	1	100	69.95	271.12	Yes	Yes	$463,537,464	5,100,000	$91	highest estimated volume
New Haven Harbor - Improvement	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$532,236,906	5,100,000	$104	highest estimated volume
New Haven Harbor - Improvement	IslandCDF-P_bse	100	27	50	72.76	249.74	Yes	Yes	$483,075,203	5,100,000	$95	highest estimated volume
New Haven Harbor - Improvement	COW-E_cap	100	9	50	85.57	245.06	Yes	Yes	$136,415,074	5,100,000	$27	highest estimated volume
New Haven Harbor - Improvement	COW-E_bse	100	5	50	85.57	240.79	Yes	Yes	$136,415,074	5,100,000	$27	highest estimated volume
New Haven Harbor - Improvement	IslandCDF-Q_bse	100	58	0	71.51	229.67	Yes	Yes	$532,236,906	5,100,000	$104	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-C_bse	100	11	50	66.9	227.76	Yes	Yes	$483,075,203	5,100,000	$95	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-D_bse	100	5	50	70.36	225.12	Yes	Yes	$483,075,203	5,100,000	$95	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-A_bse	100	55	0	67.58	222.24	Yes	Yes	$532,236,906	5,100,000	$104	highest estimated volume
New Haven Harbor - Improvement	LFPlace-59	100	20	0	85.27	204.88	Yes	Yes	$476,500,834	5,100,000	$93	highest estimated volume
New Haven Harbor - Improvement	LFCap-251	100	24	0	77.41	200.94	Yes	Yes	$476,500,834	5,100,000	$93	highest estimated volume
New Haven Harbor - Improvement	LFCap-61	100	14	0	77.41	191.14	Yes	Yes	$476,500,834	5,100,000	$93	highest estimated volume

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Improvement	IslandCDF-B_bse	100	10	0	68.28	178.05	Yes	Yes	$532,236,906	5,100,000	$104	highest estimated volume
New Haven Harbor - Improvement	Habitat-429	50	15	0	61.33	126.04	Yes	Yes	$476,500,834	5,100,000	$93	highest estimated volume
New Haven Harbor - Improvement	BF-422/423	50	3	0	62.03	114.78	Yes	Yes	$476,500,834	5,100,000	$93	highest estimated volume
New Haven Harbor - Improvement	Habitat-427	50	1	0	59.77	111.03	Yes	Yes	$476,500,834	5,100,000	$93	highest estimated volume
New Haven Harbor - Improvement	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	5,100,000	$2	highest estimated volume
New Haven Harbor - Improvement	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	5,100,000	$3	highest estimated volume

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Improvement	Beach-333	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	5,100,000	$2	highest estimated volume
New Haven Harbor - Improvement	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Improvement	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Improvement	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Beach-337	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	5,100,000	$2	highest estimated volume
New Haven Harbor - Improvement	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Beach-459	-1	0	0	0	-1.00	Yes	Yes	$7,233,630	5,100,000	$1	highest estimated volume
New Haven Harbor - Improvement	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Improvement	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-447	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$250,892,021	5,100,000	$49	highest estimated volume
New Haven Harbor - Improvement	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Beach-329	-1	0	0	0	-1.00	Yes	Yes	$7,233,630	5,100,000	$1	highest estimated volume
New Haven Harbor - Improvement	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-451	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	5,100,000	$3	highest estimated volume

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Improvement	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-327	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Beach-325	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	5,100,000	$2	highest estimated volume
New Haven Harbor - Improvement	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-330	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	5,100,000	$2	highest estimated volume
New Haven Harbor - Improvement	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Improvement	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-331	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	5,100,000	$2	highest estimated volume
New Haven Harbor - Improvement	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-332	-1	0	0	0	-1.00	Yes	Yes	$7,233,630	5,100,000	$1	highest estimated volume
New Haven Harbor - Improvement	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Improvement	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$532,236,906	5,100,000	$104	highest estimated volume
New Haven Harbor - Improvement	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	5,100,000	$3	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$483,075,203	5,100,000	$95	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$483,075,203	5,100,000	$95	highest estimated volume
New Haven Harbor - Improvement	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$483,075,203	5,100,000	$95	highest estimated volume

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Haven Harbor - Improvement	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$334,628,071	5,100,000	$66	highest estimated volume
New Haven Harbor - Improvement	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$532,236,906	5,100,000	$104	highest estimated volume
New Haven Harbor - Improvement	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$463,537,464	5,100,000	$91	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$399,819,850	5,100,000	$78	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$463,537,464	5,100,000	$91	highest estimated volume
New Haven Harbor - Improvement	Berm-620	-1	0	0	0	-1.00	No	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$463,537,464	5,100,000	$91	highest estimated volume
New Haven Harbor - Improvement	Beach-620	-1	0	-1	0	-1.00	No	Yes	$22,809,066	5,100,000	$4	highest estimated volume
New Haven Harbor - Improvement	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$532,236,906	5,100,000	$104	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$532,236,906	5,100,000	$104	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$463,537,464	5,100,000	$91	highest estimated volume
New Haven Harbor - Improvement	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$463,537,464	5,100,000	$91	highest estimated volume
New Haven Harbor - Improvement	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$22,809,066	5,100,000	$4	highest estimated volume
West River	CAD-M_bse	100	100	100	85.16	385.16	Yes	Yes	$8,552,693	114,000	$75	
West River	UOW-CLDS	100	100	100	75.43	375.43	No	Yes	$3,233,484	114,000	$28	
West River	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$14,360,810	114,000	$126	
West River	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$13,091,436	114,000	$115	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
West River	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$14,360,810	114,000	$126	
West River	ShoreCDF-K_bse	100	96	100	67.68	364.07	Yes	Yes	$13,091,436	114,000	$115	
West River	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$14,360,810	114,000	$126	
West River	ShoreCDF-I_bse	100	87	100	71.25	358.32	Yes	Yes	$14,360,810	114,000	$126	
West River	COW-E_bse	100	100	50	85.57	335.57	Yes	Yes	$4,576,830	114,000	$40	
West River	COW-E_cap	100	100	50	85.57	335.57	Yes	Yes	$4,576,830	114,000	$40	
West River	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$14,934,702	114,000	$131	
West River	ShoreCDF-D_bse	100	100	50	70.36	320.36	Yes	Yes	$14,934,702	114,000	$131	
West River	ShoreCDF-C_bse	100	100	50	66.9	316.90	Yes	Yes	$14,934,702	114,000	$131	
West River	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$12,324,898	114,000	$108	
West River	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$12,324,898	114,000	$108	
West River	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$12,324,898	114,000	$108	
West River	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$6,836,074	114,000	$60	
West River	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$6,836,074	114,000	$60	
West River	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$6,836,074	114,000	$60	
West River	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$18,616,400	114,000	$163	
West River	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$18,616,400	114,000	$163	
West River	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$18,616,400	114,000	$163	
West River	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$18,616,400	114,000	$163	
West River	ShoreCDF-O_bse	100	26	50	69.95	246.28	Yes	Yes	$14,934,702	114,000	$131	
West River	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$12,324,898	114,000	$108	
West River	BF-422/423	50	62	0	62.03	173.62	Yes	Yes	$12,324,898	114,000	$108	
West River	Habitat-427	50	28	0	59.77	138.10	Yes	Yes	$12,324,898	114,000	$108	
West River	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$6,971,154	114,000	$61	
West River	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$6,971,154	114,000	$61	
West River	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$18,616,400	114,000	$163	
West River	Beach-451	-1	0	0	0	-1.00	Yes	Yes	$4,473,498	114,000	$39	
West River	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$8,552,693	114,000	$75	
West River	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$5,820,978	114,000	$51	
West River	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
West River	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$5,820,978	114,000	$51	
West River	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$6,971,154	114,000	$61	
West River	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-331	-1	0	0	0	-1.00	Yes	Yes	$2,895,707	114,000	$25	
West River	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$6,971,154	114,000	$61	
West River	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$6,971,154	114,000	$61	
West River	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$6,971,154	114,000	$61	
West River	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-325	-1	0	0	0	-1.00	Yes	Yes	$2,895,707	114,000	$25	
West River	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-332	-1	0	0	0	-1.00	Yes	Yes	$2,895,707	114,000	$25	
West River	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$5,820,978	114,000	$51	
West River	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$4,473,498	114,000	$39	
West River	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-459	-1	0	0	0	-1.00	Yes	Yes	$4,473,498	114,000	$39	
West River	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-447	-1	0	0	0	-1.00	Yes	Yes	$4,473,498	114,000	$39	
West River	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
West River	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$4,473,498	114,000	$39	
West River	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-329	-1	0	0	0	-1.00	Yes	Yes	$2,895,707	114,000	$25	
West River	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$6,971,154	114,000	$61	
West River	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-330	-1	0	0	0	-1.00	Yes	Yes	$2,895,707	114,000	$25	
West River	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-327	-1	0	0	0	-1.00	Yes	Yes	$4,473,498	114,000	$39	
West River	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$4,473,498	114,000	$39	
West River	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$6,971,154	114,000	$61	
West River	Beach-337	-1	0	0	0	-1.00	Yes	Yes	$4,473,498	114,000	$39	
West River	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$6,971,154	114,000	$61	
West River	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$6,971,154	114,000	$61	
West River	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$6,971,154	114,000	$61	
West River	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-333	-1	0	0	0	-1.00	Yes	Yes	$4,473,498	114,000	$39	
West River	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$4,473,498	114,000	$39	
West River	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$7,947,032	114,000	$70	
West River	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$14,360,810	114,000	$126	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
West River	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$14,934,702	114,000	$131	
West River	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$18,616,400	114,000	$163	
West River	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$14,934,702	114,000	$131	
West River	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$18,616,400	114,000	$163	
West River	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$13,091,436	114,000	$115	
West River	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$13,091,436	114,000	$115	
West River	Berm-620	-1	0	0	0	-1.00	No	Yes	$7,947,032	114,000	$70	
West River	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$7,947,032	114,000	$70	
West River	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$14,934,702	114,000	$131	
West River	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$14,360,810	114,000	$126	
West River	Beach-620	-1	0	-1	0	-1.00	No	Yes	$7,947,032	114,000	$70	
West River	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$18,616,400	114,000	$163	
West River	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$14,360,810	114,000	$126	
West River	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$14,360,810	114,000	$126	
West River	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$14,934,702	114,000	$131	
Mill River	CAD-M_bse	100	100	100	85.16	385.16	Yes	Yes	$27,876,595	418,600	$67	
Mill River	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$50,333,443	418,600	$120	
Mill River	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$46,576,856	418,600	$111	
Mill River	ShoreCDF-I_bse	100	98	100	71.25	369.46	Yes	Yes	$50,333,443	418,600	$120	
Mill River	ShoreCDF-K_bse	100	100	100	67.68	367.68	Yes	Yes	$46,576,856	418,600	$111	
Mill River	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$50,333,443	418,600	$120	
Mill River	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$52,654,701	418,600	$126	
Mill River	ShoreCDF-F_bse	100	100	50	59.43	309.43	Yes	Yes	$52,654,701	418,600	$126	
Mill River	ShoreCDF-O_bse	100	30	100	69.95	299.65	Yes	Yes	$50,333,443	418,600	$120	
Mill River	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$60,995,732	418,600	$146	
Mill River	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$60,995,732	418,600	$146	
Mill River	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$60,995,732	418,600	$146	
Mill River	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$60,995,732	418,600	$146	
Mill River	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$60,995,732	418,600	$146	
Mill River	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$60,995,732	418,600	$146	
Mill River	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Mill River	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mill River	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Mill River	Beach-459	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Mill River	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Mill River	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-327	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Mill River	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Mill River	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Mill River	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-330	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Mill River	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Mill River	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-329	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Mill River	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Mill River	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$27,876,595	418,600	$67	
Mill River	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$14,493,221	418,600	$35	
Mill River	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Mill River	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$50,391,025	418,600	$120	
Mill River	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Mill River	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-325	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Mill River	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Mill River	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mill River	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Mill River	Beach-337	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Mill River	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Mill River	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-333	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Mill River	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$14,493,221	418,600	$35	
Mill River	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	COW-E_cap	-1	0	0	0	-1.00	Yes	Yes	$15,837,936	418,600	$38	
Mill River	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$15,837,936	418,600	$38	
Mill River	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Mill River	Beach-331	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Mill River	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$14,493,221	418,600	$35	
Mill River	Beach-332	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Mill River	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$50,391,025	418,600	$120	
Mill River	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Mill River	Beach-447	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Mill River	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mill River	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$60,995,732	418,600	$146	
Mill River	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$14,493,221	418,600	$35	
Mill River	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$50,391,025	418,600	$120	
Mill River	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Mill River	Berm-620	-1	0	0	0	-1.00	No	Yes	$20,555,104	418,600	$49	
Mill River	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$60,995,732	418,600	$146	
Mill River	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$60,995,732	418,600	$146	
Mill River	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$50,333,443	418,600	$120	
Mill River	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$60,995,732	418,600	$146	
Mill River	UOW-CSDS	-1	0	0	0	-1.00	No	Yes	$15,837,936	418,600	$38	
Mill River	Beach-620	-1	0	-1	0	-1.00	No	Yes	$20,555,104	418,600	$49	
Mill River	UOW-WLDS	-1	0	0	0	-1.00	No	Yes	$21,580,940	418,600	$52	
Mill River	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$20,555,104	418,600	$49	
Mill River	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$46,576,856	418,600	$111	
Mill River	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$46,576,856	418,600	$111	
Mill River	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$60,995,732	418,600	$146	
Mill River	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$50,391,025	418,600	$120	
Mill River	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$50,333,443	418,600	$120	
Mill River	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$52,654,701	418,600	$126	
Mill River	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$52,654,701	418,600	$126	
Mill River	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$50,391,025	418,600	$120	
Mill River	UOW-CLDS	-1	0	0	0	-1.00	No	Yes	$11,575,547	418,600	$28	
Mill River	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$50,333,443	418,600	$120	
Mill River	UOW-NLDS	-1	0	0	0	-1.00	No	Yes	$21,580,940	418,600	$52	
Mill River	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$50,333,443	418,600	$120	
Mill River	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$60,995,732	418,600	$146	
Mill River	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$50,391,025	418,600	$120	
Quinnipiac River	CAD-M_bse	100	100	100	85.16	385.16	Yes	Yes	$27,876,595	418,600	$67	
Quinnipiac River	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$50,333,443	418,600	$120	
Quinnipiac River	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$46,576,856	418,600	$111	
Quinnipiac River	ShoreCDF-K_bse	100	100	100	67.68	367.68	Yes	Yes	$50,333,443	418,600	$120	
Quinnipiac River	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$50,333,443	418,600	$120	
Quinnipiac River	ShoreCDF-I_bse	100	91	100	71.25	362.41	Yes	Yes	$50,333,443	418,600	$120	
Quinnipiac River	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$52,654,701	418,600	$126	
Quinnipiac River	ShoreCDF-F_bse	100	100	50	59.43	309.43	Yes	Yes	$52,654,701	418,600	$126	
Quinnipiac River	ShoreCDF-O_bse	100	28	100	69.95	297.52	Yes	Yes	$50,333,443	418,600	$120	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Quinnipiac River	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$60,995,732	418,600	$146	
Quinnipiac River	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$60,995,732	418,600	$146	
Quinnipiac River	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$60,995,732	418,600	$146	
Quinnipiac River	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$60,995,732	418,600	$146	
Quinnipiac River	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$60,995,732	418,600	$146	
Quinnipiac River	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$60,995,732	418,600	$146	
Quinnipiac River	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	Beach-327	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Quinnipiac River	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-329	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Quinnipiac River	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$60,995,732	418,600	$146	
Quinnipiac River	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Quinnipiac River	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$50,391,025	418,600	$120	
Quinnipiac River	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-332	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Quinnipiac River	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$14,493,221	418,600	$35	
Quinnipiac River	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Quinnipiac River	Beach-333	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Quinnipiac River	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$50,391,025	418,600	$120	
Quinnipiac River	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$50,391,025	418,600	$120	
Quinnipiac River	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-330	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Quinnipiac River	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$14,493,221	418,600	$35	
Quinnipiac River	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Quinnipiac River	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	COW-E_cap	-1	0	0	0	-1.00	Yes	Yes	$15,837,936	418,600	$38	
Quinnipiac River	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-337	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Quinnipiac River	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$14,493,221	418,600	$35	
Quinnipiac River	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$27,876,595	418,600	$67	
Quinnipiac River	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Quinnipiac River	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-459	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Quinnipiac River	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$15,837,936	418,600	$38	
Quinnipiac River	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-331	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Quinnipiac River	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-325	-1	0	0	0	-1.00	Yes	Yes	$11,613,923	418,600	$28	
Quinnipiac River	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$14,493,221	418,600	$35	
Quinnipiac River	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$14,542,123	418,600	$35	
Quinnipiac River	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$60,995,732	418,600	$146	
Quinnipiac River	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$46,576,856	418,600	$111	
Quinnipiac River	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$20,555,104	418,600	$49	
Quinnipiac River	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$50,333,443	418,600	$120	
Quinnipiac River	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$50,391,025	418,600	$120	
Quinnipiac River	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$60,995,732	418,600	$146	
Quinnipiac River	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$50,391,025	418,600	$120	
Quinnipiac River	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$60,995,732	418,600	$146	
Quinnipiac River	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$50,391,025	418,600	$120	
Quinnipiac River	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$60,995,732	418,600	$146	
Quinnipiac River	UOW-NLDS	-1	0	0	0	-1.00	No	Yes	$21,580,940	418,600	$52	
Quinnipiac River	Beach-620	-1	0	-1	0	-1.00	No	Yes	$20,555,104	418,600	$49	
Quinnipiac River	Berm-620	-1	0	0	0	-1.00	No	Yes	$20,555,104	418,600	$49	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Quinnipiac River	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$50,333,443	418,600	$120	
Quinnipiac River	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$52,654,701	418,600	$126	
Quinnipiac River	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$60,995,732	418,600	$146	
Quinnipiac River	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$50,333,443	418,600	$120	
Quinnipiac River	UOW-WLDS	-1	0	0	0	-1.00	No	Yes	$21,580,940	418,600	$52	
Quinnipiac River	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$50,333,443	418,600	$120	
Quinnipiac River	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$50,333,443	418,600	$120	
Quinnipiac River	UOW-CLDS	-1	0	0	0	-1.00	No	Yes	$11,575,547	418,600	$28	
Quinnipiac River	UOW-CSDS	-1	0	0	0	-1.00	No	Yes	$15,837,936	418,600	$38	
Quinnipiac River	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$52,654,701	418,600	$126	
U.S. Coast Guard Sector Long Island Sound	CAD-M_bse	100	100	100	85.16	385.16	Yes	Yes	$2,151,632	20,000	$108	
U.S. Coast Guard Sector Long Island Sound	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$3,114,356	20,000	$156	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-I_bse	100	100	100	71.25	371.25	Yes	Yes	$3,114,356	20,000	$156	
U.S. Coast Guard Sector Long Island Sound	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$2,717,165	20,000	$136	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-O_bse	100	100	100	69.95	369.70	Yes	Yes	$3,114,356	20,000	$156	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-K_bse	100	100	100	67.68	367.68	Yes	Yes	$2,717,165	20,000	$136	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$3,114,356	20,000	$156	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$3,114,356	20,000	$156	
U.S. Coast Guard Sector Long Island Sound	UOW-CLDS	50	100	100	75.43	325.43	No	Yes	$1,112,225	20,000	$56	
U.S. Coast Guard Sector Long Island Sound	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$3,203,048	20,000	$160	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-D_bse	100	100	50	70.36	320.36	Yes	Yes	$3,203,048	20,000	$160	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-C_bse	100	100	50	66.9	316.90	Yes	Yes	$3,203,048	20,000	$160	
U.S. Coast Guard Sector Long Island Sound	COW-E_bse	50	100	50	85.57	285.57	Yes	Yes	$1,468,033	20,000	$73	
U.S. Coast Guard Sector Long Island Sound	COW-E_cap	50	100	50	85.57	285.57	Yes	Yes	$1,468,033	20,000	$73	
U.S. Coast Guard Sector Long Island Sound	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$2,505,564	20,000	$125	
U.S. Coast Guard Sector Long Island Sound	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$2,505,564	20,000	$125	
U.S. Coast Guard Sector Long Island Sound	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$2,505,564	20,000	$125	
U.S. Coast Guard Sector Long Island Sound	UOW-CSDS	50	100	50	72.31	272.31	No	Yes	$1,468,033	20,000	$73	
U.S. Coast Guard Sector Long Island Sound	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$3,869,932	20,000	$193	
U.S. Coast Guard Sector Long Island Sound	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$3,869,932	20,000	$193	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$3,869,932	20,000	$193	
U.S. Coast Guard Sector Long Island Sound	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$3,869,932	20,000	$193	
U.S. Coast Guard Sector Long Island Sound	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$1,989,313	20,000	$99	
U.S. Coast Guard Sector Long Island Sound	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$1,989,313	20,000	$99	
U.S. Coast Guard Sector Long Island Sound	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$2,505,564	20,000	$125	
U.S. Coast Guard Sector Long Island Sound	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$2,505,564	20,000	$125	
U.S. Coast Guard Sector Long Island Sound	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$2,505,564	20,000	$125	
U.S. Coast Guard Sector Long Island Sound	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard Sector Long Island Sound	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-337	-1	0	0	0	-1.00	Yes	Yes	$1,061,992	20,000	$53	
U.S. Coast Guard Sector Long Island Sound	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	
U.S. Coast Guard Sector Long Island Sound	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
U.S. Coast Guard Sector Long Island Sound	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
U.S. Coast Guard Sector Long Island Sound	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$1,659,167	20,000	$83	
U.S. Coast Guard Sector Long Island Sound	Beach-333	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	
U.S. Coast Guard Sector Long Island Sound	Beach-332	-1	0	0	0	-1.00	Yes	Yes	$1,061,992	20,000	$53	
U.S. Coast Guard Sector Long Island Sound	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
U.S. Coast Guard Sector Long Island Sound	Beach-459	-1	0	0	0	-1.00	Yes	Yes	$899,209	20,000	$45	
U.S. Coast Guard Sector Long Island Sound	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$1,659,167	20,000	$83	
U.S. Coast Guard Sector Long Island Sound	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
U.S. Coast Guard Sector Long Island Sound	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
U.S. Coast Guard Sector Long Island Sound	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$1,659,167	20,000	$83	
U.S. Coast Guard Sector Long Island Sound	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
U.S. Coast Guard Sector Long Island Sound	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-327	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard Sector Long Island Sound	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-329	-1	0	0	0	-1.00	Yes	Yes	$1,061,992	20,000	$53	
U.S. Coast Guard Sector Long Island Sound	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$3,869,932	20,000	$193	
U.S. Coast Guard Sector Long Island Sound	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
U.S. Coast Guard Sector Long Island Sound	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
U.S. Coast Guard Sector Long Island Sound	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$2,151,632	20,000	$108	
U.S. Coast Guard Sector Long Island Sound	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
U.S. Coast Guard Sector Long Island Sound	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
U.S. Coast Guard Sector Long Island Sound	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
U.S. Coast Guard Sector Long Island Sound	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-325	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	
U.S. Coast Guard Sector Long Island Sound	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
U.S. Coast Guard Sector Long Island Sound	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$1,659,167	20,000	$83	
U.S. Coast Guard Sector Long Island Sound	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$1,061,992	20,000	$53	
U.S. Coast Guard Sector Long Island Sound	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard Sector Long Island Sound	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
U.S. Coast Guard Sector Long Island Sound	Beach-330	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	
U.S. Coast Guard Sector Long Island Sound	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	
U.S. Coast Guard Sector Long Island Sound	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-447	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	
U.S. Coast Guard Sector Long Island Sound	Beach-331	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	
U.S. Coast Guard Sector Long Island Sound	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$3,114,356	20,000	$156	
U.S. Coast Guard Sector Long Island Sound	Beach-620	-1	0	-1	0	-1.00	No	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$2,717,165	20,000	$136	
U.S. Coast Guard Sector Long Island Sound	Berm-620	-1	0	0	0	-1.00	No	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$3,869,932	20,000	$193	
U.S. Coast Guard Sector Long Island Sound	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$2,533,799	20,000	$127	
U.S. Coast Guard Sector Long Island Sound	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$3,203,048	20,000	$160	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$3,203,048	20,000	$160	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$3,114,356	20,000	$156	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$3,114,356	20,000	$156	
U.S. Coast Guard Sector Long Island Sound	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$2,717,165	20,000	$136	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$3,203,048	20,000	$160	
U.S. Coast Guard Sector Long Island Sound	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$3,869,932	20,000	$193	
U.S. Coast Guard Sector Long Island Sound	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$3,114,356	20,000	$156	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$3,869,932	20,000	$193	
U.S. Coast Guard Sector Long Island Sound	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$3,114,356	20,000	$156	
Milford Harbor - Entrance Channel and Outer Anchorage	COW-E_cap	100	100	100	85.57	385.57	Yes	Yes	$1,205,598	22,000	$55	
Milford Harbor - Entrance Channel and Outer Anchorage	CAD-M_cap	100	100	100	85.16	385.16	Yes	Yes	$2,294,043	22,000	$104	
Milford Harbor - Entrance Channel and Outer Anchorage	UOW-CLDS	100	100	100	75.43	375.43	No	Yes	$1,148,006	22,000	$52	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-364	100	100	100	73.83	373.83	Yes	Yes	$1,086,558	22,000	$49	
Milford Harbor - Entrance Channel and Outer Anchorage	IslandCDF-N_cap	100	100	100	73.28	373.28	Yes	Yes	$3,360,766	22,000	$153	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-I_cap	100	100	100	71.25	371.25	Yes	Yes	$2,899,512	22,000	$132	
Milford Harbor - Entrance Channel and Outer Anchorage	IslandCDF-L_cap	100	100	100	70.94	370.94	Yes	Yes	$2,899,512	22,000	$132	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-J_cap	100	100	100	66.72	366.72	Yes	Yes	$2,899,512	22,000	$132	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-F_cap	100	100	100	59.43	359.43	Yes	Yes	$3,360,766	22,000	$153	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-K_cap	100	77	100	67.68	344.47	Yes	Yes	$2,679,864	22,000	$122	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-327/333/330	100	100	50	83.23	333.23	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-323	100	100	50	80.39	330.39	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	UOW-WLDS	100	100	50	75.43	325.43	No	Yes	$1,521,061	22,000	$69	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-450	100	100	50	74.14	324.14	Yes	Yes	$1,465,273	22,000	$67	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Milford Harbor - Entrance Channel and Outer Anchorage	IslandCDF-P_cap	100	100	50	72.76	322.76	Yes	Yes	$3,415,943	22,000	$155	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-364b/364c	100	38	100	82.6	320.87	Yes	Yes	$1,086,558	22,000	$49	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-D_cap	100	100	50	70.36	320.36	Yes	Yes	$3,415,943	22,000	$155	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-O_cap	100	100	50	69.95	319.95	Yes	Yes	$3,415,943	22,000	$155	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-337	100	84	50	83.93	317.76	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-C_cap	100	100	50	66.9	316.90	Yes	Yes	$3,415,943	22,000	$155	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-447	100	83	50	80.1	313.04	Yes	Yes	$1,465,273	22,000	$67	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-444	100	32	100	74.14	306.41	Yes	Yes	$915,412	22,000	$42	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-467	100	68	50	82.19	300.59	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-453	100	100	0	84.53	284.53	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-454B	100	100	0	83.23	283.23	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-449	100	100	0	82.4	282.40	Yes	Yes	$2,197,124	22,000	$100	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-368	100	100	0	81.61	281.61	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-456	100	100	0	80.39	280.39	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-620	100	100	0	75	275.00	No	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$2,074,313	22,000	$94	
Milford Harbor - Entrance Channel and Outer Anchorage	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$2,074,313	22,000	$94	
Milford Harbor - Entrance Channel and Outer Anchorage	IslandCDF-Q_cap	100	100	0	71.51	271.51	Yes	Yes	$4,127,596	22,000	$188	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-Grove Beach	100	95	0	75	269.74	No	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$4,127,596	22,000	$188	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-440	100	88	0	79.87	267.89	Yes	Yes	$2,197,124	22,000	$100	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$4,127,596	22,000	$188	
Milford Harbor - Entrance Channel and Outer Anchorage	IslandCDF-R_cap	100	100	0	67.53	267.53	Yes	Yes	$4,127,596	22,000	$188	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-367	100	73	0	83.31	256.58	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-451	100	12	50	82.29	244.59	Yes	Yes	$1,465,273	22,000	$67	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-455/82	100	53	0	83.93	236.92	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-320	100	46	0	87.24	232.86	Yes	Yes	$2,197,124	22,000	$100	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-441	100	43	0	87.76	230.29	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-451	100	3	50	74.14	227.32	Yes	Yes	$1,465,273	22,000	$67	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-433	100	41	0	82.92	223.97	Yes	Yes	$2,197,124	22,000	$100	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-434	100	30	0	81.35	211.63	Yes	Yes	$2,197,124	22,000	$100	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-438	100	19	0	81.67	200.83	Yes	Yes	$2,197,124	22,000	$100	
Milford Harbor - Entrance Channel and Outer Anchorage	Berm-457	100	13	0	86.95	200.11	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-329	100	100	-1	74.14	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-459	100	32	-1	74.14	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-480	100	20	-1	72.89	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$2,682,834	22,000	$122	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-330	100	100	-1	74.53	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,205,598	22,000	$55	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-337	100	21	-1	74.14	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-333	100	11	-1	74.53	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-457	100	26	-1	74.14	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-327	100	71	-1	74.53	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$2,294,043	22,000	$104	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-339	100	39	-1	74.14	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-474	100	0	-1	74.14	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-343	100	7	-1	73.83	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-434	100	39	-1	74.14	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-433	100	96	-1	74.14	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$4,127,596	22,000	$188	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$2,616,216	22,000	$119	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-381	100	100	-1	72.66	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-367	100	64	-1	73.59	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$2,682,834	22,000	$122	
Milford Harbor - Entrance Channel and Outer Anchorage	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$2,682,834	22,000	$122	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-67	100	22	-1	74.14	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$2,899,512	22,000	$132	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-68	100	15	-1	73.2	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-438	100	17	-1	74.14	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-121	100	55	-1	73.2	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-79	100	89	-1	73.2	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-344	100	4	-1	74.53	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-348	100	10	-1	73.83	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$3,415,943	22,000	$155	
Milford Harbor - Entrance Channel and Outer Anchorage	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$4,127,596	22,000	$188	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$3,360,766	22,000	$153	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$2,899,512	22,000	$132	
Milford Harbor - Entrance Channel and Outer Anchorage	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$2,682,834	22,000	$122	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$4,127,596	22,000	$188	
Milford Harbor - Entrance Channel and Outer Anchorage	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$4,127,596	22,000	$188	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$3,415,943	22,000	$155	
Milford Harbor - Entrance Channel and Outer Anchorage	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$2,682,834	22,000	$122	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$3,415,943	22,000	$155	
Milford Harbor - Entrance Channel and Outer Anchorage	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$3,360,766	22,000	$153	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Milford Harbor - Entrance Channel and Outer Anchorage	Beach-620	100	100	-1	75	-1.00	No	Yes	$2,616,216	22,000	$119	
Milford Harbor - Entrance Channel and Outer Anchorage	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$3,415,943	22,000	$155	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$2,679,864	22,000	$122	
Milford Harbor - Entrance Channel and Outer Anchorage	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$2,682,834	22,000	$122	
Milford Harbor - Entrance Channel and Outer Anchorage	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$2,899,512	22,000	$132	
Milford Harbor - Inner Channels and Anchorages	COW-E_bse	100	100	100	85.57	385.57	Yes	Yes	$1,973,813	44,400	$44	
Milford Harbor - Inner Channels and Anchorages	COW-E_cap	100	100	100	85.57	385.57	Yes	Yes	$1,973,813	44,400	$44	
Milford Harbor - Inner Channels and Anchorages	CAD-M_bse	100	100	100	85.16	385.16	Yes	Yes	$3,774,301	44,400	$85	
Milford Harbor - Inner Channels and Anchorages	UOW-CLDS	100	100	100	75.43	375.43	No	Yes	$1,641,560	44,400	$37	
Milford Harbor - Inner Channels and Anchorages	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$6,022,411	44,400	$136	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-I_bse	100	100	100	71.25	371.25	Yes	Yes	$5,394,225	44,400	$121	
Milford Harbor - Inner Channels and Anchorages	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$5,394,225	44,400	$121	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-K_bse	100	100	100	67.68	367.68	Yes	Yes	$4,742,073	44,400	$107	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$5,394,225	44,400	$121	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$6,022,411	44,400	$136	
Milford Harbor - Inner Channels and Anchorages	UOW-WLDS	100	100	50	75.43	325.43	No	Yes	$2,246,197	44,400	$51	
Milford Harbor - Inner Channels and Anchorages	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$6,212,362	44,400	$140	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-D_bse	100	100	50	70.36	320.36	Yes	Yes	$6,212,362	44,400	$140	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-C_bse	100	100	50	66.9	316.90	Yes	Yes	$6,212,362	44,400	$140	
Milford Harbor - Inner Channels and Anchorages	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$4,938,779	44,400	$111	
Milford Harbor - Inner Channels and Anchorages	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$4,938,779	44,400	$111	
Milford Harbor - Inner Channels and Anchorages	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$4,938,779	44,400	$111	
Milford Harbor - Inner Channels and Anchorages	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$3,210,545	44,400	$72	
Milford Harbor - Inner Channels and Anchorages	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$3,210,545	44,400	$72	
Milford Harbor - Inner Channels and Anchorages	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$7,489,796	44,400	$169	
Milford Harbor - Inner Channels and Anchorages	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$7,489,796	44,400	$169	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$7,489,796	44,400	$169	
Milford Harbor - Inner Channels and Anchorages	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$7,489,796	44,400	$169	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-O_bse	100	45	50	69.95	264.88	Yes	Yes	$6,212,362	44,400	$140	
Milford Harbor - Inner Channels and Anchorages	BF-422/423	100	100	0	62.03	262.03	Yes	Yes	$4,938,779	44,400	$111	
Milford Harbor - Inner Channels and Anchorages	Habitat-429	100	100	0	61.33	261.33	Yes	Yes	$4,938,779	44,400	$111	
Milford Harbor - Inner Channels and Anchorages	Habitat-427	100	48	0	59.77	208.12	Yes	Yes	$4,938,779	44,400	$111	
Milford Harbor - Inner Channels and Anchorages	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Milford Harbor - Inner Channels and Anchorages	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$3,774,301	44,400	$85	
Milford Harbor - Inner Channels and Anchorages	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-444	-1	0	0	0	-1.00	Yes	Yes	$1,346,998	44,400	$30	
Milford Harbor - Inner Channels and Anchorages	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-451	-1	0	0	0	-1.00	Yes	Yes	$2,190,362	44,400	$49	
Milford Harbor - Inner Channels and Anchorages	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-450	-1	0	0	0	-1.00	Yes	Yes	$2,190,362	44,400	$49	
Milford Harbor - Inner Channels and Anchorages	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Milford Harbor - Inner Channels and Anchorages	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$7,489,796	44,400	$169	
Milford Harbor - Inner Channels and Anchorages	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$1,545,008	44,400	$35	
Milford Harbor - Inner Channels and Anchorages	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$2,190,362	44,400	$49	
Milford Harbor - Inner Channels and Anchorages	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-364	-1	0	0	0	-1.00	Yes	Yes	$1,545,008	44,400	$35	
Milford Harbor - Inner Channels and Anchorages	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$2,190,362	44,400	$49	
Milford Harbor - Inner Channels and Anchorages	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Milford Harbor - Inner Channels and Anchorages	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$2,714,717	44,400	$61	
Milford Harbor - Inner Channels and Anchorages	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$3,343,833	44,400	$75	
Milford Harbor - Inner Channels and Anchorages	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$6,212,362	44,400	$140	
Milford Harbor - Inner Channels and Anchorages	Berm-620	-1	0	0	0	-1.00	No	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$3,897,349	44,400	$88	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$5,394,225	44,400	$121	
Milford Harbor - Inner Channels and Anchorages	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$7,489,796	44,400	$169	
Milford Harbor - Inner Channels and Anchorages	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$7,489,796	44,400	$169	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$6,212,362	44,400	$140	
Milford Harbor - Inner Channels and Anchorages	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$5,394,225	44,400	$121	
Milford Harbor - Inner Channels and Anchorages	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$6,212,362	44,400	$140	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$5,394,225	44,400	$121	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$6,022,411	44,400	$136	
Milford Harbor - Inner Channels and Anchorages	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$6,022,411	44,400	$136	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$7,489,796	44,400	$169	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$4,742,073	44,400	$107	
Milford Harbor - Inner Channels and Anchorages	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$6,212,362	44,400	$140	
Milford Harbor - Inner Channels and Anchorages	Beach-620	-1	0	-1	0	-1.00	No	Yes	$3,897,349	44,400	$88	
Housatonic River downstream of Pope's Island	UOW-CLDS	100	100	100	75.43	375.43	No	Yes	$11,386,210	410,000	$28	
Housatonic River downstream of Pope's Island	IslandCDF-L_cap	100	100	100	70.94	370.94	Yes	Yes	$45,633,613	410,000	$111	
Housatonic River downstream of Pope's Island	ShoreCDF-J_cap	100	100	100	66.72	366.72	Yes	Yes	$45,633,613	410,000	$111	
Housatonic River downstream of Pope's Island	ShoreCDF-F_cap	100	100	100	59.43	359.43	Yes	Yes	$45,633,613	410,000	$111	
Housatonic River downstream of Pope's Island	UOW-WLDS	100	100	50	75.43	325.43	No	Yes	$15,495,146	410,000	$38	
Housatonic River downstream of Pope's Island	COW-E_cap	100	39	100	85.57	324.70	Yes	Yes	$11,386,210	410,000	$28	
Housatonic River downstream of Pope's Island	IslandCDF-N_cap	100	95	50	73.28	317.84	Yes	Yes	$51,598,267	410,000	$126	
Housatonic River downstream of Pope's Island	ShoreCDF-C_cap	100	30	100	66.9	297.30	Yes	Yes	$49,331,449	410,000	$120	
Housatonic River downstream of Pope's Island	CAD-M_cap	100	12	100	85.16	296.79	Yes	Yes	$27,288,245	410,000	$67	
Housatonic River downstream of Pope's Island	Beach-450	100	18	100	74.14	292.07	Yes	Yes	$7,660,061	410,000	$19	
Housatonic River downstream of Pope's Island	ShoreCDF-D_cap	100	13	100	70.36	283.09	Yes	Yes	$49,331,449	410,000	$120	
Housatonic River downstream of Pope's Island	ShoreCDF-I_cap	100	8	100	71.25	279.50	Yes	Yes	$45,633,613	410,000	$111	
Housatonic River downstream of Pope's Island	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$21,190,199	410,000	$52	
Housatonic River downstream of Pope's Island	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$21,190,199	410,000	$52	
Housatonic River downstream of Pope's Island	ShoreCDF-K_cap	100	4	100	67.68	271.80	Yes	Yes	$45,633,613	410,000	$111	
Housatonic River downstream of Pope's Island	Beach-323	100	43	50	74.14	267.24	Yes	Yes	$11,476,826	410,000	$28	
Housatonic River downstream of Pope's Island	IslandCDF-B_cap	100	27	50	68.28	245.10	Yes	Yes	$51,598,267	410,000	$126	
Housatonic River downstream of Pope's Island	Berm-323	100	12	50	80.39	241.96	Yes	Yes	$11,476,826	410,000	$28	
Housatonic River downstream of Pope's Island	Berm-467	100	4	50	82.19	235.86	Yes	Yes	$11,476,826	410,000	$28	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Housatonic River downstream of Pope's Island	Berm-433	100	2	50	82.92	235.12	Yes	Yes	$14,361,026	410,000	$35	
Housatonic River downstream of Pope's Island	Berm-364b/364c	100	2	50	82.6	234.65	Yes	Yes	$11,476,826	410,000	$28	
Housatonic River downstream of Pope's Island	Beach-468	100	10	50	74.14	234.58	Yes	Yes	$11,476,826	410,000	$28	
Housatonic River downstream of Pope's Island	Berm-447	100	4	50	80.1	234.55	Yes	Yes	$14,361,026	410,000	$35	
Housatonic River downstream of Pope's Island	Berm-434	100	2	50	81.35	232.97	Yes	Yes	$14,361,026	410,000	$35	
Housatonic River downstream of Pope's Island	Berm-451	100	1	50	82.29	232.95	Yes	Yes	$14,361,026	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-467	100	8	50	73.83	231.46	Yes	Yes	$11,476,826	410,000	$28	
Housatonic River downstream of Pope's Island	Beach-364	100	7	50	73.83	230.76	Yes	Yes	$11,476,826	410,000	$28	
Housatonic River downstream of Pope's Island	Beach-444	100	2	50	74.14	225.87	Yes	Yes	$11,476,826	410,000	$28	
Housatonic River downstream of Pope's Island	ShoreCDF-A_cap	100	58	0	67.58	225.16	Yes	Yes	$59,879,492	410,000	$146	
Housatonic River downstream of Pope's Island	ShoreCDF-O_cap	100	52	0	69.95	221.70	Yes	Yes	$59,879,492	410,000	$146	
Housatonic River downstream of Pope's Island	Berm-381/382	100	38	0	82.47	220.25	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	IslandCDF-R_cap	100	46	0	67.53	213.61	Yes	Yes	$59,879,492	410,000	$146	
Housatonic River downstream of Pope's Island	IslandCDF-Q_cap	100	35	0	71.51	206.58	Yes	Yes	$59,879,492	410,000	$146	
Housatonic River downstream of Pope's Island	Berm-173	100	22	0	83.2	205.52	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-63	100	20	0	83.57	203.64	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-178	100	21	0	82.14	202.71	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-170	100	20	0	82.37	202.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Berm-384	100	17	0	84.56	201.74	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-121/446	100	16	0	84.45	200.81	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-327/333/330	100	17	0	83.23	200.59	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Berm-171	100	16	0	82.68	198.67	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-600	100	16	0	82.66	198.20	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-610	100	16	0	81.25	196.97	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-454A	100	13	0	83.72	196.26	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-180	100	16	0	78.31	194.81	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-453	100	8	0	84.53	193.03	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-177	100	8	0	84.64	192.86	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-365	100	11	0	81.28	192.60	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-445	100	10	0	81.98	192.46	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	IslandCDF-P_cap	100	19	0	72.76	191.67	Yes	Yes	$59,879,492	410,000	$146	
Housatonic River downstream of Pope's Island	Berm-449	100	9	0	82.4	190.96	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Berm-441	100	2	0	87.76	190.04	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-320	100	2	0	87.24	189.68	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Berm-454B	100	6	0	83.23	189.12	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-337	100	4	0	83.93	188.42	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Berm-456	100	8	0	80.39	188.17	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-179	100	11	0	77.11	187.71	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-457	100	1	0	86.95	187.66	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-368	100	6	0	81.61	187.45	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-367	100	4	0	83.31	187.24	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-455/82	100	3	0	83.93	186.77	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-440	100	5	0	79.87	184.59	Yes	Yes	$14,534,694	410,000	$35	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Housatonic River downstream of Pope's Island	Berm-438	100	1	0	81.67	182.70	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Berm-620	100	6	0	75	181.47	No	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Berm-Grove Beach	100	5	0	75	180.08	No	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-121	100	3	-1	73.2	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$49,499,688	410,000	$121	
Housatonic River downstream of Pope's Island	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$45,633,613	410,000	$111	
Housatonic River downstream of Pope's Island	Beach-178	100	25	-1	72.89	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-179	100	49	-1	72.89	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-111	100	8	-1	73.2	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$51,598,267	410,000	$126	
Housatonic River downstream of Pope's Island	Beach-170	100	53	-1	72.89	-1.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-459	100	2	-1	74.14	-1.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-171	100	54	-1	72.89	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$49,499,688	410,000	$121	
Housatonic River downstream of Pope's Island	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$11,386,210	410,000	$28	
Housatonic River downstream of Pope's Island	Beach-177	100	7	-1	72.89	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-474	100	0	-1	74.14	-1.00	Yes	Yes	$14,361,026	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-434	100	2	-1	74.14	-1.00	Yes	Yes	$14,361,026	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-433	100	5	-1	74.14	-1.00	Yes	Yes	$14,361,026	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-384	100	11	-1	72.89	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-454 West	100	17	-1	73.2	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-382	100	22	-1	72.27	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-381	100	7	-1	72.66	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-339	100	2	-1	74.14	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-368	100	43	-1	72.89	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-437	100	14	-1	72.27	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-348	100	1	-1	73.83	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-455/82	100	24	-1	70.43	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-345	100	14	-1	74.14	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-600	100	16	-1	70.67	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-344	100	0	-1	74.53	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-343	100	0	-1	73.83	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-610	100	16	-1	70.67	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-445	100	39	-1	73.2	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-451	100	0	-1	74.14	-1.00	Yes	Yes	$14,361,026	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-68	100	1	-1	73.2	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-67	100	1	-1	74.14	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-76	100	8	-1	74.14	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-449	100	23	-1	74.14	-1.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-79	100	5	-1	73.2	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-447	100	21	-1	74.53	-1.00	Yes	Yes	$14,361,026	410,000	$35	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Housatonic River downstream of Pope's Island	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-436	100	8	-1	74.14	-1.00	Yes	Yes	$14,361,026	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-64	100	42	-1	73.2	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-442	100	13	-1	74.53	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-441	100	7	-1	74.14	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-440	100	22	-1	74.14	-1.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-454 East	100	54	-1	70.45	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-438	100	1	-1	74.14	-1.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-367	100	3	-1	73.59	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-453	100	98	-1	73.2	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-457	100	1	-1	74.14	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-480	100	1	-1	72.89	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-329	100	6	-1	74.14	-1.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-181	100	8	-1	74.14	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-332	100	9	-1	74.14	-1.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-320	100	10	-1	73.83	-1.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-325	100	17	-1	74.53	-1.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-333	100	1	-1	74.53	-1.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$49,499,688	410,000	$121	
Housatonic River downstream of Pope's Island	Beach-327	100	4	-1	74.53	-1.00	Yes	Yes	$14,361,026	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-180	100	39	-1	72.89	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$27,288,245	410,000	$67	
Housatonic River downstream of Pope's Island	Beach-456	100	25	-1	72.89	-1.00	Yes	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	Beach-337	100	1	-1	74.14	-1.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-330	100	6	-1	74.53	-1.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	Beach-331	100	10	-1	74.53	-1.00	Yes	Yes	$14,534,694	410,000	$35	
Housatonic River downstream of Pope's Island	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$45,633,613	410,000	$111	
Housatonic River downstream of Pope's Island	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$51,598,267	410,000	$126	
Housatonic River downstream of Pope's Island	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$59,879,492	410,000	$146	
Housatonic River downstream of Pope's Island	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$45,633,613	410,000	$111	
Housatonic River downstream of Pope's Island	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$59,879,492	410,000	$146	
Housatonic River downstream of Pope's Island	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$59,879,492	410,000	$146	
Housatonic River downstream of Pope's Island	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$49,499,688	410,000	$121	
Housatonic River downstream of Pope's Island	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$45,633,613	410,000	$111	
Housatonic River downstream of Pope's Island	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$59,879,492	410,000	$146	
Housatonic River downstream of Pope's Island	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$49,331,449	410,000	$120	
Housatonic River downstream of Pope's Island	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$49,331,449	410,000	$120	
Housatonic River downstream of Pope's Island	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$49,499,688	410,000	$121	
Housatonic River downstream of Pope's Island	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$49,499,688	410,000	$121	
Housatonic River downstream of Pope's Island	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$45,633,613	410,000	$111	
Housatonic River downstream of Pope's Island	Beach-620	100	20	-1	75	-1.00	No	Yes	$20,316,971	410,000	$50	
Housatonic River downstream of Pope's Island	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$59,879,492	410,000	$146	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Housatonic River upstream of Pope's Island	COW-E_bse	100	100	100	85.57	385.57	Yes	Yes	$6,483,514	203,900	$32	
Housatonic River upstream of Pope's Island	COW-E_cap	100	100	100	85.57	385.57	Yes	Yes	$6,483,514	203,900	$32	
Housatonic River upstream of Pope's Island	CAD-M_bse	100	100	100	85.16	385.16	Yes	Yes	$13,701,783	203,900	$67	
Housatonic River upstream of Pope's Island	UOW-CLDS	100	100	100	75.43	375.43	No	Yes	$6,483,514	203,900	$32	
Housatonic River upstream of Pope's Island	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$23,002,558	203,900	$113	
Housatonic River upstream of Pope's Island	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$25,154,679	203,900	$123	
Housatonic River upstream of Pope's Island	ShoreCDF-I_bse	100	97	100	71.25	368.31	Yes	Yes	$23,002,558	203,900	$113	
Housatonic River upstream of Pope's Island	ShoreCDF-K_bse	100	100	100	67.68	367.68	Yes	Yes	$23,002,558	203,900	$113	
Housatonic River upstream of Pope's Island	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$25,154,679	203,900	$123	
Housatonic River upstream of Pope's Island	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$23,002,558	203,900	$113	
Housatonic River upstream of Pope's Island	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$23,002,558	203,900	$113	
Housatonic River upstream of Pope's Island	UOW-WLDS	100	100	50	75.43	325.43	No	Yes	$7,578,450	203,900	$37	
Housatonic River upstream of Pope's Island	IslandCDF-N_bse	100	100	50	73.28	323.28	Yes	Yes	$26,178,142	203,900	$128	
Housatonic River upstream of Pope's Island	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$25,936,658	203,900	$127	
Housatonic River upstream of Pope's Island	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$25,936,658	203,900	$127	
Housatonic River upstream of Pope's Island	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$25,936,658	203,900	$127	
Housatonic River upstream of Pope's Island	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$32,164,751	203,900	$158	
Housatonic River upstream of Pope's Island	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$11,519,148	203,900	$56	
Housatonic River upstream of Pope's Island	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$11,519,148	203,900	$56	
Housatonic River upstream of Pope's Island	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$32,164,751	203,900	$158	
Housatonic River upstream of Pope's Island	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$32,164,751	203,900	$158	
Housatonic River upstream of Pope's Island	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$32,164,751	203,900	$158	
Housatonic River upstream of Pope's Island	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$32,164,751	203,900	$158	
Housatonic River upstream of Pope's Island	Habitat-429	100	100	0	61.33	261.33	Yes	Yes	$25,936,658	203,900	$127	
Housatonic River upstream of Pope's Island	ShoreCDF-O_bse	100	29	50	69.95	249.30	Yes	Yes	$26,178,142	203,900	$128	
Housatonic River upstream of Pope's Island	BF-422/423	100	69	0	62.03	230.69	Yes	Yes	$25,936,658	203,900	$127	
Housatonic River upstream of Pope's Island	Habitat-427	100	32	0	59.77	191.35	Yes	Yes	$25,936,658	203,900	$127	
Housatonic River upstream of Pope's Island	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Beach-444	-1	0	0	0	-1.00	Yes	Yes	$7,416,862	203,900	$36	
Housatonic River upstream of Pope's Island	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Housatonic River upstream of Pope's Island	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-450	-1	0	0	0	-1.00	Yes	Yes	$7,416,862	203,900	$36	
Housatonic River upstream of Pope's Island	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Beach-364	-1	0	0	0	-1.00	Yes	Yes	$7,416,862	203,900	$36	
Housatonic River upstream of Pope's Island	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Housatonic River upstream of Pope's Island	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$13,701,783	203,900	$67	
Housatonic River upstream of Pope's Island	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$32,164,751	203,900	$158	
Housatonic River upstream of Pope's Island	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$7,416,862	203,900	$36	
Housatonic River upstream of Pope's Island	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$11,879,516	203,900	$58	
Housatonic River upstream of Pope's Island	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Housatonic River upstream of Pope's Island	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$9,840,445	203,900	$48	
Housatonic River upstream of Pope's Island	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$23,002,558	203,900	$113	
Housatonic River upstream of Pope's Island	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$32,164,751	203,900	$158	
Housatonic River upstream of Pope's Island	Berm-620	-1	0	0	0	-1.00	No	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$32,164,751	203,900	$158	
Housatonic River upstream of Pope's Island	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$32,164,751	203,900	$158	
Housatonic River upstream of Pope's Island	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$23,002,558	203,900	$113	
Housatonic River upstream of Pope's Island	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$25,154,679	203,900	$123	
Housatonic River upstream of Pope's Island	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$23,002,558	203,900	$113	
Housatonic River upstream of Pope's Island	Beach-620	-1	0	-1	0	-1.00	No	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$26,178,142	203,900	$128	
Housatonic River upstream of Pope's Island	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$25,154,679	203,900	$123	
Housatonic River upstream of Pope's Island	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$26,178,142	203,900	$128	
Housatonic River upstream of Pope's Island	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$23,002,558	203,900	$113	
Housatonic River upstream of Pope's Island	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$13,195,306	203,900	$65	
Housatonic River upstream of Pope's Island	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$32,164,751	203,900	$158	
Housatonic River upstream of Pope's Island	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$23,002,558	203,900	$113	
Johnsons Creek	CAD-M_bse	100	100	100	85.16	385.16	Yes	Yes	$6,944,977	88,000	$79	
Johnsons Creek	ShoreCDF-I_bse	100	100	100	71.25	371.25	Yes	Yes	$8,676,954	88,000	$99	
Johnsons Creek	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$11,072,646	88,000	$126	
Johnsons Creek	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$11,072,646	88,000	$126	
Johnsons Creek	ShoreCDF-K_bse	100	100	100	67.68	367.68	Yes	Yes	$10,223,369	88,000	$116	
Johnsons Creek	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$11,072,646	88,000	$126	
Johnsons Creek	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$8,676,954	88,000	$99	
Johnsons Creek	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$10,223,369	88,000	$116	
Johnsons Creek	IslandCDF-N_bse	100	100	50	73.28	323.28	Yes	Yes	$11,678,579	88,000	$133	
Johnsons Creek	IslandCDF-B_bse	100	100	50	68.28	318.28	Yes	Yes	$11,678,579	88,000	$133	
Johnsons Creek	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$14,395,039	88,000	$164	
Johnsons Creek	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$14,395,039	88,000	$164	
Johnsons Creek	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$14,395,039	88,000	$164	
Johnsons Creek	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$14,395,039	88,000	$164	
Johnsons Creek	ShoreCDF-O_bse	100	68	0	69.95	237.96	Yes	Yes	$14,395,039	88,000	$164	
Johnsons Creek	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$4,661,545	88,000	$53	
Johnsons Creek	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$11,678,579	88,000	$133	
Johnsons Creek	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$4,661,545	88,000	$53	
Johnsons Creek	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Johnsons Creek	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$2,629,697	88,000	$30	
Johnsons Creek	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$4,661,545	88,000	$53	
Johnsons Creek	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$4,661,545	88,000	$53	
Johnsons Creek	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$9,041,115	88,000	$103	
Johnsons Creek	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-323	-1	0	0	0	-1.00	Yes	Yes	$3,623,205	88,000	$41	
Johnsons Creek	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$4,661,545	88,000	$53	
Johnsons Creek	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	COW-E_cap	-1	0	0	0	-1.00	Yes	Yes	$2,629,697	88,000	$30	
Johnsons Creek	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$4,661,545	88,000	$53	
Johnsons Creek	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$3,623,205	88,000	$41	
Johnsons Creek	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Johnsons Creek	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$9,041,115	88,000	$103	
Johnsons Creek	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$4,661,545	88,000	$53	
Johnsons Creek	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-436	-1	0	0	0	-1.00	Yes	Yes	$3,623,205	88,000	$41	
Johnsons Creek	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-450	-1	0	0	0	-1.00	Yes	Yes	$3,623,205	88,000	$41	
Johnsons Creek	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$4,661,545	88,000	$53	
Johnsons Creek	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-468	-1	0	0	0	-1.00	Yes	Yes	$3,623,205	88,000	$41	
Johnsons Creek	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$9,041,115	88,000	$103	
Johnsons Creek	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-467	-1	0	0	0	-1.00	Yes	Yes	$2,401,709	88,000	$27	
Johnsons Creek	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$4,661,545	88,000	$53	
Johnsons Creek	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Johnsons Creek	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$4,661,545	88,000	$53	
Johnsons Creek	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$3,623,205	88,000	$41	
Johnsons Creek	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$5,623,171	88,000	$64	
Johnsons Creek	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$3,623,205	88,000	$41	
Johnsons Creek	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$6,944,977	88,000	$79	
Johnsons Creek	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$6,435,471	88,000	$73	
Johnsons Creek	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$4,661,545	88,000	$53	
Johnsons Creek	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$4,661,545	88,000	$53	
Johnsons Creek	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$14,395,039	88,000	$164	
Johnsons Creek	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$9,041,115	88,000	$103	
Johnsons Creek	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$9,041,115	88,000	$103	
Johnsons Creek	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$11,072,646	88,000	$126	
Johnsons Creek	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$11,678,579	88,000	$133	
Johnsons Creek	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$11,072,646	88,000	$126	
Johnsons Creek	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$14,395,039	88,000	$164	
Johnsons Creek	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$9,041,115	88,000	$103	
Johnsons Creek	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$14,395,039	88,000	$164	
Johnsons Creek	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$14,395,039	88,000	$164	
Johnsons Creek	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$8,676,954	88,000	$99	
Johnsons Creek	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$14,395,039	88,000	$164	
Johnsons Creek	UOW-CLDS	-1	0	0	0	-1.00	No	Yes	$3,132,870	88,000	$36	
Johnsons Creek	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$10,223,369	88,000	$116	
Johnsons Creek	Beach-620	-1	0	-1	0	-1.00	No	Yes	$6,435,471	88,000	$73	
Johnsons Creek	UOW-CSDS	-1	0	0	0	-1.00	No	Yes	$5,470,695	88,000	$62	
Johnsons Creek	UOW-NLDS	-1	0	0	0	-1.00	No	Yes	$5,470,695	88,000	$62	
Johnsons Creek	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$6,435,471	88,000	$73	
Johnsons Creek	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$11,072,646	88,000	$126	
Johnsons Creek	Berm-620	-1	0	0	0	-1.00	No	Yes	$6,435,471	88,000	$73	
Johnsons Creek	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$8,676,954	88,000	$99	
Johnsons Creek	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$10,223,369	88,000	$116	
Johnsons Creek	UOW-WLDS	-1	0	0	0	-1.00	No	Yes	$3,696,395	88,000	$42	
Black Rock Harbor	UOW-CLDS	100	100	100	75.43	375.43	No	Yes	$17,001,874	619,500	$27	
Black Rock Harbor	UOW-WLDS	100	100	100	75.43	375.43	No	Yes	$17,001,874	619,500	$27	
Black Rock Harbor	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$73,775,419	619,500	$119	
Black Rock Harbor	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$68,487,783	619,500	$111	
Black Rock Harbor	COW-E_cap	100	78	100	85.57	363.70	Yes	Yes	$11,184,624	619,500	$18	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Black Rock Harbor	CAD-M_bse	100	75	100	85.16	360.40	Yes	Yes	$41,260,557	619,500	$67	
Black Rock Harbor	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$54,696,312	619,500	$88	
Black Rock Harbor	ShoreCDF-C_bse	100	89	100	66.9	356.32	Yes	Yes	$73,775,419	619,500	$119	
Black Rock Harbor	COW-E_bse	100	43	100	85.57	328.51	Yes	Yes	$11,184,624	619,500	$18	
Black Rock Harbor	IslandCDF-N_bse	100	100	50	73.28	323.28	Yes	Yes	$77,459,294	619,500	$125	
Black Rock Harbor	ShoreCDF-D_bse	100	39	100	70.36	309.52	Yes	Yes	$73,775,419	619,500	$119	
Black Rock Harbor	ShoreCDF-I_bse	100	32	100	71.25	303.20	Yes	Yes	$68,487,783	619,500	$111	
Black Rock Harbor	ShoreCDF-K_bse	100	35	100	67.68	303.05	Yes	Yes	$68,487,783	619,500	$111	
Black Rock Harbor	IslandCDF-B_bse	100	80	50	68.28	298.70	Yes	Yes	$77,459,294	619,500	$125	
Black Rock Harbor	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$61,145,496	619,500	$99	
Black Rock Harbor	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$76,599,892	619,500	$124	
Black Rock Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$76,599,892	619,500	$124	
Black Rock Harbor	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$88,489,194	619,500	$143	
Black Rock Harbor	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$43,640,077	619,500	$70	
Black Rock Harbor	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$31,056,860	619,500	$50	
Black Rock Harbor	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$88,489,194	619,500	$143	
Black Rock Harbor	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$88,489,194	619,500	$143	
Black Rock Harbor	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$88,489,194	619,500	$143	
Black Rock Harbor	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$76,599,892	619,500	$124	
Black Rock Harbor	ShoreCDF-O_bse	100	10	0	69.95	179.61	Yes	Yes	$88,489,194	619,500	$143	
Black Rock Harbor	BF-422/423	50	23	0	62.03	134.63	Yes	Yes	$76,599,892	619,500	$124	
Black Rock Harbor	Habitat-427	50	10	0	59.77	120.17	Yes	Yes	$76,599,892	619,500	$124	
Black Rock Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	619,500	$25	
Black Rock Harbor	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	619,500	$25	
Black Rock Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	619,500	$25	
Black Rock Harbor	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	619,500	$25	
Black Rock Harbor	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	619,500	$25	
Black Rock Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Black Rock Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	619,500	$14	
Black Rock Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-467	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	619,500	$21	
Black Rock Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	619,500	$21	
Black Rock Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-434	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	619,500	$21	
Black Rock Harbor	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-323	-1	0	0	0	-1.00	Yes	Yes	$8,827,236	619,500	$14	
Black Rock Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-474	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	619,500	$21	
Black Rock Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	619,500	$25	
Black Rock Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-433	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	619,500	$21	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Black Rock Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	619,500	$25	
Black Rock Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$41,260,557	619,500	$67	
Black Rock Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-436	-1	0	0	0	-1.00	Yes	Yes	$7,233,630	619,500	$12	
Black Rock Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	619,500	$25	
Black Rock Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	619,500	$21	
Black Rock Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	619,500	$25	
Black Rock Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	619,500	$25	
Black Rock Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	619,500	$25	
Black Rock Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	619,500	$21	
Black Rock Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$77,459,294	619,500	$125	
Black Rock Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	619,500	$24	
Black Rock Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$54,696,312	619,500	$88	
Black Rock Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$77,459,294	619,500	$125	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Black Rock Harbor	Beach-620	-1	0	-1	0	-1.00	No	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$73,775,419	619,500	$119	
Black Rock Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$88,489,194	619,500	$143	
Black Rock Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$68,487,783	619,500	$111	
Black Rock Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$88,489,194	619,500	$143	
Black Rock Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$73,775,419	619,500	$119	
Black Rock Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$68,487,783	619,500	$111	
Black Rock Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$73,775,419	619,500	$119	
Black Rock Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$88,489,194	619,500	$143	
Black Rock Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$22,809,066	619,500	$37	
Black Rock Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$88,489,194	619,500	$143	
Black Rock Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$68,487,783	619,500	$111	
Black Rock Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$88,489,194	619,500	$143	
Southport Harbor - Entrance Channel	COW-E_cap	100	100	100	85.57	385.57	Yes	Yes	$1,018,699	16,600	$61	
Southport Harbor - Entrance Channel	UOW-WLDS	100	100	100	75.43	375.43	No	Yes	$1,097,477	16,600	$66	
Southport Harbor - Entrance Channel	Beach-433	100	100	100	74.14	374.14	Yes	Yes	$871,664	16,600	$53	
Southport Harbor - Entrance Channel	ShoreCDF-I_cap	100	100	100	71.25	371.25	Yes	Yes	$2,407,174	16,600	$145	
Southport Harbor - Entrance Channel	IslandCDF-L_cap	100	100	100	70.94	370.94	Yes	Yes	$2,695,458	16,600	$162	
Southport Harbor - Entrance Channel	ShoreCDF-D_cap	100	100	100	70.36	370.36	Yes	Yes	$2,407,174	16,600	$145	
Southport Harbor - Entrance Channel	ShoreCDF-K_cap	100	100	100	67.68	367.68	Yes	Yes	$2,695,458	16,600	$162	
Southport Harbor - Entrance Channel	ShoreCDF-C_cap	100	100	100	66.9	366.90	Yes	Yes	$2,407,174	16,600	$145	
Southport Harbor - Entrance Channel	ShoreCDF-J_cap	100	100	100	66.72	366.72	Yes	Yes	$2,407,174	16,600	$145	
Southport Harbor - Entrance Channel	Berm-433	100	78	100	82.92	360.46	Yes	Yes	$871,664	16,600	$53	
Southport Harbor - Entrance Channel	ShoreCDF-F_cap	100	100	100	59.43	359.43	Yes	Yes	$2,407,174	16,600	$145	
Southport Harbor - Entrance Channel	Berm-434	100	57	100	81.35	338.55	Yes	Yes	$871,664	16,600	$53	
Southport Harbor - Entrance Channel	CAD-M_cap	100	100	50	85.16	335.16	Yes	Yes	$1,896,807	16,600	$114	
Southport Harbor - Entrance Channel	Berm-449	100	100	50	82.4	332.40	Yes	Yes	$1,339,857	16,600	$81	
Southport Harbor - Entrance Channel	Berm-467	100	100	50	82.19	332.19	Yes	Yes	$1,541,395	16,600	$93	
Southport Harbor - Entrance Channel	Berm-323	100	100	50	80.39	330.39	Yes	Yes	$1,339,857	16,600	$81	
Southport Harbor - Entrance Channel	Berm-440	100	100	50	79.87	329.87	Yes	Yes	$1,339,857	16,600	$81	
Southport Harbor - Entrance Channel	UOW-CLDS	100	100	50	75.43	325.43	No	Yes	$1,377,885	16,600	$83	
Southport Harbor - Entrance Channel	Beach-434	100	51	100	74.14	325.34	Yes	Yes	$871,664	16,600	$53	
Southport Harbor - Entrance Channel	Beach-449	100	100	50	74.14	324.14	Yes	Yes	$1,339,857	16,600	$81	
Southport Harbor - Entrance Channel	Beach-440	100	100	50	74.14	324.14	Yes	Yes	$1,339,857	16,600	$81	
Southport Harbor - Entrance Channel	Beach-436	100	100	50	74.14	324.14	Yes	Yes	$1,339,857	16,600	$81	
Southport Harbor - Entrance Channel	Beach-323	100	100	50	74.14	324.14	Yes	Yes	$1,339,857	16,600	$81	
Southport Harbor - Entrance Channel	Berm-320	100	86	50	87.24	323.40	Yes	Yes	$1,541,395	16,600	$93	
Southport Harbor - Entrance Channel	IslandCDF-B_cap	100	100	50	68.28	318.28	Yes	Yes	$2,841,128	16,600	$171	
Southport Harbor - Entrance Channel	Berm-438	100	36	100	81.67	317.87	Yes	Yes	$1,020,231	16,600	$61	
Southport Harbor - Entrance Channel	ShoreCDF-A_cap	100	100	50	67.58	317.58	Yes	Yes	$2,841,128	16,600	$171	
Southport Harbor - Entrance Channel	Beach-438	100	22	100	74.14	296.43	Yes	Yes	$1,020,231	16,600	$61	
Southport Harbor - Entrance Channel	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$2,393,689	16,600	$144	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Southport Harbor - Entrance Channel	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-453	100	100	0	84.53	284.53	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-455/82	100	100	0	83.93	283.93	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-337	100	100	0	83.93	283.93	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Berm-367	100	100	0	83.31	283.31	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-454B	100	100	0	83.23	283.23	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-368	100	100	0	81.61	281.61	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-456	100	100	0	80.39	280.39	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Berm-447	100	100	0	80.1	280.10	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-Grove Beach	100	100	0	75	275.00	No	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-620	100	100	0	75	275.00	No	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-474	100	1	100	74.14	274.74	Yes	Yes	$871,664	16,600	$53	
Southport Harbor - Entrance Channel	IslandCDF-N_cap	100	100	0	73.28	273.28	Yes	Yes	$3,431,903	16,600	$207	
Southport Harbor - Entrance Channel	IslandCDF-P_cap	100	100	0	72.76	272.76	Yes	Yes	$3,431,903	16,600	$207	
Southport Harbor - Entrance Channel	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$2,576,051	16,600	$155	
Southport Harbor - Entrance Channel	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$1,844,813	16,600	$111	
Southport Harbor - Entrance Channel	IslandCDF-Q_cap	100	100	0	71.51	271.51	Yes	Yes	$3,431,903	16,600	$207	
Southport Harbor - Entrance Channel	ShoreCDF-O_cap	100	100	0	69.95	269.95	Yes	Yes	$3,431,903	16,600	$207	
Southport Harbor - Entrance Channel	Berm-441	100	80	0	87.76	268.09	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	IslandCDF-R_cap	100	100	0	67.53	267.53	Yes	Yes	$3,431,903	16,600	$207	
Southport Harbor - Entrance Channel	Berm-364b/364c	100	72	0	82.6	254.89	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Berm-457	100	25	0	86.95	211.81	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Berm-451	100	23	0	82.29	205.53	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-327	100	94	-1	74.53	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$2,393,689	16,600	$144	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Southport Harbor - Entrance Channel	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-79	100	100	-1	73.2	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$2,204,203	16,600	$133	
Southport Harbor - Entrance Channel	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$1,896,807	16,600	$114	
Southport Harbor - Entrance Channel	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-348	100	14	-1	73.83	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$2,204,203	16,600	$133	
Southport Harbor - Entrance Channel	Beach-444	100	43	-1	74.14	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-451	100	4	-1	74.14	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$1,541,395	16,600	$93	
Southport Harbor - Entrance Channel	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$2,204,203	16,600	$133	
Southport Harbor - Entrance Channel	Beach-330	100	100	-1	74.53	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-367	100	85	-1	73.59	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-364	100	100	-1	73.83	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-344	100	5	-1	74.53	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-67	100	29	-1	74.14	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-68	100	19	-1	73.2	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$1,541,395	16,600	$93	
Southport Harbor - Entrance Channel	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,018,699	16,600	$61	
Southport Harbor - Entrance Channel	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-333	100	14	-1	74.53	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$1,541,395	16,600	$93	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Southport Harbor - Entrance Channel	Beach-339	100	52	-1	74.14	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$1,976,251	16,600	$119	
Southport Harbor - Entrance Channel	Beach-337	100	28	-1	74.14	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-381	100	100	-1	72.66	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-480	100	27	-1	72.89	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$2,841,128	16,600	$171	
Southport Harbor - Entrance Channel	Beach-329	100	100	-1	74.14	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-121	100	73	-1	73.2	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-343	100	10	-1	73.83	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$1,541,395	16,600	$93	
Southport Harbor - Entrance Channel	Beach-457	100	34	-1	74.14	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	Beach-459	100	43	-1	74.14	-1.00	Yes	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$2,407,174	16,600	$145	
Southport Harbor - Entrance Channel	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$2,204,203	16,600	$133	
Southport Harbor - Entrance Channel	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$3,431,903	16,600	$207	
Southport Harbor - Entrance Channel	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$2,407,174	16,600	$145	
Southport Harbor - Entrance Channel	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$2,407,174	16,600	$145	
Southport Harbor - Entrance Channel	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$2,407,174	16,600	$145	
Southport Harbor - Entrance Channel	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$2,841,128	16,600	$171	
Southport Harbor - Entrance Channel	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$2,407,174	16,600	$145	
Southport Harbor - Entrance Channel	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$2,695,458	16,600	$162	
Southport Harbor - Entrance Channel	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$3,431,903	16,600	$207	
Southport Harbor - Entrance Channel	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$2,204,203	16,600	$133	
Southport Harbor - Entrance Channel	Beach-620	100	100	-1	75	-1.00	No	Yes	$2,393,689	16,600	$144	
Southport Harbor - Entrance Channel	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$2,695,458	16,600	$162	
Southport Harbor - Entrance Channel	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$3,431,903	16,600	$207	
Southport Harbor - Entrance Channel	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$3,431,903	16,600	$207	
Southport Harbor - Entrance Channel	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$1,755,651	16,600	$106	
Southport Harbor - Entrance Channel	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$3,431,903	16,600	$207	
Southport Harbor - Inner Harbor	COW-E_cap	100	100	100	85.57	385.57	Yes	Yes	$1,130,359	22,000	$51	
Southport Harbor - Inner Harbor	COW-E_bse	100	100	100	85.57	385.57	Yes	Yes	$1,130,359	22,000	$51	
Southport Harbor - Inner Harbor	UOW-WLDS	100	100	100	75.43	375.43	No	Yes	$1,205,598	22,000	$55	
Southport Harbor - Inner Harbor	ShoreCDF-I_bse	100	100	100	71.25	371.25	Yes	Yes	$2,899,512	22,000	$132	
Southport Harbor - Inner Harbor	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$3,360,766	22,000	$153	
Southport Harbor - Inner Harbor	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$2,899,512	22,000	$132	
Southport Harbor - Inner Harbor	ShoreCDF-K_bse	100	100	100	67.68	367.68	Yes	Yes	$3,360,766	22,000	$153	
Southport Harbor - Inner Harbor	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$2,899,512	22,000	$132	
Southport Harbor - Inner Harbor	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$2,899,512	22,000	$132	
Southport Harbor - Inner Harbor	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$2,899,512	22,000	$132	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Southport Harbor - Inner Harbor	CAD-M_bse	100	100	50	85.16	335.16	Yes	Yes	$2,294,043	22,000	$104	
Southport Harbor - Inner Harbor	UOW-CLDS	100	100	50	75.43	325.43	No	Yes	$1,521,061	22,000	$69	
Southport Harbor - Inner Harbor	IslandCDF-B_bse	100	100	50	68.28	318.28	Yes	Yes	$3,415,943	22,000	$155	
Southport Harbor - Inner Harbor	ShoreCDF-A_bse	100	100	50	67.58	317.58	Yes	Yes	$3,415,943	22,000	$155	
Southport Harbor - Inner Harbor	LFPlace-59	100	100	0	85.27	285.27	Yes	Yes	$1,967,195	22,000	$89	
Southport Harbor - Inner Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$2,682,834	22,000	$122	
Southport Harbor - Inner Harbor	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$2,682,834	22,000	$122	
Southport Harbor - Inner Harbor	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$4,127,596	22,000	$188	
Southport Harbor - Inner Harbor	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$4,127,596	22,000	$188	
Southport Harbor - Inner Harbor	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$3,403,838	22,000	$155	
Southport Harbor - Inner Harbor	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$2,074,313	22,000	$94	
Southport Harbor - Inner Harbor	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$4,127,596	22,000	$188	
Southport Harbor - Inner Harbor	ShoreCDF-O_bse	100	100	0	69.95	269.95	Yes	Yes	$4,127,596	22,000	$188	
Southport Harbor - Inner Harbor	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$4,127,596	22,000	$188	
Southport Harbor - Inner Harbor	BF-422/423	100	100	0	62.03	262.03	Yes	Yes	$2,682,834	22,000	$122	
Southport Harbor - Inner Harbor	Habitat-429	100	100	0	61.33	261.33	Yes	Yes	$2,682,834	22,000	$122	
Southport Harbor - Inner Harbor	Habitat-427	100	100	0	59.77	259.77	Yes	Yes	$2,682,834	22,000	$122	
Southport Harbor - Inner Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$915,412	22,000	$42	
Southport Harbor - Inner Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Southport Harbor - Inner Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-433	-1	0	0	0	-1.00	Yes	Yes	$915,412	22,000	$42	
Southport Harbor - Inner Harbor	Beach-436	-1	0	0	0	-1.00	Yes	Yes	$1,465,273	22,000	$67	
Southport Harbor - Inner Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$3,415,943	22,000	$155	
Southport Harbor - Inner Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Southport Harbor - Inner Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$1,465,273	22,000	$67	
Southport Harbor - Inner Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$1,465,273	22,000	$67	
Southport Harbor - Inner Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Southport Harbor - Inner Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$1,086,558	22,000	$49	
Southport Harbor - Inner Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Beach-474	-1	0	0	0	-1.00	Yes	Yes	$915,412	22,000	$42	
Southport Harbor - Inner Harbor	Beach-449	-1	0	0	0	-1.00	Yes	Yes	$1,465,273	22,000	$67	
Southport Harbor - Inner Harbor	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Southport Harbor - Inner Harbor	Beach-440	-1	0	0	0	-1.00	Yes	Yes	$1,465,273	22,000	$67	
Southport Harbor - Inner Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-323	-1	0	0	0	-1.00	Yes	Yes	$1,465,273	22,000	$67	
Southport Harbor - Inner Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Southport Harbor - Inner Harbor	Beach-438	-1	0	0	0	-1.00	Yes	Yes	$1,086,558	22,000	$49	
Southport Harbor - Inner Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-434	-1	0	0	0	-1.00	Yes	Yes	$915,412	22,000	$42	
Southport Harbor - Inner Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Southport Harbor - Inner Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$2,294,043	22,000	$104	
Southport Harbor - Inner Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Southport Harbor - Inner Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$1,728,444	22,000	$79	
Southport Harbor - Inner Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$2,197,124	22,000	$100	
Southport Harbor - Inner Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$1,465,273	22,000	$67	
Southport Harbor - Inner Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$915,412	22,000	$42	
Southport Harbor - Inner Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$3,360,766	22,000	$153	
Southport Harbor - Inner Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$2,899,512	22,000	$132	
Southport Harbor - Inner Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$2,899,512	22,000	$132	
Southport Harbor - Inner Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$3,415,943	22,000	$155	
Southport Harbor - Inner Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$4,127,596	22,000	$188	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Southport Harbor - Inner Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$4,127,596	22,000	$188	
Southport Harbor - Inner Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$2,899,512	22,000	$132	
Southport Harbor - Inner Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$3,360,766	22,000	$153	
Southport Harbor - Inner Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$4,127,596	22,000	$188	
Southport Harbor - Inner Harbor	Beach-620	-1	0	-1	0	-1.00	No	Yes	$2,616,216	22,000	$119	
Southport Harbor - Inner Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$4,127,596	22,000	$188	
Southport Harbor - Inner Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$2,899,512	22,000	$132	
Southport Harbor - Inner Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$4,127,596	22,000	$188	
Southport Harbor - Inner Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$2,899,512	22,000	$132	
Westport Harbor	COW-E_bse	100	100	100	85.57	385.57	Yes	Yes	$1,559,486	50,700	$31	
Westport Harbor	COW-E_cap	100	100	100	85.57	385.57	Yes	Yes	$1,559,486	50,700	$31	
Westport Harbor	UOW-WLDS	100	100	100	75.43	375.43	No	Yes	$2,202,549	50,700	$43	
Westport Harbor	ShoreCDF-I_bse	100	100	100	71.25	371.25	Yes	Yes	$6,756,659	50,700	$133	
Westport Harbor	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$6,119,376	50,700	$121	
Westport Harbor	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$6,756,659	50,700	$133	
Westport Harbor	ShoreCDF-K_bse	100	100	100	67.68	367.68	Yes	Yes	$6,756,659	50,700	$133	
Westport Harbor	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$6,119,376	50,700	$121	
Westport Harbor	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$6,756,659	50,700	$133	
Westport Harbor	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$6,119,376	50,700	$121	
Westport Harbor	LFPlace-59	100	100	50	85.27	335.27	Yes	Yes	$3,864,443	50,700	$76	
Westport Harbor	CAD-M_bse	100	100	50	85.16	335.16	Yes	Yes	$4,189,488	50,700	$83	
Westport Harbor	UOW-CLDS	100	100	50	75.43	325.43	No	Yes	$2,457,414	50,700	$48	
Westport Harbor	IslandCDF-L_bse	100	100	50	70.94	320.94	Yes	Yes	$7,021,052	50,700	$138	
Westport Harbor	ShoreCDF-A_bse	100	100	50	67.58	317.58	Yes	Yes	$7,021,052	50,700	$138	
Westport Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$5,580,820	50,700	$110	
Westport Harbor	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$5,580,820	50,700	$110	
Westport Harbor	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$8,461,274	50,700	$167	
Westport Harbor	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$8,461,274	50,700	$167	
Westport Harbor	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$3,540,371	50,700	$70	
Westport Harbor	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$6,072,435	50,700	$120	
Westport Harbor	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$8,461,274	50,700	$167	
Westport Harbor	ShoreCDF-O_bse	100	100	0	69.95	269.95	Yes	Yes	$8,461,274	50,700	$167	
Westport Harbor	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$8,461,274	50,700	$167	
Westport Harbor	BF-422/423	100	100	0	62.03	262.03	Yes	Yes	$5,580,820	50,700	$110	
Westport Harbor	Habitat-429	100	100	0	61.33	261.33	Yes	Yes	$5,580,820	50,700	$110	
Westport Harbor	Habitat-427	100	100	0	59.77	259.77	Yes	Yes	$5,580,820	50,700	$110	
Westport Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$3,003,822	50,700	$59	
Westport Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$4,189,488	50,700	$83	
Westport Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$2,405,611	50,700	$47	
Westport Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Westport Harbor	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$6,756,659	50,700	$133	
Westport Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-438	-1	0	0	0	-1.00	Yes	Yes	$2,405,611	50,700	$47	
Westport Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$3,003,822	50,700	$59	
Westport Harbor	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$2,405,611	50,700	$47	
Westport Harbor	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$2,405,611	50,700	$47	
Westport Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-433	-1	0	0	0	-1.00	Yes	Yes	$2,405,611	50,700	$47	
Westport Harbor	Beach-449	-1	0	0	0	-1.00	Yes	Yes	$2,405,611	50,700	$47	
Westport Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$2,405,611	50,700	$47	
Westport Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$2,405,611	50,700	$47	
Westport Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$3,003,822	50,700	$59	
Westport Harbor	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Beach-440	-1	0	0	0	-1.00	Yes	Yes	$2,405,611	50,700	$47	
Westport Harbor	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$3,003,822	50,700	$59	
Westport Harbor	Beach-474	-1	0	0	0	-1.00	Yes	Yes	$2,405,611	50,700	$47	
Westport Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Westport Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-320	-1	0	0	0	-1.00	Yes	Yes	$2,405,611	50,700	$47	
Westport Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Beach-434	-1	0	0	0	-1.00	Yes	Yes	$2,405,611	50,700	$47	
Westport Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Westport Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$3,680,778	50,700	$73	
Westport Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$4,277,587	50,700	$84	
Westport Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$2,405,611	50,700	$47	
Westport Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$3,003,822	50,700	$59	
Westport Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$4,277,587	50,700	$84	
Westport Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$8,461,274	50,700	$167	
Westport Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$6,756,659	50,700	$133	
Westport Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$6,119,376	50,700	$121	
Westport Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$8,461,274	50,700	$167	
Westport Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$6,756,659	50,700	$133	
Westport Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$7,021,052	50,700	$138	
Westport Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$6,756,659	50,700	$133	
Westport Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$6,119,376	50,700	$121	
Westport Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$8,461,274	50,700	$167	
Westport Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$7,021,052	50,700	$138	
Westport Harbor	Beach-620	-1	0	-1	0	-1.00	No	Yes	$4,277,587	50,700	$84	
Westport Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$8,461,274	50,700	$167	
Westport Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$6,119,376	50,700	$121	
Westport Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$4,277,587	50,700	$84	
Westport Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$8,461,274	50,700	$167	
Norwalk Harbor - Suitable	UOW-WLDS	100	100	100	75.43	375.43	No	Yes	$5,400,723	209,000	$26	
Norwalk Harbor - Suitable	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$25,767,012	209,000	$123	
Norwalk Harbor - Suitable	COW-E_cap	100	77	100	85.57	362.76	Yes	Yes	$4,466,207	209,000	$21	
Norwalk Harbor - Suitable	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$23,564,814	209,000	$113	
Norwalk Harbor - Suitable	ShoreCDF-C_bse	100	88	100	66.9	355.26	Yes	Yes	$19,557,577	209,000	$94	
Norwalk Harbor - Suitable	IslandCDF-B_bse	100	79	100	68.28	347.73	Yes	Yes	$25,767,012	209,000	$123	
Norwalk Harbor - Suitable	LFPlace-59	100	100	50	85.27	335.27	Yes	Yes	$16,002,515	209,000	$77	
Norwalk Harbor - Suitable	COW-E_bse	100	42	100	85.57	327.99	Yes	Yes	$4,466,207	209,000	$21	
Norwalk Harbor - Suitable	UOW-CLDS	100	100	50	75.43	325.43	No	Yes	$7,748,731	209,000	$37	
Norwalk Harbor - Suitable	IslandCDF-L_bse	100	100	50	70.94	320.94	Yes	Yes	$26,815,980	209,000	$128	
Norwalk Harbor - Suitable	ShoreCDF-A_bse	100	100	50	67.58	317.58	Yes	Yes	$26,815,980	209,000	$128	
Norwalk Harbor - Suitable	CAD-M_bse	100	74	50	85.16	309.50	Yes	Yes	$13,993,889	209,000	$67	
Norwalk Harbor - Suitable	ShoreCDF-D_bse	100	39	100	70.36	309.05	Yes	Yes	$19,557,577	209,000	$94	
Norwalk Harbor - Suitable	ShoreCDF-I_bse	100	32	100	71.25	302.81	Yes	Yes	$25,767,012	209,000	$123	
Norwalk Harbor - Suitable	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$26,708,849	209,000	$128	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Norwalk Harbor - Suitable	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$26,708,849	209,000	$128	
Norwalk Harbor - Suitable	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$32,933,345	209,000	$158	
Norwalk Harbor - Suitable	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$32,933,345	209,000	$158	
Norwalk Harbor - Suitable	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$20,953,986	209,000	$100	
Norwalk Harbor - Suitable	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$11,784,818	209,000	$56	
Norwalk Harbor - Suitable	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$32,933,345	209,000	$158	
Norwalk Harbor - Suitable	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$32,933,345	209,000	$158	
Norwalk Harbor - Suitable	Habitat-429	100	100	0	61.33	261.33	Yes	Yes	$26,708,849	209,000	$128	
Norwalk Harbor - Suitable	ShoreCDF-K_bse	100	35	50	67.68	252.62	Yes	Yes	$26,815,980	209,000	$128	
Norwalk Harbor - Suitable	BF-422/423	100	22	0	62.03	184.36	Yes	Yes	$26,708,849	209,000	$128	
Norwalk Harbor - Suitable	ShoreCDF-O_bse	100	10	0	69.95	179.50	Yes	Yes	$32,933,345	209,000	$158	
Norwalk Harbor - Suitable	Habitat-427	100	10	0	59.77	170.04	Yes	Yes	$26,708,849	209,000	$128	
Norwalk Harbor - Suitable	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$10,068,468	209,000	$48	
Norwalk Harbor - Suitable	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-449	-1	0	0	0	-1.00	Yes	Yes	$7,583,838	209,000	$36	
Norwalk Harbor - Suitable	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$10,068,468	209,000	$48	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Norwalk Harbor - Suitable	Beach-440	-1	0	0	0	-1.00	Yes	Yes	$7,583,838	209,000	$36	
Norwalk Harbor - Suitable	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$4,774,315	209,000	$23	
Norwalk Harbor - Suitable	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$10,068,468	209,000	$48	
Norwalk Harbor - Suitable	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$13,993,889	209,000	$67	
Norwalk Harbor - Suitable	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$10,068,468	209,000	$48	
Norwalk Harbor - Suitable	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-438	-1	0	0	0	-1.00	Yes	Yes	$7,583,838	209,000	$36	
Norwalk Harbor - Suitable	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$7,583,838	209,000	$36	
Norwalk Harbor - Suitable	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$10,068,468	209,000	$48	
Norwalk Harbor - Suitable	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$7,583,838	209,000	$36	
Norwalk Harbor - Suitable	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Norwalk Harbor - Suitable	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$10,068,468	209,000	$48	
Norwalk Harbor - Suitable	Beach-320	-1	0	0	0	-1.00	Yes	Yes	$4,087,070	209,000	$20	
Norwalk Harbor - Suitable	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$10,068,468	209,000	$48	
Norwalk Harbor - Suitable	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$10,068,468	209,000	$48	
Norwalk Harbor - Suitable	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$10,068,468	209,000	$48	
Norwalk Harbor - Suitable	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$12,157,966	209,000	$58	
Norwalk Harbor - Suitable	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$7,583,838	209,000	$36	
Norwalk Harbor - Suitable	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$25,767,012	209,000	$123	
Norwalk Harbor - Suitable	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Berm-620	-1	0	0	0	-1.00	No	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$26,815,980	209,000	$128	
Norwalk Harbor - Suitable	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$23,564,814	209,000	$113	
Norwalk Harbor - Suitable	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$26,815,980	209,000	$128	
Norwalk Harbor - Suitable	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$32,933,345	209,000	$158	
Norwalk Harbor - Suitable	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$19,557,577	209,000	$94	
Norwalk Harbor - Suitable	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$26,815,980	209,000	$128	
Norwalk Harbor - Suitable	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	Beach-620	-1	0	-1	0	-1.00	No	Yes	$13,493,039	209,000	$65	
Norwalk Harbor - Suitable	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$25,767,012	209,000	$123	
Norwalk Harbor - Suitable	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$19,557,577	209,000	$94	
Norwalk Harbor - Suitable	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$32,933,345	209,000	$158	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Norwalk Harbor - Suitable	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$32,933,345	209,000	$158	
Norwalk Harbor - Suitable	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$32,933,345	209,000	$158	
Norwalk Harbor - Suitable	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$32,933,345	209,000	$158	
Norwalk Harbor - Suitable	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$25,767,012	209,000	$123	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-I_bse	100	100	100	71.25	371.25	Yes	Yes	$3,114,356	20,000	$156	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$2,522,669	20,000	$126	
Norwalk Harbor-West Branch I-95 Area	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$3,114,356	20,000	$156	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$2,522,669	20,000	$126	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$3,114,356	20,000	$156	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$2,717,165	20,000	$136	
Norwalk Harbor-West Branch I-95 Area	CAD-M_bse	100	100	50	85.16	335.16	Yes	Yes	$2,146,918	20,000	$107	
Norwalk Harbor-West Branch I-95 Area	IslandCDF-L_bse	100	100	50	70.94	320.94	Yes	Yes	$3,203,048	20,000	$160	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-K_bse	100	100	50	67.68	317.68	Yes	Yes	$3,203,048	20,000	$160	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-A_bse	100	100	50	67.58	317.58	Yes	Yes	$3,203,048	20,000	$160	
Norwalk Harbor-West Branch I-95 Area	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$3,869,932	20,000	$193	
Norwalk Harbor-West Branch I-95 Area	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$3,869,932	20,000	$193	
Norwalk Harbor-West Branch I-95 Area	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$3,869,932	20,000	$193	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-O_bse	100	100	0	69.95	269.70	Yes	Yes	$3,869,932	20,000	$193	
Norwalk Harbor-West Branch I-95 Area	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$3,869,932	20,000	$193	
Norwalk Harbor-West Branch I-95 Area	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Beach-449	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	
Norwalk Harbor-West Branch I-95 Area	Beach-440	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	
Norwalk Harbor-West Branch I-95 Area	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$1,659,167	20,000	$83	
Norwalk Harbor-West Branch I-95 Area	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$1,659,167	20,000	$83	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Norwalk Harbor-West Branch I-95 Area	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$1,659,167	20,000	$83	
Norwalk Harbor-West Branch I-95 Area	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$3,114,356	20,000	$156	
Norwalk Harbor-West Branch I-95 Area	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$1,659,167	20,000	$83	
Norwalk Harbor-West Branch I-95 Area	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$2,505,564	20,000	$125	
Norwalk Harbor-West Branch I-95 Area	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$1,659,167	20,000	$83	
Norwalk Harbor-West Branch I-95 Area	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	
Norwalk Harbor-West Branch I-95 Area	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$1,659,167	20,000	$83	
Norwalk Harbor-West Branch I-95 Area	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$2,146,918	20,000	$107	
Norwalk Harbor-West Branch I-95 Area	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$2,505,564	20,000	$125	
Norwalk Harbor-West Branch I-95 Area	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	
Norwalk Harbor-West Branch I-95 Area	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Norwalk Harbor-West Branch I-95 Area	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$1,659,167	20,000	$83	
Norwalk Harbor-West Branch I-95 Area	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	
Norwalk Harbor-West Branch I-95 Area	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$1,659,167	20,000	$83	
Norwalk Harbor-West Branch I-95 Area	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-320	-1	0	0	0	-1.00	Yes	Yes	$899,209	20,000	$45	
Norwalk Harbor-West Branch I-95 Area	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$1,061,992	20,000	$53	
Norwalk Harbor-West Branch I-95 Area	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$1,659,167	20,000	$83	
Norwalk Harbor-West Branch I-95 Area	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	COW-E_cap	-1	0	0	0	-1.00	Yes	Yes	$1,089,003	20,000	$54	
Norwalk Harbor-West Branch I-95 Area	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$2,115,319	20,000	$106	
Norwalk Harbor-West Branch I-95 Area	Beach-438	-1	0	0	0	-1.00	Yes	Yes	$1,418,823	20,000	$71	
Norwalk Harbor-West Branch I-95 Area	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$2,505,564	20,000	$125	
Norwalk Harbor-West Branch I-95 Area	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,089,003	20,000	$54	
Norwalk Harbor-West Branch I-95 Area	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$2,533,799	20,000	$127	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Norwalk Harbor-West Branch I-95 Area	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$3,869,932	20,000	$193	
Norwalk Harbor-West Branch I-95 Area	UOW-NLDS	-1	0	0	0	-1.00	No	Yes	$3,097,251	20,000	$155	
Norwalk Harbor-West Branch I-95 Area	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$3,869,932	20,000	$193	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$3,869,932	20,000	$193	
Norwalk Harbor-West Branch I-95 Area	UOW-CLDS	-1	0	0	0	-1.00	No	Yes	$1,468,033	20,000	$73	
Norwalk Harbor-West Branch I-95 Area	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$1,888,845	20,000	$94	
Norwalk Harbor-West Branch I-95 Area	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$3,203,048	20,000	$160	
Norwalk Harbor-West Branch I-95 Area	Berm-620	-1	0	0	0	-1.00	No	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$3,869,932	20,000	$193	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$2,717,165	20,000	$136	
Norwalk Harbor-West Branch I-95 Area	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$2,505,564	20,000	$125	
Norwalk Harbor-West Branch I-95 Area	Beach-620	-1	0	-1	0	-1.00	No	Yes	$2,533,799	20,000	$127	
Norwalk Harbor-West Branch I-95 Area	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$2,505,564	20,000	$125	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$3,203,048	20,000	$160	
Norwalk Harbor-West Branch I-95 Area	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$3,869,932	20,000	$193	
Norwalk Harbor-West Branch I-95 Area	UOW-WLDS	-1	0	0	0	-1.00	No	Yes	$1,112,225	20,000	$56	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$3,114,356	20,000	$156	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$3,114,356	20,000	$156	
Norwalk Harbor-West Branch I-95 Area	UOW-CSDS	-1	0	0	0	-1.00	No	Yes	$1,989,313	20,000	$99	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$3,203,048	20,000	$160	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$2,522,669	20,000	$126	
Norwalk Harbor-West Branch I-95 Area	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$2,522,669	20,000	$126	
Norwalk Harbor-West Branch I-95 Area	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$2,533,799	20,000	$127	
Wilson Point	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$73,705,337	618,900	$119	
Wilson Point	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$73,705,337	618,900	$119	
Wilson Point	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$73,705,337	618,900	$119	
Wilson Point	ShoreCDF-C_bse	100	90	100	66.9	356.41	Yes	Yes	$54,644,022	618,900	$88	
Wilson Point	IslandCDF-B_bse	100	80	100	68.28	348.77	Yes	Yes	$73,705,337	618,900	$119	
Wilson Point	LFPlace-59	100	100	50	85.27	335.27	Yes	Yes	$61,071,218	618,900	$99	
Wilson Point	UOW-WLDS	50	100	100	75.43	325.43	No	Yes	$11,172,690	618,900	$18	
Wilson Point	IslandCDF-L_bse	100	100	50	70.94	320.94	Yes	Yes	$77,384,958	618,900	$125	
Wilson Point	COW-E_cap	50	78	100	85.57	313.77	Yes	Yes	$11,172,690	618,900	$18	
Wilson Point	ShoreCDF-D_bse	100	39	100	70.36	309.55	Yes	Yes	$54,644,022	618,900	$88	
Wilson Point	ShoreCDF-I_bse	100	32	100	71.25	303.23	Yes	Yes	$73,705,337	618,900	$119	
Wilson Point	COW-E_bse	50	43	100	85.57	278.55	Yes	Yes	$11,172,690	618,900	$18	
Wilson Point	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$76,510,659	618,900	$124	
Wilson Point	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$76,510,659	618,900	$124	
Wilson Point	UOW-CLDS	50	100	50	75.43	275.43	No	Yes	$23,723,640	618,900	$38	
Wilson Point	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$88,404,199	618,900	$143	
Wilson Point	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$88,404,199	618,900	$143	
Wilson Point	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$88,404,199	618,900	$143	
Wilson Point	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$88,404,199	618,900	$143	
Wilson Point	CAD-M_bse	100	75	0	85.16	260.47	Yes	Yes	$41,221,317	618,900	$67	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Wilson Point	ShoreCDF-K_bse	100	35	50	67.68	253.08	Yes	Yes	$77,384,958	618,900	$125	
Wilson Point	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$31,027,852	618,900	$50	
Wilson Point	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$43,614,729	618,900	$70	
Wilson Point	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$76,510,659	618,900	$124	
Wilson Point	ShoreCDF-O_bse	100	10	0	69.95	179.62	Yes	Yes	$88,404,199	618,900	$143	
Wilson Point	BF-422/423	50	23	0	62.03	134.65	Yes	Yes	$76,510,659	618,900	$124	
Wilson Point	Habitat-427	50	10	0	59.77	120.18	Yes	Yes	$76,510,659	618,900	$124	
Wilson Point	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	
Wilson Point	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	618,900	$24	
Wilson Point	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	618,900	$21	
Wilson Point	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	
Wilson Point	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	
Wilson Point	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	
Wilson Point	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	618,900	$24	
Wilson Point	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$41,221,317	618,900	$67	
Wilson Point	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	
Wilson Point	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	618,900	$24	
Wilson Point	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	618,900	$24	
Wilson Point	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	618,900	$24	
Wilson Point	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	
Wilson Point	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Wilson Point	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-441	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	618,900	$21	
Wilson Point	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	618,900	$24	
Wilson Point	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	
Wilson Point	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	
Wilson Point	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	
Wilson Point	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	618,900	$24	
Wilson Point	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	618,900	$21	
Wilson Point	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	618,900	$24	
Wilson Point	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	
Wilson Point	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	618,900	$24	
Wilson Point	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	
Wilson Point	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Wilson Point	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	
Wilson Point	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-442	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	618,900	$21	
Wilson Point	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$73,705,337	618,900	$119	
Wilson Point	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	618,900	$24	
Wilson Point	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	618,900	$25	
Wilson Point	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	618,900	$24	
Wilson Point	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	618,900	$24	
Wilson Point	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	618,900	$24	
Wilson Point	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-320	-1	0	0	0	-1.00	Yes	Yes	$12,911,556	618,900	$21	
Wilson Point	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	618,900	$37	
Wilson Point	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$54,644,022	618,900	$88	
Wilson Point	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$73,705,337	618,900	$119	
Wilson Point	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$73,705,337	618,900	$119	
Wilson Point	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$22,809,066	618,900	$37	
Wilson Point	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$73,705,337	618,900	$119	
Wilson Point	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$73,705,337	618,900	$119	
Wilson Point	Berm-620	-1	0	0	0	-1.00	No	Yes	$22,809,066	618,900	$37	
Wilson Point	Beach-620	-1	0	-1	0	-1.00	No	Yes	$22,809,066	618,900	$37	
Wilson Point	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$88,404,199	618,900	$143	
Wilson Point	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$88,404,199	618,900	$143	
Wilson Point	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$77,384,958	618,900	$125	
Wilson Point	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$88,404,199	618,900	$143	
Wilson Point	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$77,384,958	618,900	$125	
Wilson Point	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$88,404,199	618,900	$143	
Wilson Point	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$88,404,199	618,900	$143	
Wilson Point	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$54,644,022	618,900	$88	
Fivemile River	COW-E_cap	100	100	100	85.57	385.57	Yes	Yes	$1,889,137	55,400	$34	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Fivemile River	COW-E_bse	100	100	100	85.57	385.57	Yes	Yes	$1,889,137	55,400	$34	
Fivemile River	UOW-WLDS	100	100	100	75.43	375.43	No	Yes	$1,889,137	55,400	$34	
Fivemile River	ShoreCDF-I_bse	100	100	100	71.25	371.25	Yes	Yes	$7,254,665	55,400	$131	
Fivemile River	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$6,635,600	55,400	$120	
Fivemile River	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$7,254,665	55,400	$131	
Fivemile River	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$7,254,665	55,400	$131	
Fivemile River	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$5,766,660	55,400	$104	
Fivemile River	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$7,254,665	55,400	$131	
Fivemile River	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$7,254,665	55,400	$131	
Fivemile River	LFPlace-59	100	100	50	85.27	335.27	Yes	Yes	$4,400,852	55,400	$79	
Fivemile River	IslandCDF-L_bse	100	100	50	70.94	320.94	Yes	Yes	$7,606,501	55,400	$137	
Fivemile River	ShoreCDF-K_bse	100	100	50	67.68	317.68	Yes	Yes	$7,606,501	55,400	$137	
Fivemile River	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$4,553,588	55,400	$82	
Fivemile River	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$6,006,189	55,400	$108	
Fivemile River	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$6,006,189	55,400	$108	
Fivemile River	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$3,780,444	55,400	$68	
Fivemile River	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$9,166,527	55,400	$165	
Fivemile River	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$9,166,527	55,400	$165	
Fivemile River	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$3,780,444	55,400	$68	
Fivemile River	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$6,507,752	55,400	$117	
Fivemile River	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$9,166,527	55,400	$165	
Fivemile River	ShoreCDF-O_bse	100	100	0	69.95	269.95	Yes	Yes	$9,166,527	55,400	$165	
Fivemile River	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$9,166,527	55,400	$165	
Fivemile River	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$6,006,189	55,400	$108	
Fivemile River	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$6,006,189	55,400	$108	
Fivemile River	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$6,006,189	55,400	$108	
Fivemile River	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$3,212,668	55,400	$58	
Fivemile River	Beach-442	-1	0	0	0	-1.00	Yes	Yes	$2,558,991	55,400	$46	
Fivemile River	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$3,212,668	55,400	$58	
Fivemile River	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$4,553,588	55,400	$82	
Fivemile River	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$3,212,668	55,400	$58	
Fivemile River	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	
Fivemile River	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Fivemile River	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	
Fivemile River	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$3,212,668	55,400	$58	
Fivemile River	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$3,212,668	55,400	$58	
Fivemile River	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$3,212,668	55,400	$58	
Fivemile River	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$2,558,991	55,400	$46	
Fivemile River	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	
Fivemile River	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	
Fivemile River	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	
Fivemile River	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	
Fivemile River	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	
Fivemile River	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$3,212,668	55,400	$58	
Fivemile River	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$3,212,668	55,400	$58	
Fivemile River	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$3,212,668	55,400	$58	
Fivemile River	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$3,212,668	55,400	$58	
Fivemile River	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Fivemile River	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	
Fivemile River	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-320	-1	0	0	0	-1.00	Yes	Yes	$2,558,991	55,400	$46	
Fivemile River	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$2,558,991	55,400	$46	
Fivemile River	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$3,212,668	55,400	$58	
Fivemile River	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$3,212,668	55,400	$58	
Fivemile River	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	
Fivemile River	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$7,254,665	55,400	$131	
Fivemile River	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$3,212,668	55,400	$58	
Fivemile River	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	
Fivemile River	Beach-441	-1	0	0	0	-1.00	Yes	Yes	$2,558,991	55,400	$46	
Fivemile River	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	
Fivemile River	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	
Fivemile River	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	
Fivemile River	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$3,934,181	55,400	$71	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Fivemile River	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$4,549,486	55,400	$82	
Fivemile River	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$9,166,527	55,400	$165	
Fivemile River	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$5,766,660	55,400	$104	
Fivemile River	Beach-620	-1	0	-1	0	-1.00	No	Yes	$4,549,486	55,400	$82	
Fivemile River	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$4,549,486	55,400	$82	
Fivemile River	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$7,254,665	55,400	$131	
Fivemile River	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$7,254,665	55,400	$131	
Fivemile River	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$6,635,600	55,400	$120	
Fivemile River	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$9,166,527	55,400	$165	
Fivemile River	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$9,166,527	55,400	$165	
Fivemile River	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$7,254,665	55,400	$131	
Fivemile River	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$9,166,527	55,400	$165	
Fivemile River	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$9,166,527	55,400	$165	
Fivemile River	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$7,254,665	55,400	$131	
Fivemile River	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$7,606,501	55,400	$137	
Fivemile River	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$7,606,501	55,400	$137	
Fivemile River	Berm-620	-1	0	0	0	-1.00	No	Yes	$4,549,486	55,400	$82	
Westcott Cove - Sand	COW-E_cap	100	100	100	85.57	385.57	Yes	Yes	$1,596,092	34,300	$47	
Westcott Cove - Sand	UOW-WLDS	100	100	100	75.43	375.43	No	Yes	$1,328,596	34,300	$39	
Westcott Cove - Sand	Beach-442	100	100	100	74.53	374.53	Yes	Yes	$1,127,882	34,300	$33	
Westcott Cove - Sand	ShoreCDF-D_cap	100	100	100	70.36	370.36	Yes	Yes	$4,225,031	34,300	$123	
Westcott Cove - Sand	Berm-441	100	82	100	87.76	369.96	Yes	Yes	$1,320,328	34,300	$38	
Westcott Cove - Sand	IslandCDF-B_cap	100	100	100	68.28	368.28	Yes	Yes	$4,225,031	34,300	$123	
Westcott Cove - Sand	ShoreCDF-A_cap	100	100	100	67.58	367.58	Yes	Yes	$4,831,915	34,300	$141	
Westcott Cove - Sand	ShoreCDF-C_cap	100	100	100	66.9	366.90	Yes	Yes	$4,225,031	34,300	$123	
Westcott Cove - Sand	ShoreCDF-F_cap	100	100	100	59.43	359.43	Yes	Yes	$4,831,915	34,300	$141	
Westcott Cove - Sand	Beach-441	100	79	100	74.14	353.15	Yes	Yes	$1,320,328	34,300	$38	
Westcott Cove - Sand	Berm-456	100	100	50	80.39	330.39	Yes	Yes	$2,249,393	34,300	$66	
Westcott Cove - Sand	Berm-320	100	88	50	87.24	325.41	Yes	Yes	$2,249,393	34,300	$66	
Westcott Cove - Sand	ShoreCDF-I_cap	100	100	50	71.25	321.25	Yes	Yes	$4,911,092	34,300	$143	
Westcott Cove - Sand	ShoreCDF-K_cap	100	100	50	67.68	317.68	Yes	Yes	$4,911,092	34,300	$143	
Westcott Cove - Sand	ShoreCDF-J_cap	100	100	50	66.72	316.72	Yes	Yes	$4,911,092	34,300	$143	
Westcott Cove - Sand	CAD-M_cap	100	100	0	85.16	285.16	Yes	Yes	$3,123,285	34,300	$91	
Westcott Cove - Sand	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-453	100	100	0	84.53	284.53	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-337	100	100	0	83.93	283.93	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-455/82	100	100	0	83.93	283.93	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Berm-367	100	100	0	83.31	283.31	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-454B	100	100	0	83.23	283.23	Yes	Yes	$3,284,598	34,300	$96	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Westcott Cove - Sand	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-177	100	98	0	84.64	282.89	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-449	100	100	0	82.4	282.40	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Berm-467	100	100	0	82.19	282.19	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-368	100	100	0	81.61	281.61	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Berm-447	100	100	0	80.1	280.10	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-440	100	100	0	79.87	279.87	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$2,680,168	34,300	$78	
Westcott Cove - Sand	Berm-620	100	100	0	75	275.00	No	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-Grove Beach	100	100	0	75	275.00	No	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	IslandCDF-N_cap	100	100	0	73.28	273.28	Yes	Yes	$5,927,111	34,300	$173	
Westcott Cove - Sand	IslandCDF-P_cap	100	100	0	72.76	272.76	Yes	Yes	$5,927,111	34,300	$173	
Westcott Cove - Sand	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$4,705,425	34,300	$137	
Westcott Cove - Sand	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$4,705,425	34,300	$137	
Westcott Cove - Sand	IslandCDF-Q_cap	100	100	0	71.51	271.51	Yes	Yes	$5,927,111	34,300	$173	
Westcott Cove - Sand	IslandCDF-L_cap	100	100	0	70.94	270.94	Yes	Yes	$5,927,111	34,300	$173	
Westcott Cove - Sand	ShoreCDF-O_cap	100	100	0	69.95	269.95	Yes	Yes	$5,927,111	34,300	$173	
Westcott Cove - Sand	IslandCDF-R_cap	100	100	0	67.53	267.53	Yes	Yes	$5,927,111	34,300	$173	
Westcott Cove - Sand	Berm-433	100	79	0	82.92	262.27	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Berm-364b/364c	100	74	0	82.6	256.58	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-434	100	59	0	81.35	239.88	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Berm-438	100	37	0	81.67	218.71	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Berm-457	100	25	0	86.95	212.39	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Berm-451	100	24	0	82.29	206.07	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,596,092	34,300	$47	
Westcott Cove - Sand	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-79	100	57	-1	73.2	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-364	100	83	-1	73.83	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$3,895,074	34,300	$114	
Westcott Cove - Sand	Beach-381	100	89	-1	72.66	-1.00	Yes	Yes	$3,284,598	34,300	$96	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Westcott Cove - Sand	Beach-467	100	91	-1	73.83	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$3,895,074	34,300	$114	
Westcott Cove - Sand	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-438	100	11	-1	74.14	-1.00	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Beach-337	100	13	-1	74.14	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$3,895,074	34,300	$114	
Westcott Cove - Sand	Beach-343	100	5	-1	73.83	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-434	100	25	-1	74.14	-1.00	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Beach-474	100	0	-1	74.14	-1.00	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Beach-348	100	7	-1	73.83	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$2,249,393	34,300	$66	
Westcott Cove - Sand	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-181	100	98	-1	74.14	-1.00	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Beach-121	100	36	-1	73.2	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-433	100	62	-1	74.14	-1.00	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-480	100	13	-1	72.89	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-68	100	9	-1	73.2	-1.00	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Beach-344	100	3	-1	74.53	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-67	100	14	-1	74.14	-1.00	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$3,123,285	34,300	$91	
Westcott Cove - Sand	Beach-329	100	70	-1	74.14	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-444	100	21	-1	74.14	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-339	100	25	-1	74.14	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-330	100	70	-1	74.53	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$2,249,393	34,300	$66	
Westcott Cove - Sand	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$2,249,393	34,300	$66	
Westcott Cove - Sand	Beach-457	100	17	-1	74.14	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-451	100	2	-1	74.14	-1.00	Yes	Yes	$3,284,598	34,300	$96	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Westcott Cove - Sand	Beach-111	100	94	-1	73.2	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-76	100	91	-1	74.14	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-177	100	79	-1	72.89	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-459	100	21	-1	74.14	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$4,225,031	34,300	$123	
Westcott Cove - Sand	Beach-333	100	7	-1	74.53	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$2,249,393	34,300	$66	
Westcott Cove - Sand	Beach-367	100	41	-1	73.59	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-436	100	97	-1	74.14	-1.00	Yes	Yes	$2,804,197	34,300	$82	
Westcott Cove - Sand	Beach-327	100	45	-1	74.53	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$3,895,074	34,300	$114	
Westcott Cove - Sand	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$4,911,092	34,300	$143	
Westcott Cove - Sand	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$2,698,205	34,300	$79	
Westcott Cove - Sand	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$5,927,111	34,300	$173	
Westcott Cove - Sand	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$5,927,111	34,300	$173	
Westcott Cove - Sand	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$4,911,092	34,300	$143	
Westcott Cove - Sand	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$5,927,111	34,300	$173	
Westcott Cove - Sand	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$5,927,111	34,300	$173	
Westcott Cove - Sand	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$4,911,092	34,300	$143	
Westcott Cove - Sand	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$4,225,031	34,300	$123	
Westcott Cove - Sand	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$5,927,111	34,300	$173	
Westcott Cove - Sand	Beach-620	100	100	-1	75	-1.00	No	Yes	$3,284,598	34,300	$96	
Westcott Cove - Sand	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$5,927,111	34,300	$173	
Westcott Cove - Sand	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$4,831,915	34,300	$141	
Westcott Cove - Sand	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$4,831,915	34,300	$141	
Westcott Cove - Sand	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$4,225,031	34,300	$123	
Westcott Cove - Sand	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$3,895,074	34,300	$114	
Westcott Cove - Fines	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$4,236,607	34,400	$123	
Westcott Cove - Fines	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$4,236,607	34,400	$123	
Westcott Cove - Fines	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$4,843,703	34,400	$141	
Westcott Cove - Fines	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$4,236,607	34,400	$123	
Westcott Cove - Fines	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$4,843,703	34,400	$141	
Westcott Cove - Fines	COW-E_cap	50	100	100	85.57	335.57	Yes	Yes	$1,599,832	34,400	$47	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Westcott Cove - Fines	COW-E_bse	50	100	100	85.57	335.57	Yes	Yes	$1,599,832	34,400	$47	
Westcott Cove - Fines	LFPlace-59	100	100	50	85.27	335.27	Yes	Yes	$2,705,124	34,400	$79	
Westcott Cove - Fines	UOW-WLDS	50	100	100	75.43	325.43	No	Yes	$1,329,988	34,400	$39	
Westcott Cove - Fines	ShoreCDF-I_bse	100	100	50	71.25	321.25	Yes	Yes	$4,923,976	34,400	$143	
Westcott Cove - Fines	ShoreCDF-K_bse	100	100	50	67.68	317.68	Yes	Yes	$4,923,976	34,400	$143	
Westcott Cove - Fines	ShoreCDF-J_bse	100	100	50	66.72	316.72	Yes	Yes	$4,923,976	34,400	$143	
Westcott Cove - Fines	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$3,129,731	34,400	$91	
Westcott Cove - Fines	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$3,905,408	34,400	$114	
Westcott Cove - Fines	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$3,905,408	34,400	$114	
Westcott Cove - Fines	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$5,942,583	34,400	$173	
Westcott Cove - Fines	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$5,942,583	34,400	$173	
Westcott Cove - Fines	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$5,942,583	34,400	$173	
Westcott Cove - Fines	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$5,942,583	34,400	$173	
Westcott Cove - Fines	ShoreCDF-O_bse	100	100	0	69.95	269.95	Yes	Yes	$5,942,583	34,400	$173	
Westcott Cove - Fines	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$5,942,583	34,400	$173	
Westcott Cove - Fines	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$2,685,419	34,400	$78	
Westcott Cove - Fines	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$4,713,719	34,400	$137	
Westcott Cove - Fines	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$4,713,719	34,400	$137	
Westcott Cove - Fines	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$3,905,408	34,400	$114	
Westcott Cove - Fines	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$3,905,408	34,400	$114	
Westcott Cove - Fines	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$3,905,408	34,400	$114	
Westcott Cove - Fines	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Beach-441	-1	0	0	0	-1.00	Yes	Yes	$1,322,552	34,400	$38	
Westcott Cove - Fines	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$2,254,001	34,400	$66	
Westcott Cove - Fines	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Westcott Cove - Fines	Beach-442	-1	0	0	0	-1.00	Yes	Yes	$1,130,052	34,400	$33	
Westcott Cove - Fines	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$2,254,001	34,400	$66	
Westcott Cove - Fines	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$2,254,001	34,400	$66	
Westcott Cove - Fines	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$2,254,001	34,400	$66	
Westcott Cove - Fines	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$1,322,552	34,400	$38	
Westcott Cove - Fines	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$2,254,001	34,400	$66	
Westcott Cove - Fines	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$2,254,001	34,400	$66	
Westcott Cove - Fines	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Westcott Cove - Fines	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$3,129,731	34,400	$91	
Westcott Cove - Fines	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$4,236,607	34,400	$123	
Westcott Cove - Fines	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$2,809,540	34,400	$82	
Westcott Cove - Fines	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$5,942,583	34,400	$173	
Westcott Cove - Fines	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$4,923,976	34,400	$143	
Westcott Cove - Fines	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$5,942,583	34,400	$173	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Westcott Cove - Fines	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$4,923,976	34,400	$143	
Westcott Cove - Fines	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$5,942,583	34,400	$173	
Westcott Cove - Fines	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$5,942,583	34,400	$173	
Westcott Cove - Fines	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$4,923,976	34,400	$143	
Westcott Cove - Fines	Berm-620	-1	0	0	0	-1.00	No	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$4,843,703	34,400	$141	
Westcott Cove - Fines	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$4,236,607	34,400	$123	
Westcott Cove - Fines	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$5,942,583	34,400	$173	
Westcott Cove - Fines	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$4,843,703	34,400	$141	
Westcott Cove - Fines	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$5,942,583	34,400	$173	
Westcott Cove - Fines	Beach-620	-1	0	-1	0	-1.00	No	Yes	$3,290,665	34,400	$96	
Westcott Cove - Fines	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$4,236,607	34,400	$123	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$53,969,251	486,000	$111	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$58,186,285	486,000	$120	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$53,969,251	486,000	$111	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$58,186,285	486,000	$120	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	LFPlace-59	100	100	50	85.27	335.27	Yes	Yes	$44,805,543	486,000	$92	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	COW-E_cap	50	100	100	85.57	335.16	Yes	Yes	$13,059,423	486,000	$27	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	UOW-WLDS	50	100	100	75.43	325.43	No	Yes	$6,438,122	486,000	$13	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-D_bse	100	50	100	70.36	320.27	Yes	Yes	$53,969,251	486,000	$111	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-J_bse	100	100	50	66.72	316.72	Yes	Yes	$60,934,192	486,000	$125	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	COW-E_bse	50	55	100	85.57	290.30	Yes	Yes	$13,059,423	486,000	$27	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	CAD-M_bse	100	96	0	85.16	281.07	Yes	Yes	$32,487,618	486,000	$67	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$57,376,626	486,000	$118	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$57,376,626	486,000	$118	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$69,743,938	486,000	$144	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$69,743,938	486,000	$144	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$69,743,938	486,000	$144	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$69,743,938	486,000	$144	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$69,743,938	486,000	$144	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-K_bse	100	45	50	67.68	262.76	Yes	Yes	$60,934,192	486,000	$125	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-I_bse	100	41	50	71.25	261.97	Yes	Yes	$60,934,192	486,000	$125	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$24,643,262	486,000	$51	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$37,819,470	486,000	$78	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$37,819,470	486,000	$78	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$57,376,626	486,000	$118	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-O_bse	100	12	0	69.95	182.26	Yes	Yes	$69,743,938	486,000	$144	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	BF-422/423	50	29	0	62.03	140.84	Yes	Yes	$57,376,626	486,000	$118	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Habitat-427	50	13	0	59.77	123.02	Yes	Yes	$57,376,626	486,000	$118	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$32,487,618	486,000	$67	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-441	-1	0	0	0	-1.00	Yes	Yes	$12,688,376	486,000	$26	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$15,529,256	486,000	$32	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$12,688,376	486,000	$26	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$15,529,256	486,000	$32	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-442	-1	0	0	0	-1.00	Yes	Yes	$8,645,676	486,000	$18	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$15,529,256	486,000	$32	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$53,969,251	486,000	$111	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$15,529,256	486,000	$32	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$15,529,256	486,000	$32	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$14,600,343	486,000	$30	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-620	-1	0	0	0	-1.00	No	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$60,934,192	486,000	$125	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$60,934,192	486,000	$125	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$60,934,192	486,000	$125	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$69,743,938	486,000	$144	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$69,743,938	486,000	$144	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$69,743,938	486,000	$144	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$58,186,285	486,000	$120	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$69,743,938	486,000	$144	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$53,969,251	486,000	$111	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$58,186,285	486,000	$120	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$22,421,407	486,000	$46	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$69,743,938	486,000	$144	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$69,743,938	486,000	$144	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$53,969,251	486,000	$111	
Stamford Harbor - Outer 18-Foot Channel & Anchorage and 15-Foot Upper Main & West Channel	Beach-620	-1	0	-1	0	-1.00	No	Yes	$22,421,407	486,000	$46	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$16,464,966	144,600	$114	
Stamford Harbor - 12-Foot East Branch Channel	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$16,464,966	144,600	$114	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$18,034,808	144,600	$125	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$16,464,966	144,600	$114	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$18,034,808	144,600	$125	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-I_bse	100	100	50	71.25	321.25	Yes	Yes	$18,761,724	144,600	$130	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-K_bse	100	100	50	67.68	317.68	Yes	Yes	$18,761,724	144,600	$130	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-J_bse	100	100	50	66.72	316.72	Yes	Yes	$18,761,724	144,600	$130	
Stamford Harbor - 12-Foot East Branch Channel	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$10,305,331	144,600	$71	
Stamford Harbor - 12-Foot East Branch Channel	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$23,227,963	144,600	$161	
Stamford Harbor - 12-Foot East Branch Channel	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$23,227,963	144,600	$161	
Stamford Harbor - 12-Foot East Branch Channel	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$23,227,963	144,600	$161	
Stamford Harbor - 12-Foot East Branch Channel	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$23,227,963	144,600	$161	
Stamford Harbor - 12-Foot East Branch Channel	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$23,227,963	144,600	$161	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-O_bse	100	41	0	69.95	211.34	Yes	Yes	$23,227,963	144,600	$161	
Stamford Harbor - 12-Foot East Branch Channel	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$7,189,117	144,600	$50	
Stamford Harbor - 12-Foot East Branch Channel	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stamford Harbor - 12-Foot East Branch Channel	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$16,464,966	144,600	$114	
Stamford Harbor - 12-Foot East Branch Channel	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$7,189,117	144,600	$50	
Stamford Harbor - 12-Foot East Branch Channel	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$5,475,355	144,600	$38	
Stamford Harbor - 12-Foot East Branch Channel	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$16,958,044	144,600	$117	
Stamford Harbor - 12-Foot East Branch Channel	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$7,189,117	144,600	$50	
Stamford Harbor - 12-Foot East Branch Channel	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$7,189,117	144,600	$50	
Stamford Harbor - 12-Foot East Branch Channel	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stamford Harbor - 12-Foot East Branch Channel	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$16,958,044	144,600	$117	
Stamford Harbor - 12-Foot East Branch Channel	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	COW-E_cap	-1	0	0	0	-1.00	Yes	Yes	$4,708,188	144,600	$33	
Stamford Harbor - 12-Foot East Branch Channel	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$7,189,117	144,600	$50	
Stamford Harbor - 12-Foot East Branch Channel	Beach-442	-1	0	0	0	-1.00	Yes	Yes	$3,500,817	144,600	$24	
Stamford Harbor - 12-Foot East Branch Channel	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-441	-1	0	0	0	-1.00	Yes	Yes	$5,475,355	144,600	$38	
Stamford Harbor - 12-Foot East Branch Channel	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$10,305,331	144,600	$71	
Stamford Harbor - 12-Foot East Branch Channel	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$16,958,044	144,600	$117	
Stamford Harbor - 12-Foot East Branch Channel	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Stamford Harbor - 12-Foot East Branch Channel	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$4,708,188	144,600	$33	
Stamford Harbor - 12-Foot East Branch Channel	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$8,641,854	144,600	$60	
Stamford Harbor - 12-Foot East Branch Channel	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$16,958,044	144,600	$117	
Stamford Harbor - 12-Foot East Branch Channel	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$23,227,963	144,600	$161	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$18,761,724	144,600	$130	
Stamford Harbor - 12-Foot East Branch Channel	UOW-WLDS	-1	0	0	0	-1.00	No	Yes	$3,286,502	144,600	$23	
Stamford Harbor - 12-Foot East Branch Channel	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$23,227,963	144,600	$161	
Stamford Harbor - 12-Foot East Branch Channel	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$23,227,963	144,600	$161	
Stamford Harbor - 12-Foot East Branch Channel	UOW-CSDS	-1	0	0	0	-1.00	No	Yes	$14,907,094	144,600	$103	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$18,761,724	144,600	$130	
Stamford Harbor - 12-Foot East Branch Channel	Berm-620	-1	0	0	0	-1.00	No	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$23,227,963	144,600	$161	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$16,464,966	144,600	$114	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$23,227,963	144,600	$161	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$18,034,808	144,600	$125	
Stamford Harbor - 12-Foot East Branch Channel	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$16,958,044	144,600	$117	
Stamford Harbor - 12-Foot East Branch Channel	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$18,034,808	144,600	$125	
Stamford Harbor - 12-Foot East Branch Channel	UOW-CLDS	-1	0	0	0	-1.00	No	Yes	$8,430,091	144,600	$58	
Stamford Harbor - 12-Foot East Branch Channel	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$11,703,772	144,600	$81	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$16,464,966	144,600	$114	
Stamford Harbor - 12-Foot East Branch Channel	Beach-620	-1	0	-1	0	-1.00	No	Yes	$9,733,430	144,600	$67	
Stamford Harbor - 12-Foot East Branch Channel	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$18,761,724	144,600	$130	
Stamford Harbor - 12-Foot East Branch Channel	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$23,227,963	144,600	$161	
Stamford Harbor - 12-Foot East Branch Channel	UOW-NLDS	-1	0	0	0	-1.00	No	Yes	$14,907,094	144,600	$103	
Mianus River	COW-E_cap	100	100	100	85.57	385.57	Yes	Yes	$2,707,291	69,000	$39	
Mianus River	COW-E_bse	100	100	100	85.57	385.57	Yes	Yes	$2,707,291	69,000	$39	
Mianus River	UOW-WLDS	100	100	100	75.43	375.43	No	Yes	$2,189,207	69,000	$32	
Mianus River	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$8,129,353	69,000	$118	
Mianus River	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$8,129,353	69,000	$118	
Mianus River	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$8,695,705	69,000	$126	
Mianus River	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$8,129,353	69,000	$118	
Mianus River	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$8,695,705	69,000	$126	
Mianus River	LFPlace-59	100	100	50	85.27	335.27	Yes	Yes	$7,237,044	69,000	$105	
Mianus River	ShoreCDF-I_bse	100	100	50	71.25	321.25	Yes	Yes	$9,300,567	69,000	$135	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mianus River	ShoreCDF-J_bse	100	100	50	66.72	316.72	Yes	Yes	$9,300,567	69,000	$135	
Mianus River	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$5,607,157	69,000	$81	
Mianus River	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$7,237,044	69,000	$105	
Mianus River	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$7,237,044	69,000	$105	
Mianus River	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$4,475,121	69,000	$65	
Mianus River	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$11,207,262	69,000	$162	
Mianus River	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$11,207,262	69,000	$162	
Mianus River	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$7,767,396	69,000	$113	
Mianus River	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$7,767,396	69,000	$113	
Mianus River	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$11,207,262	69,000	$162	
Mianus River	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$11,207,262	69,000	$162	
Mianus River	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$11,207,262	69,000	$162	
Mianus River	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$11,207,262	69,000	$162	
Mianus River	BF-422/423	100	100	0	62.03	262.03	Yes	Yes	$7,237,044	69,000	$105	
Mianus River	Habitat-429	100	100	0	61.33	261.33	Yes	Yes	$7,237,044	69,000	$105	
Mianus River	ShoreCDF-O_bse	100	43	0	69.95	213.41	Yes	Yes	$11,207,262	69,000	$162	
Mianus River	Habitat-427	100	47	0	59.77	206.54	Yes	Yes	$7,237,044	69,000	$105	
Mianus River	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$5,607,157	69,000	$81	
Mianus River	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mianus River	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$8,129,353	69,000	$118	
Mianus River	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-442	-1	0	0	0	-1.00	Yes	Yes	$3,002,814	69,000	$44	
Mianus River	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$3,816,988	69,000	$55	
Mianus River	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mianus River	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$3,816,988	69,000	$55	
Mianus River	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$4,667,433	69,000	$68	
Mianus River	Beach-441	-1	0	0	0	-1.00	Yes	Yes	$3,002,814	69,000	$44	
Mianus River	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$3,816,988	69,000	$55	
Mianus River	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$5,336,257	69,000	$77	
Mianus River	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$11,207,262	69,000	$162	
Mianus River	Beach-620	-1	0	-1	0	-1.00	No	Yes	$5,336,257	69,000	$77	
Mianus River	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$9,300,567	69,000	$135	
Mianus River	Berm-620	-1	0	0	0	-1.00	No	Yes	$5,336,257	69,000	$77	
Mianus River	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$11,207,262	69,000	$162	
Mianus River	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$11,207,262	69,000	$162	
Mianus River	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$11,207,262	69,000	$162	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mianus River	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$11,207,262	69,000	$162	
Mianus River	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$8,129,353	69,000	$118	
Mianus River	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$11,207,262	69,000	$162	
Mianus River	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$5,336,257	69,000	$77	
Mianus River	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$8,695,705	69,000	$126	
Mianus River	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$9,300,567	69,000	$135	
Mianus River	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$8,695,705	69,000	$126	
Mianus River	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$8,129,353	69,000	$118	
Mianus River	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$11,207,262	69,000	$162	
Greenwich Harbor - Entrance Channel - Suitable	COW-E_bse	100	100	100	85.57	385.57	Yes	Yes	$1,996,251	45,000	$44	
Greenwich Harbor - Entrance Channel - Suitable	COW-E_cap	100	100	100	85.57	385.57	Yes	Yes	$1,996,251	45,000	$44	
Greenwich Harbor - Entrance Channel - Suitable	UOW-WLDS	100	100	100	75.43	375.43	No	Yes	$1,655,320	45,000	$37	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$6,093,134	45,000	$135	
Greenwich Harbor - Entrance Channel - Suitable	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$4,799,067	45,000	$107	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$6,093,134	45,000	$135	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$6,093,134	45,000	$135	
Greenwich Harbor - Entrance Channel - Suitable	LFPlace-59	100	100	50	85.27	335.27	Yes	Yes	$3,438,582	45,000	$76	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-I_bse	100	100	50	71.25	321.25	Yes	Yes	$6,289,665	45,000	$140	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-J_bse	100	100	50	66.72	316.72	Yes	Yes	$6,289,665	45,000	$140	
Greenwich Harbor - Entrance Channel - Suitable	BF-422/423	100	100	50	62.03	312.03	Yes	Yes	$3,438,582	45,000	$76	
Greenwich Harbor - Entrance Channel - Suitable	Habitat-429	100	100	50	61.33	311.33	Yes	Yes	$5,000,781	45,000	$111	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-F_bse	100	100	50	59.43	309.43	Yes	Yes	$6,289,665	45,000	$140	
Greenwich Harbor - Entrance Channel - Suitable	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$3,812,975	45,000	$85	
Greenwich Harbor - Entrance Channel - Suitable	Habitat-427	100	71	50	59.77	280.70	Yes	Yes	$5,000,781	45,000	$111	
Greenwich Harbor - Entrance Channel - Suitable	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$5,000,781	45,000	$111	
Greenwich Harbor - Entrance Channel - Suitable	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$5,000,781	45,000	$111	
Greenwich Harbor - Entrance Channel - Suitable	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$3,242,053	45,000	$72	
Greenwich Harbor - Entrance Channel - Suitable	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$5,592,894	45,000	$124	
Greenwich Harbor - Entrance Channel - Suitable	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$5,592,894	45,000	$124	
Greenwich Harbor - Entrance Channel - Suitable	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-O_bse	100	66	0	69.95	235.86	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$2,742,359	45,000	$61	
Greenwich Harbor - Entrance Channel - Suitable	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Greenwich Harbor - Entrance Channel - Suitable	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$2,742,359	45,000	$61	
Greenwich Harbor - Entrance Channel - Suitable	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$2,742,359	45,000	$61	
Greenwich Harbor - Entrance Channel - Suitable	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$4,799,067	45,000	$107	
Greenwich Harbor - Entrance Channel - Suitable	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Greenwich Harbor - Entrance Channel - Suitable	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Greenwich Harbor - Entrance Channel - Suitable	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$3,375,891	45,000	$75	
Greenwich Harbor - Entrance Channel - Suitable	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$2,742,359	45,000	$61	
Greenwich Harbor - Entrance Channel - Suitable	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$2,742,359	45,000	$61	
Greenwich Harbor - Entrance Channel - Suitable	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$3,812,975	45,000	$85	
Greenwich Harbor - Entrance Channel - Suitable	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$6,289,665	45,000	$140	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$6,093,134	45,000	$135	
Greenwich Harbor - Entrance Channel - Suitable	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$6,093,134	45,000	$135	
Greenwich Harbor - Entrance Channel - Suitable	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	Berm-620	-1	0	0	0	-1.00	No	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel - Suitable	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$6,289,665	45,000	$140	
Greenwich Harbor - Entrance Channel - Suitable	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$6,093,134	45,000	$135	
Greenwich Harbor - Entrance Channel - Suitable	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$6,289,665	45,000	$140	
Greenwich Harbor - Entrance Channel - Suitable	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$7,582,629	45,000	$169	
Greenwich Harbor - Entrance Channel - Suitable	Beach-620	-1	0	-1	0	-1.00	No	Yes	$3,933,750	45,000	$87	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$15,854,503	168,000	$94	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$20,844,336	168,000	$124	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$20,844,336	168,000	$124	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-D_bse	100	72	100	70.36	342.36	Yes	Yes	$20,844,336	168,000	$124	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-J_bse	100	100	50	66.72	316.72	Yes	Yes	$21,688,270	168,000	$129	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-F_bse	100	100	50	59.43	309.43	Yes	Yes	$21,688,270	168,000	$129	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$11,645,584	168,000	$69	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-I_bse	100	59	50	71.25	279.99	Yes	Yes	$21,688,270	168,000	$129	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$26,754,453	168,000	$159	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$26,754,453	168,000	$159	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$26,754,453	168,000	$159	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$26,754,453	168,000	$159	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$26,754,453	168,000	$159	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-K_bse	100	65	0	67.68	232.71	Yes	Yes	$26,754,453	168,000	$159	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-O_bse	100	18	0	69.95	187.71	Yes	Yes	$26,754,453	168,000	$159	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$11,645,584	168,000	$69	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$8,235,340	168,000	$49	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$15,854,503	168,000	$94	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$13,265,737	168,000	$79	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$20,501,039	168,000	$122	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$8,235,340	168,000	$49	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	COW-E_cap	-1	0	0	0	-1.00	Yes	Yes	$5,408,738	168,000	$32	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$8,235,340	168,000	$49	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$20,501,039	168,000	$122	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$5,408,738	168,000	$32	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$8,235,340	168,000	$49	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$8,235,340	168,000	$49	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$9,919,447	168,000	$59	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	UOW-WLDS	-1	0	0	0	-1.00	No	Yes	$4,465,388	168,000	$27	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$26,754,453	168,000	$159	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-620	-1	0	0	0	-1.00	No	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$20,501,039	168,000	$122	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$21,688,270	168,000	$129	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	UOW-CLDS	-1	0	0	0	-1.00	No	Yes	$9,649,044	168,000	$57	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$26,754,453	168,000	$159	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$21,688,270	168,000	$129	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	UOW-NLDS	-1	0	0	0	-1.00	No	Yes	$17,104,257	168,000	$102	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$26,754,453	168,000	$159	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$20,501,039	168,000	$122	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$26,754,453	168,000	$159	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$20,844,336	168,000	$124	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$21,688,270	168,000	$129	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$26,754,453	168,000	$159	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$26,754,453	168,000	$159	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$20,844,336	168,000	$124	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$13,265,737	168,000	$79	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$26,754,453	168,000	$159	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	UOW-CSDS	-1	0	0	0	-1.00	No	Yes	$17,104,257	168,000	$102	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	Beach-620	-1	0	-1	0	-1.00	No	Yes	$11,099,499	168,000	$66	
Greenwich Harbor - Entrance Channel, Inner Channel and Anchorages	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$20,844,336	168,000	$124	
Port Chester Harbor	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$17,209,286	183,000	$94	
Port Chester Harbor	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$22,645,315	183,000	$124	
Port Chester Harbor	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$22,645,315	183,000	$124	
Port Chester Harbor	ShoreCDF-D_bse	100	66	100	70.36	336.64	Yes	Yes	$22,645,315	183,000	$124	
Port Chester Harbor	ShoreCDF-J_bse	100	100	50	66.72	316.72	Yes	Yes	$23,564,261	183,000	$129	
Port Chester Harbor	ShoreCDF-F_bse	100	100	50	59.43	309.43	Yes	Yes	$23,564,261	183,000	$129	
Port Chester Harbor	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$12,504,720	183,000	$68	
Port Chester Harbor	ShoreCDF-I_bse	100	54	50	71.25	275.32	Yes	Yes	$23,564,261	183,000	$129	
Port Chester Harbor	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$29,015,023	183,000	$159	
Port Chester Harbor	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$29,015,023	183,000	$159	
Port Chester Harbor	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$29,015,023	183,000	$159	
Port Chester Harbor	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$29,015,023	183,000	$159	
Port Chester Harbor	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$29,015,023	183,000	$159	
Port Chester Harbor	ShoreCDF-K_bse	100	60	0	67.68	227.54	Yes	Yes	$29,015,023	183,000	$159	
Port Chester Harbor	ShoreCDF-O_bse	100	16	0	69.95	186.30	Yes	Yes	$29,015,023	183,000	$159	
Port Chester Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$8,905,997	183,000	$49	
Port Chester Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$8,905,997	183,000	$49	
Port Chester Harbor	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$22,772,189	183,000	$124	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Port Chester Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$14,266,997	183,000	$78	
Port Chester Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$5,857,809	183,000	$32	
Port Chester Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$8,905,997	183,000	$49	
Port Chester Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	COW-E_cap	-1	0	0	0	-1.00	Yes	Yes	$5,857,809	183,000	$32	
Port Chester Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$8,905,997	183,000	$49	
Port Chester Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Port Chester Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$22,772,189	183,000	$124	
Port Chester Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$17,209,286	183,000	$94	
Port Chester Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$12,504,720	183,000	$68	
Port Chester Harbor	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$10,738,418	183,000	$59	
Port Chester Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$8,905,997	183,000	$49	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Port Chester Harbor	UOW-CSDS	-1	0	0	0	-1.00	No	Yes	$18,512,694	183,000	$101	
Port Chester Harbor	Beach-620	-1	0	-1	0	-1.00	No	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$22,772,189	183,000	$124	
Port Chester Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$29,015,023	183,000	$159	
Port Chester Harbor	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$22,772,189	183,000	$124	
Port Chester Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$23,564,261	183,000	$129	
Port Chester Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$22,645,315	183,000	$124	
Port Chester Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$29,015,023	183,000	$159	
Port Chester Harbor	UOW-WLDS	-1	0	0	0	-1.00	No	Yes	$4,807,584	183,000	$26	
Port Chester Harbor	UOW-NLDS	-1	0	0	0	-1.00	No	Yes	$18,512,694	183,000	$101	
Port Chester Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$22,645,315	183,000	$124	
Port Chester Harbor	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$14,266,997	183,000	$78	
Port Chester Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$29,015,023	183,000	$159	
Port Chester Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$23,564,261	183,000	$129	
Port Chester Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	UOW-CLDS	-1	0	0	0	-1.00	No	Yes	$10,430,425	183,000	$57	
Port Chester Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$29,015,023	183,000	$159	
Port Chester Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$29,015,023	183,000	$159	
Port Chester Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$22,645,315	183,000	$124	
Port Chester Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$23,564,261	183,000	$129	
Port Chester Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$11,975,185	183,000	$65	
Port Chester Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$29,015,023	183,000	$159	
Port Chester Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$29,015,023	183,000	$159	
Milton Harbor	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$8,822,856	70,200	$126	
Milton Harbor	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$8,261,155	70,200	$118	
Milton Harbor	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$8,261,155	70,200	$118	
Milton Harbor	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$8,822,856	70,200	$126	
Milton Harbor	LFPlace-59	100	100	50	85.27	335.27	Yes	Yes	$6,089,967	70,200	$87	
Milton Harbor	UOW-WLDS	50	100	100	75.43	325.43	No	Yes	$2,740,389	70,200	$39	
Milton Harbor	ShoreCDF-F_bse	100	100	50	59.43	309.43	Yes	Yes	$9,450,043	70,200	$135	
Milton Harbor	COW-E_bse	50	100	50	85.57	285.57	Yes	Yes	$3,092,622	70,200	$44	
Milton Harbor	COW-E_cap	50	100	50	85.57	285.57	Yes	Yes	$3,092,622	70,200	$44	
Milton Harbor	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$5,700,119	70,200	$81	
Milton Harbor	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$7,345,649	70,200	$105	
Milton Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$7,345,649	70,200	$105	
Milton Harbor	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$11,387,327	70,200	$162	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Milton Harbor	BF-422/423	50	100	50	62.03	261.75	Yes	Yes	$5,424,963	70,200	$77	
Milton Harbor	Habitat-429	50	100	50	61.33	261.33	Yes	Yes	$6,089,967	70,200	$87	
Milton Harbor	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$4,536,416	70,200	$65	
Milton Harbor	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$7,878,541	70,200	$112	
Milton Harbor	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$7,878,541	70,200	$112	
Milton Harbor	ShoreCDF-O_bse	100	43	0	69.95	212.58	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	Habitat-427	50	46	50	59.77	205.64	Yes	Yes	$7,345,649	70,200	$105	
Milton Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$5,700,119	70,200	$81	
Milton Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$3,870,311	70,200	$55	
Milton Harbor	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$8,261,155	70,200	$118	
Milton Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Milton Harbor	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$4,732,132	70,200	$67	
Milton Harbor	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$4,732,132	70,200	$67	
Milton Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$4,732,132	70,200	$67	
Milton Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$3,870,311	70,200	$55	
Milton Harbor	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$4,732,132	70,200	$67	
Milton Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$4,732,132	70,200	$67	
Milton Harbor	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$3,870,311	70,200	$55	
Milton Harbor	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$4,732,132	70,200	$67	
Milton Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$4,732,132	70,200	$67	
Milton Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$4,732,132	70,200	$67	
Milton Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Milton Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$4,732,132	70,200	$67	
Milton Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$5,405,678	70,200	$77	
Milton Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$4,732,132	70,200	$67	
Milton Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$8,261,155	70,200	$118	
Milton Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$8,822,856	70,200	$126	
Milton Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$8,822,856	70,200	$126	
Milton Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$5,405,678	70,200	$77	
Milton Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	Beach-620	-1	0	-1	0	-1.00	No	Yes	$5,405,678	70,200	$77	
Milton Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$5,405,678	70,200	$77	
Milton Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$11,387,327	70,200	$162	
Milton Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$9,450,043	70,200	$135	
Mamaroneck Harbor	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$8,805,161	70,033	$126	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mamaroneck Harbor	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$8,242,813	70,033	$118	
Mamaroneck Harbor	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$8,242,813	70,033	$118	
Mamaroneck Harbor	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$8,805,161	70,033	$126	
Mamaroneck Harbor	LFPlace-59	100	100	50	85.27	335.27	Yes	Yes	$6,070,908	70,033	$87	
Mamaroneck Harbor	UOW-WLDS	50	100	100	75.43	325.43	No	Yes	$2,735,783	70,033	$39	
Mamaroneck Harbor	ShoreCDF-F_bse	100	100	50	59.43	309.43	Yes	Yes	$9,429,241	70,033	$135	
Mamaroneck Harbor	COW-E_cap	50	100	50	85.57	285.57	Yes	Yes	$3,087,182	70,033	$44	
Mamaroneck Harbor	COW-E_bse	50	100	50	85.57	285.57	Yes	Yes	$3,087,182	70,033	$44	
Mamaroneck Harbor	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$5,687,181	70,033	$81	
Mamaroneck Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$7,330,535	70,033	$105	
Mamaroneck Harbor	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$7,330,535	70,033	$105	
Mamaroneck Harbor	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	ShoreCDF-I_bse	100	94	0	71.25	265.44	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	Habitat-429	50	100	50	61.33	261.33	Yes	Yes	$6,070,908	70,033	$87	
Mamaroneck Harbor	BF-422/423	50	67	50	62.03	228.66	Yes	Yes	$5,413,782	70,033	$77	
Mamaroneck Harbor	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$4,527,886	70,033	$65	
Mamaroneck Harbor	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$7,863,073	70,033	$112	
Mamaroneck Harbor	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$7,863,073	70,033	$112	
Mamaroneck Harbor	ShoreCDF-O_bse	100	28	0	69.95	198.44	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	Habitat-427	50	31	50	59.77	190.42	Yes	Yes	$7,330,535	70,033	$105	
Mamaroneck Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$5,687,181	70,033	$81	
Mamaroneck Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$4,723,128	70,033	$67	
Mamaroneck Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mamaroneck Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$4,723,128	70,033	$67	
Mamaroneck Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$8,242,813	70,033	$118	
Mamaroneck Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mamaroneck Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$4,723,128	70,033	$67	
Mamaroneck Harbor	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$4,723,128	70,033	$67	
Mamaroneck Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$4,723,128	70,033	$67	
Mamaroneck Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$3,862,890	70,033	$55	
Mamaroneck Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$4,723,128	70,033	$67	
Mamaroneck Harbor	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$4,723,128	70,033	$67	
Mamaroneck Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$4,723,128	70,033	$67	
Mamaroneck Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$3,862,890	70,033	$55	
Mamaroneck Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mamaroneck Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$4,723,128	70,033	$67	
Mamaroneck Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$8,805,161	70,033	$126	
Mamaroneck Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$9,429,241	70,033	$135	
Mamaroneck Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$8,805,161	70,033	$126	
Mamaroneck Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	Beach-620	-1	0	-1	0	-1.00	No	Yes	$5,396,017	70,033	$77	
Mamaroneck Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$8,242,813	70,033	$118	
Mamaroneck Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$11,362,268	70,033	$162	
Mamaroneck Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$5,396,017	70,033	$77	
Echo Bay	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$7,052,972	59,200	$119	
Echo Bay	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$7,052,972	59,200	$119	
Echo Bay	UOW-WLDS	50	100	100	75.43	325.43	No	Yes	$2,436,992	59,200	$41	
Echo Bay	ShoreCDF-D_bse	100	100	50	70.36	320.36	Yes	Yes	$8,079,843	59,200	$136	
Echo Bay	ShoreCDF-C_bse	100	100	50	66.9	316.90	Yes	Yes	$8,079,843	59,200	$136	
Echo Bay	BF-422/423	50	100	100	62.03	312.03	Yes	Yes	$4,688,544	59,200	$79	
Echo Bay	COW-E_cap	50	100	50	85.57	285.57	Yes	Yes	$2,734,300	59,200	$46	
Echo Bay	COW-E_bse	50	100	50	85.57	285.57	Yes	Yes	$2,734,300	59,200	$46	
Echo Bay	LFPlace-59	50	100	50	85.27	285.27	Yes	Yes	$4,834,544	59,200	$82	
Echo Bay	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$4,847,968	59,200	$82	
Echo Bay	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	ShoreCDF-O_bse	100	100	0	69.95	269.95	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	Habitat-429	50	100	50	61.33	261.33	Yes	Yes	$4,834,544	59,200	$82	
Echo Bay	Habitat-427	50	100	50	59.77	259.77	Yes	Yes	$4,834,544	59,200	$82	
Echo Bay	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	Berm-384	50	100	0	84.56	234.56	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-453	50	100	0	84.53	234.53	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-121/446	50	100	0	84.45	234.45	Yes	Yes	$4,769,319	59,200	$81	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Echo Bay	Berm-454A	50	100	0	83.72	233.72	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-63	50	100	0	83.57	233.57	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-327/333/330	50	100	0	83.23	233.23	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-454B	50	100	0	83.23	233.23	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-173	50	100	0	83.2	233.20	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-171	50	100	0	82.68	232.68	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-600	50	100	0	82.66	232.66	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-381/382	50	100	0	82.47	232.47	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-449	50	100	0	82.4	232.40	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-170	50	100	0	82.37	232.37	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-178	50	100	0	82.14	232.14	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-445	50	100	0	81.98	231.98	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-368	50	100	0	81.61	231.61	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-365	50	100	0	81.28	231.28	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-610	50	100	0	81.25	231.25	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-181	50	57	50	74.14	231.15	Yes	Yes	$2,683,001	59,200	$45	
Echo Bay	Berm-323	50	100	0	80.39	230.39	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-456	50	100	0	80.39	230.39	Yes	Yes	$4,139,061	59,200	$70	
Echo Bay	Berm-440	50	99	0	79.87	228.44	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-180	50	100	0	78.31	228.31	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-337	50	94	0	83.93	227.82	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	LFCap-61	50	100	0	77.41	227.41	Yes	Yes	$6,350,104	59,200	$107	
Echo Bay	LFCap-251	50	100	0	77.41	227.41	Yes	Yes	$6,350,104	59,200	$107	
Echo Bay	Berm-179	50	100	0	77.11	227.11	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$3,974,545	59,200	$67	
Echo Bay	Berm-Grove Beach	50	100	0	75	225.00	No	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-620	50	100	0	75	225.00	No	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-447	50	93	0	80.1	222.99	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$6,859,712	59,200	$116	
Echo Bay	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$6,859,712	59,200	$116	
Echo Bay	Berm-367	50	82	0	83.31	215.36	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-467	50	77	0	82.19	208.79	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-455/82	50	59	0	83.93	193.28	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-177	50	57	0	84.64	191.57	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-320	50	51	0	87.24	188.33	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-441	50	48	0	87.76	185.39	Yes	Yes	$4,139,061	59,200	$70	
Echo Bay	Berm-433	50	46	0	82.92	178.90	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-364b/364c	50	43	0	82.6	175.46	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-434	50	34	0	81.35	165.26	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-438	50	21	0	81.67	153.13	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-457	50	15	0	86.95	151.69	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Berm-451	50	14	0	82.29	146.07	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-367	50	24	-1	73.59	-1.00	Yes	Yes	$4,769,319	59,200	$81	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Echo Bay	Beach-344	50	2	-1	74.53	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-337	50	8	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-330	50	40	-1	74.53	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-343	50	3	-1	73.83	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-331	50	68	-1	74.53	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-339	50	15	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-332	50	63	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-333	50	4	-1	74.53	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-368	50	100	-1	72.89	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-345	50	96	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-364	50	48	-1	73.83	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-365	50	100	-1	73.83	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-348	50	4	-1	73.83	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-67	50	8	-1	74.14	-1.00	Yes	Yes	$4,139,061	59,200	$70	
Echo Bay	Beach-178	50	100	-1	72.89	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-79	50	33	-1	73.2	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-449	50	100	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-76	50	53	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-384	50	73	-1	72.89	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-177	50	46	-1	72.89	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-454 West	50	100	-1	73.2	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-451	50	1	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-327	50	26	-1	74.53	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-173	50	100	-1	72.89	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-453	50	100	-1	73.2	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-64	50	100	-1	73.2	-1.00	Yes	Yes	$4,139,061	59,200	$70	
Echo Bay	Beach-454 East	50	100	-1	70.45	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-63	50	100	-1	73.2	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-171	50	100	-1	72.89	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-382	50	100	-1	72.27	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-68	50	5	-1	73.2	-1.00	Yes	Yes	$4,139,061	59,200	$70	
Echo Bay	Beach-442	50	88	-1	74.53	-1.00	Yes	Yes	$4,139,061	59,200	$70	
Echo Bay	Beach-436	50	56	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-325	50	100	-1	74.53	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-437	50	95	-1	72.27	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-323	50	100	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-438	50	6	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-434	50	14	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-320	50	73	-1	73.83	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-447	50	100	-1	74.53	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-441	50	46	-1	74.14	-1.00	Yes	Yes	$4,139,061	59,200	$70	
Echo Bay	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$4,847,968	59,200	$82	
Echo Bay	Beach-444	50	12	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Echo Bay	Beach-180	50	100	-1	72.89	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-433	50	36	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-445	50	100	-1	73.2	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-179	50	100	-1	72.89	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-446	50	100	-1	72.89	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-450	50	100	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-440	50	100	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$7,052,972	59,200	$119	
Echo Bay	Beach-381	50	52	-1	72.66	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-480	50	8	-1	72.89	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-121	50	21	-1	73.2	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-456	50	100	-1	72.89	-1.00	Yes	Yes	$4,139,061	59,200	$70	
Echo Bay	Beach-468	50	72	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-600	50	100	-1	70.67	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-170	50	100	-1	72.89	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-457	50	10	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-610	50	100	-1	70.67	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-459	50	12	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-455/82	50	100	-1	70.43	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-329	50	40	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-111	50	54	-1	73.2	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-467	50	53	-1	73.83	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	Beach-474	50	0	-1	74.14	-1.00	Yes	Yes	$4,769,319	59,200	$81	
Echo Bay	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$7,052,972	59,200	$119	
Echo Bay	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$8,079,843	59,200	$136	
Echo Bay	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	Beach-620	50	100	-1	75	-1.00	No	Yes	$4,769,319	59,200	$81	
Echo Bay	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$8,079,843	59,200	$136	
Echo Bay	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$9,736,733	59,200	$164	
Echo Bay	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$9,736,733	59,200	$164	
New Rochelle Harbor	UOW-WLDS	100	100	100	75.43	375.43	No	Yes	$3,024,833	82,600	$37	
New Rochelle Harbor	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$10,349,384	82,600	$125	
New Rochelle Harbor	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$9,627,289	82,600	$117	
New Rochelle Harbor	COW-E_cap	100	100	50	85.57	335.57	Yes	Yes	$3,510,546	82,600	$43	
New Rochelle Harbor	COW-E_bse	100	100	50	85.57	335.57	Yes	Yes	$3,510,546	82,600	$43	
New Rochelle Harbor	LFPlace-59	100	100	50	85.27	335.27	Yes	Yes	$7,272,815	82,600	$88	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Rochelle Harbor	ShoreCDF-D_bse	100	100	50	70.36	320.36	Yes	Yes	$11,001,240	82,600	$133	
New Rochelle Harbor	ShoreCDF-C_bse	100	100	50	66.9	316.90	Yes	Yes	$11,001,240	82,600	$133	
New Rochelle Harbor	BF-422/423	50	100	100	62.03	312.03	Yes	Yes	$6,304,503	82,600	$76	
New Rochelle Harbor	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$6,582,342	82,600	$80	
New Rochelle Harbor	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$8,517,296	82,600	$103	
New Rochelle Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$8,517,296	82,600	$103	
New Rochelle Harbor	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$5,184,454	82,600	$63	
New Rochelle Harbor	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$9,051,571	82,600	$110	
New Rochelle Harbor	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$9,051,571	82,600	$110	
New Rochelle Harbor	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	Habitat-429	50	100	50	61.33	261.33	Yes	Yes	$7,272,815	82,600	$88	
New Rochelle Harbor	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	ShoreCDF-O_bse	100	72	0	69.95	242.40	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	Habitat-427	50	78	50	59.77	237.74	Yes	Yes	$7,272,815	82,600	$88	
New Rochelle Harbor	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$5,360,546	82,600	$65	
New Rochelle Harbor	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$5,360,546	82,600	$65	
New Rochelle Harbor	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$10,349,384	82,600	$125	
New Rochelle Harbor	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Rochelle Harbor	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-181	-1	0	0	0	-1.00	Yes	Yes	$2,303,991	82,600	$28	
New Rochelle Harbor	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$5,360,546	82,600	$65	
New Rochelle Harbor	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$5,360,546	82,600	$65	
New Rochelle Harbor	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$5,360,546	82,600	$65	
New Rochelle Harbor	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$5,360,546	82,600	$65	
New Rochelle Harbor	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Rochelle Harbor	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$5,360,546	82,600	$65	
New Rochelle Harbor	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$6,582,342	82,600	$80	
New Rochelle Harbor	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$5,360,546	82,600	$65	
New Rochelle Harbor	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$13,444,867	82,600	$163	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
New Rochelle Harbor	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	Berm-620	-1	0	0	0	-1.00	No	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$9,627,289	82,600	$117	
New Rochelle Harbor	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	Beach-620	-1	0	-1	0	-1.00	No	Yes	$6,123,057	82,600	$74	
New Rochelle Harbor	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$11,001,240	82,600	$133	
New Rochelle Harbor	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$13,444,867	82,600	$163	
New Rochelle Harbor	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$11,001,240	82,600	$133	
Eastchester Creek - Suitable	UOW-WLDS	100	100	100	75.43	375.43	No	Yes	$3,717,239	111,500	$33	
Eastchester Creek - Suitable	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$14,060,647	111,500	$126	
Eastchester Creek - Suitable	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$12,815,820	111,500	$115	
Eastchester Creek - Suitable	BF-422/423	100	100	100	62.03	362.03	Yes	Yes	$8,233,847	111,500	$74	
Eastchester Creek - Suitable	COW-E_cap	100	100	50	85.57	335.57	Yes	Yes	$4,493,359	111,500	$40	
Eastchester Creek - Suitable	COW-E_bse	100	100	50	85.57	335.57	Yes	Yes	$4,493,359	111,500	$40	
Eastchester Creek - Suitable	LFPlace-59	100	100	50	85.27	335.27	Yes	Yes	$9,494,324	111,500	$85	
Eastchester Creek - Suitable	ShoreCDF-D_bse	100	100	50	70.36	320.36	Yes	Yes	$14,622,036	111,500	$131	
Eastchester Creek - Suitable	ShoreCDF-C_bse	100	100	50	66.9	316.90	Yes	Yes	$14,622,036	111,500	$131	
Eastchester Creek - Suitable	Habitat-429	100	100	50	61.33	311.33	Yes	Yes	$9,494,324	111,500	$85	
Eastchester Creek - Suitable	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$8,409,504	111,500	$75	
Eastchester Creek - Suitable	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$11,946,373	111,500	$107	
Eastchester Creek - Suitable	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$11,946,373	111,500	$107	
Eastchester Creek - Suitable	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$6,705,844	111,500	$60	
Eastchester Creek - Suitable	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	UOW-NLDS	100	100	0	72.31	272.31	No	Yes	$11,799,142	111,500	$106	
Eastchester Creek - Suitable	UOW-CSDS	100	100	0	72.31	272.31	No	Yes	$11,799,142	111,500	$106	
Eastchester Creek - Suitable	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	Habitat-427	100	58	50	59.77	267.53	Yes	Yes	$11,946,373	111,500	$107	
Eastchester Creek - Suitable	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	ShoreCDF-O_bse	100	54	0	69.95	223.62	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$8,409,504	111,500	$75	
Eastchester Creek - Suitable	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Eastchester Creek - Suitable	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-181	-1	0	0	0	-1.00	Yes	Yes	$2,846,270	111,500	$26	
Eastchester Creek - Suitable	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$6,834,659	111,500	$61	
Eastchester Creek - Suitable	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$6,834,659	111,500	$61	
Eastchester Creek - Suitable	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$6,834,659	111,500	$61	
Eastchester Creek - Suitable	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Eastchester Creek - Suitable	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$14,060,647	111,500	$126	
Eastchester Creek - Suitable	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Eastchester Creek - Suitable	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$14,622,036	111,500	$131	
Eastchester Creek - Suitable	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$12,815,820	111,500	$115	
Eastchester Creek - Suitable	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$14,622,036	111,500	$131	
Eastchester Creek - Suitable	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$18,239,638	111,500	$164	
Eastchester Creek - Suitable	Beach-620	-1	0	-1	0	-1.00	No	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Suitable	Berm-620	-1	0	0	0	-1.00	No	Yes	$7,801,084	111,500	$70	
Eastchester Creek - Unsuitable	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$34,919,038	286,300	$122	
Eastchester Creek - Unsuitable	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$32,066,267	286,300	$112	
Eastchester Creek - Unsuitable	ShoreCDF-C_bse	100	100	50	66.9	316.90	Yes	Yes	$36,402,821	286,300	$127	
Eastchester Creek - Unsuitable	ShoreCDF-D_bse	100	85	50	70.36	305.09	Yes	Yes	$36,402,821	286,300	$127	
Eastchester Creek - Unsuitable	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$18,825,580	286,300	$66	
Eastchester Creek - Unsuitable	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$43,823,808	286,300	$153	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Eastchester Creek - Unsuitable	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	ShoreCDF-K_bse	100	77	0	67.68	244.20	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	ShoreCDF-I_bse	100	69	0	71.25	240.37	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	ShoreCDF-O_bse	100	21	0	69.95	190.85	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$19,284,611	286,300	$67	
Eastchester Creek - Unsuitable	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$14,427,841	286,300	$50	
Eastchester Creek - Unsuitable	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$14,427,841	286,300	$50	
Eastchester Creek - Unsuitable	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$18,825,580	286,300	$66	
Eastchester Creek - Unsuitable	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Eastchester Creek - Unsuitable	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$22,748,635	286,300	$79	
Eastchester Creek - Unsuitable	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$36,678,934	286,300	$128	
Eastchester Creek - Unsuitable	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$34,919,038	286,300	$122	
Eastchester Creek - Unsuitable	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-181	-1	0	0	0	-1.00	Yes	Yes	$6,055,844	286,300	$21	
Eastchester Creek - Unsuitable	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Eastchester Creek - Unsuitable	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$10,564,550	286,300	$37	
Eastchester Creek - Unsuitable	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$14,427,841	286,300	$50	
Eastchester Creek - Unsuitable	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	COW-E_cap	-1	0	0	0	-1.00	Yes	Yes	$10,564,550	286,300	$37	
Eastchester Creek - Unsuitable	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	UOW-CSDS	-1	0	0	0	-1.00	No	Yes	$26,805,715	286,300	$94	
Eastchester Creek - Unsuitable	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$36,678,934	286,300	$128	
Eastchester Creek - Unsuitable	Beach-620	-1	0	-1	0	-1.00	No	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$36,402,821	286,300	$127	
Eastchester Creek - Unsuitable	Berm-620	-1	0	0	0	-1.00	No	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$36,402,821	286,300	$127	
Eastchester Creek - Unsuitable	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$22,748,635	286,300	$79	
Eastchester Creek - Unsuitable	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	UOW-CLDS	-1	0	0	0	-1.00	No	Yes	$15,569,883	286,300	$54	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Eastchester Creek - Unsuitable	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	UOW-NLDS	-1	0	0	0	-1.00	No	Yes	$26,805,715	286,300	$94	
Eastchester Creek - Unsuitable	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$43,823,808	286,300	$153	
Eastchester Creek - Unsuitable	UOW-WLDS	-1	0	0	0	-1.00	No	Yes	$8,662,836	286,300	$30	
Eastchester Creek - Unsuitable	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$16,891,724	286,300	$59	
Eastchester Creek - Unsuitable	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$32,066,267	286,300	$112	
Eastchester Creek - Unsuitable	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$36,678,934	286,300	$128	
Little Neck Bay	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$61,719,229	557,200	$111	
Little Neck Bay	LFPlace-59	100	90	50	85.27	325.00	Yes	Yes	$44,317,385	557,200	$80	
Little Neck Bay	IslandCDF-B_bse	100	45	100	68.28	312.98	Yes	Yes	$66,498,581	557,200	$119	
Little Neck Bay	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$67,334,526	557,200	$121	
Little Neck Bay	UOW-WLDS	50	100	50	75.43	275.43	No	Yes	$21,315,235	557,200	$38	
Little Neck Bay	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	ShoreCDF-C_bse	100	50	50	66.9	266.61	Yes	Yes	$69,740,702	557,200	$125	
Little Neck Bay	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	ShoreCDF-D_bse	100	22	50	70.36	242.13	Yes	Yes	$69,740,702	557,200	$125	
Little Neck Bay	LFCap-61	100	63	0	77.41	240.22	Yes	Yes	$67,334,526	557,200	$121	
Little Neck Bay	Habitat-429	50	67	50	61.33	228.63	Yes	Yes	$53,432,990	557,200	$96	
Little Neck Bay	CAD-M_bse	100	42	0	85.16	226.99	Yes	Yes	$37,186,210	557,200	$67	
Little Neck Bay	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$28,044,821	557,200	$50	
Little Neck Bay	BF-422/423	50	13	100	62.03	224.59	Yes	Yes	$44,317,385	557,200	$80	
Little Neck Bay	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$41,008,105	557,200	$74	
Little Neck Bay	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$41,008,105	557,200	$74	
Little Neck Bay	ShoreCDF-I_bse	100	18	0	71.25	189.01	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	ShoreCDF-K_bse	100	20	0	67.68	187.34	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	COW-E_cap	50	43	0	85.57	179.00	Yes	Yes	$28,044,821	557,200	$50	
Little Neck Bay	ShoreCDF-O_bse	100	5	0	69.95	175.32	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	Habitat-427	50	6	50	59.77	165.55	Yes	Yes	$53,432,990	557,200	$96	
Little Neck Bay	COW-E_bse	50	24	0	85.57	159.44	Yes	Yes	$28,044,821	557,200	$50	
Little Neck Bay	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$14,612,436	557,200	$26	
Little Neck Bay	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Little Neck Bay	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	557,200	$26	
Little Neck Bay	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Little Neck Bay	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$15,744,456	557,200	$28	
Little Neck Bay	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$66,498,581	557,200	$119	
Little Neck Bay	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$37,186,210	557,200	$67	
Little Neck Bay	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Little Neck Bay	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$22,809,066	557,200	$41	
Little Neck Bay	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$14,612,436	557,200	$26	
Little Neck Bay	Berm-620	-1	0	0	0	-1.00	No	Yes	$22,809,066	557,200	$41	
Little Neck Bay	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	Beach-620	-1	0	-1	0	-1.00	No	Yes	$22,809,066	557,200	$41	
Little Neck Bay	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$61,719,229	557,200	$111	
Little Neck Bay	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$69,740,702	557,200	$125	
Little Neck Bay	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$69,740,702	557,200	$125	
Little Neck Bay	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$79,663,906	557,200	$143	
Little Neck Bay	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$22,809,066	557,200	$41	
Yocum Sailing Center, US Merchant Marine Academy	UOW-WLDS	50	100	100	75.43	325.43	No	Yes	$1,554,954	33,200	$47	
Yocum Sailing Center, US Merchant Marine Academy	IslandCDF-B_cap	50	100	100	68.28	318.28	Yes	Yes	$4,702,258	33,200	$142	
Yocum Sailing Center, US Merchant Marine Academy	IslandCDF-B_bse	50	100	100	68.28	318.28	Yes	Yes	$4,702,258	33,200	$142	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-A_cap	50	100	100	67.58	317.58	Yes	Yes	$4,097,693	33,200	$123	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-A_bse	50	100	100	67.58	317.58	Yes	Yes	$4,097,693	33,200	$123	
Yocum Sailing Center, US Merchant Marine Academy	BF-422/423	50	100	100	62.03	312.03	Yes	Yes	$2,474,940	33,200	$75	
Yocum Sailing Center, US Merchant Marine Academy	COW-E_cap	50	100	50	85.57	285.57	Yes	Yes	$1,869,366	33,200	$56	
Yocum Sailing Center, US Merchant Marine Academy	COW-E_bse	50	100	50	85.57	285.57	Yes	Yes	$1,869,366	33,200	$56	
Yocum Sailing Center, US Merchant Marine Academy	LFPlace-59	50	100	50	85.27	285.27	Yes	Yes	$2,474,940	33,200	$75	
Yocum Sailing Center, US Merchant Marine Academy	Beach-181	50	100	50	74.14	274.14	Yes	Yes	$1,805,551	33,200	$54	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-D_cap	50	100	50	70.36	270.36	Yes	Yes	$4,769,369	33,200	$144	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-D_bse	50	100	50	70.36	270.36	Yes	Yes	$4,769,369	33,200	$144	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-C_bse	50	100	50	66.9	266.90	Yes	Yes	$4,769,369	33,200	$144	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-C_cap	50	100	50	66.9	266.90	Yes	Yes	$4,769,369	33,200	$144	
Yocum Sailing Center, US Merchant Marine Academy	Habitat-429	50	100	50	61.33	261.33	Yes	Yes	$2,622,092	33,200	$79	
Yocum Sailing Center, US Merchant Marine Academy	Habitat-427	50	97	50	59.77	256.76	Yes	Yes	$2,622,092	33,200	$79	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Yocum Sailing Center, US Merchant Marine Academy	CAD-M_bse	50	100	0	85.16	235.16	Yes	Yes	$3,052,382	33,200	$92	
Yocum Sailing Center, US Merchant Marine Academy	CAD-M_cap	50	100	0	85.16	235.16	Yes	Yes	$3,052,382	33,200	$92	
Yocum Sailing Center, US Merchant Marine Academy	Berm-177	50	100	0	84.64	234.64	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-384	50	100	0	84.56	234.56	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-453	50	100	0	84.53	234.53	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-121/446	50	100	0	84.45	234.45	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-454A	50	100	0	83.72	233.72	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-63	50	100	0	83.57	233.57	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-454B	50	100	0	83.23	233.23	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-327/333/330	50	100	0	83.23	233.23	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-173	50	100	0	83.2	233.20	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-171	50	100	0	82.68	232.68	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-600	50	100	0	82.66	232.66	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-381/382	50	100	0	82.47	232.47	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-449	50	100	0	82.4	232.40	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-170	50	100	0	82.37	232.37	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-178	50	100	0	82.14	232.14	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-445	50	100	0	81.98	231.98	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-368	50	100	0	81.61	231.61	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-365	50	100	0	81.28	231.28	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-610	50	100	0	81.25	231.25	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-456	50	100	0	80.39	230.39	Yes	Yes	$2,745,424	33,200	$83	
Yocum Sailing Center, US Merchant Marine Academy	Berm-323	50	100	0	80.39	230.39	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-180	50	100	0	78.31	228.31	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	LFCap-61	50	100	0	77.41	227.41	Yes	Yes	$3,781,403	33,200	$114	
Yocum Sailing Center, US Merchant Marine Academy	LFCap-251	50	100	0	77.41	227.41	Yes	Yes	$3,781,403	33,200	$114	
Yocum Sailing Center, US Merchant Marine Academy	Berm-179	50	100	0	77.11	227.11	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$2,622,404	33,200	$79	
Yocum Sailing Center, US Merchant Marine Academy	Berm-620	50	100	0	75	225.00	No	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	IslandCDF-N_cap	50	100	0	73.28	223.28	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	IslandCDF-N_bse	50	100	0	73.28	223.28	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	IslandCDF-P_bse	50	100	0	72.76	222.76	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	IslandCDF-P_cap	50	100	0	72.76	222.76	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$4,614,190	33,200	$139	
Yocum Sailing Center, US Merchant Marine Academy	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$4,614,190	33,200	$139	
Yocum Sailing Center, US Merchant Marine Academy	IslandCDF-Q_bse	50	100	0	71.51	221.51	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	IslandCDF-Q_cap	50	100	0	71.51	221.51	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-I_cap	50	100	0	71.25	221.25	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-I_bse	50	100	0	71.25	221.25	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	IslandCDF-L_bse	50	100	0	70.94	220.94	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	IslandCDF-L_cap	50	100	0	70.94	220.94	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-O_cap	50	100	0	69.95	219.95	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	Berm-Grove Beach	50	95	0	75	219.60	No	Yes	$3,217,863	33,200	$97	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Yocum Sailing Center, US Merchant Marine Academy	Berm-440	50	88	0	79.87	217.76	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-K_bse	50	100	0	67.68	217.68	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	Berm-337	50	84	0	83.93	217.64	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	IslandCDF-R_bse	50	100	0	67.53	217.53	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	IslandCDF-R_cap	50	100	0	67.53	217.53	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-J_bse	50	100	0	66.72	216.72	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-J_cap	50	100	0	66.72	216.72	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	Berm-447	50	83	0	80.1	212.92	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-O_bse	50	90	0	69.95	210.08	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-F_cap	50	100	0	59.43	209.43	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-F_bse	50	100	0	59.43	209.43	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	Berm-367	50	73	0	83.31	206.47	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-467	50	68	0	82.19	200.48	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	ShoreCDF-K_cap	50	77	0	67.68	194.35	Yes	Yes	$5,756,917	33,200	$173	
Yocum Sailing Center, US Merchant Marine Academy	Berm-455/82	50	53	0	83.93	186.84	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-320	50	46	0	87.24	182.79	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-441	50	42	0	87.76	180.22	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-433	50	41	0	82.92	173.91	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-364b/364c	50	38	0	82.6	170.82	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-434	50	30	0	81.35	161.58	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-438	50	19	0	81.67	150.81	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-457	50	13	0	86.95	150.09	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Berm-451	50	12	0	82.29	144.57	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-454 West	50	100	-1	73.2	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-79	50	59	-1	73.2	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-170	50	100	-1	72.89	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-365	50	100	-1	73.83	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-447	50	100	-1	74.53	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-457	50	17	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-345	50	100	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-468	50	100	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-180	50	100	-1	72.89	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-111	50	97	-1	73.2	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-178	50	100	-1	72.89	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-610	50	100	-1	70.67	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-337	50	14	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-177	50	82	-1	72.89	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-343	50	5	-1	73.83	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-455/82	50	100	-1	70.43	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-381	50	92	-1	72.66	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-445	50	100	-1	73.2	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-121	50	37	-1	73.2	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-456	50	100	-1	72.89	-1.00	Yes	Yes	$2,745,424	33,200	$83	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Yocum Sailing Center, US Merchant Marine Academy	Beach-179	50	100	-1	72.89	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-438	50	11	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-480	50	14	-1	72.89	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-367	50	42	-1	73.59	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-330	50	72	-1	74.53	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-332	50	100	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-348	50	7	-1	73.83	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-325	50	100	-1	74.53	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-446	50	100	-1	72.89	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-444	50	21	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-323	50	100	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-384	50	100	-1	72.89	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-436	50	100	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-339	50	26	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-600	50	100	-1	70.67	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-442	50	100	-1	74.53	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-454 East	50	100	-1	70.45	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-474	50	0	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-459	50	21	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-467	50	94	-1	73.83	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-333	50	7	-1	74.53	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-453	50	100	-1	73.2	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-63	50	100	-1	73.2	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-440	50	100	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-433	50	64	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-173	50	100	-1	72.89	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-441	50	82	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-68	50	10	-1	73.2	-1.00	Yes	Yes	$2,745,424	33,200	$83	
Yocum Sailing Center, US Merchant Marine Academy	Beach-331	50	100	-1	74.53	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-171	50	100	-1	72.89	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-450	50	100	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-76	50	94	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-437	50	100	-1	72.27	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-344	50	3	-1	74.53	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-451	50	2	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-364	50	86	-1	73.83	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-449	50	100	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-382	50	100	-1	72.27	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-434	50	26	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-64	50	100	-1	73.2	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-368	50	100	-1	72.89	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-320	50	100	-1	73.83	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-67	50	14	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Yocum Sailing Center, US Merchant Marine Academy	Beach-327	50	47	-1	74.53	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-329	50	72	-1	74.14	-1.00	Yes	Yes	$3,217,863	33,200	$97	
Yocum Sailing Center, US Merchant Marine Academy	Beach-620	50	100	-1	75	-1.00	No	Yes	$3,217,863	33,200	$97	
Hempstead Harbor	LFPlace-59	100	100	50	85.27	335.27	Yes	Yes	$12,504,590	186,900	$67	
Hempstead Harbor	UOW-WLDS	50	100	100	75.43	325.43	No	Yes	$5,974,567	186,900	$32	
Hempstead Harbor	IslandCDF-B_cap	50	100	100	68.28	318.28	Yes	Yes	$23,113,570	186,900	$124	
Hempstead Harbor	IslandCDF-B_bse	50	100	100	68.28	318.28	Yes	Yes	$23,113,570	186,900	$124	
Hempstead Harbor	ShoreCDF-A_cap	50	100	100	67.58	317.58	Yes	Yes	$17,561,529	186,900	$94	
Hempstead Harbor	ShoreCDF-A_bse	50	100	100	67.58	317.58	Yes	Yes	$17,561,529	186,900	$94	
Hempstead Harbor	ShoreCDF-C_bse	50	100	100	66.9	316.90	Yes	Yes	$23,113,570	186,900	$124	
Hempstead Harbor	ShoreCDF-C_cap	50	100	100	66.9	316.90	Yes	Yes	$23,113,570	186,900	$124	
Hempstead Harbor	COW-E_bse	50	100	50	85.57	285.57	Yes	Yes	$7,010,847	186,900	$38	
Hempstead Harbor	COW-E_cap	50	100	50	85.57	285.57	Yes	Yes	$7,010,847	186,900	$38	
Hempstead Harbor	LFCap-61	100	100	0	77.41	277.41	Yes	Yes	$23,362,688	186,900	$125	
Hempstead Harbor	LFCap-251	100	100	0	77.41	277.41	Yes	Yes	$23,362,688	186,900	$125	
Hempstead Harbor	ShoreCDF-D_bse	50	100	50	70.36	270.36	Yes	Yes	$24,052,019	186,900	$129	
Hempstead Harbor	Habitat-429	50	100	50	61.33	261.33	Yes	Yes	$12,504,590	186,900	$67	
Hempstead Harbor	ShoreCDF-F_bse	50	100	50	59.43	259.43	Yes	Yes	$24,052,019	186,900	$129	
Hempstead Harbor	ShoreCDF-F_cap	50	100	50	59.43	259.43	Yes	Yes	$24,052,019	186,900	$129	
Hempstead Harbor	ShoreCDF-D_cap	50	84	50	70.36	254.59	Yes	Yes	$24,052,019	186,900	$129	
Hempstead Harbor	BF-422/423	50	75	50	62.03	236.94	Yes	Yes	$12,504,590	186,900	$67	
Hempstead Harbor	CAD-M_bse	50	100	0	85.16	235.16	Yes	Yes	$12,728,095	186,900	$68	
Hempstead Harbor	Berm-121/446	50	100	0	84.45	234.45	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-63	50	100	0	83.57	233.57	Yes	Yes	$10,951,350	186,900	$59	
Hempstead Harbor	Berm-327/333/330	50	100	0	83.23	233.23	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-173	50	100	0	83.2	233.20	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-171	50	100	0	82.68	232.68	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-600	50	100	0	82.66	232.66	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-170	50	100	0	82.37	232.37	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-456	50	51	50	80.39	231.85	Yes	Yes	$9,080,367	186,900	$49	
Hempstead Harbor	Berm-610	50	100	0	81.25	231.25	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-180	50	100	0	78.31	228.31	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$10,633,584	186,900	$57	
Hempstead Harbor	IslandCDF-N_cap	50	100	0	73.28	223.28	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	IslandCDF-N_bse	50	100	0	73.28	223.28	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	IslandCDF-P_bse	50	100	0	72.76	222.76	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	IslandCDF-P_cap	50	100	0	72.76	222.76	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$18,878,888	186,900	$101	
Hempstead Harbor	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$18,878,888	186,900	$101	
Hempstead Harbor	IslandCDF-Q_bse	50	100	0	71.51	221.51	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	IslandCDF-Q_cap	50	100	0	71.51	221.51	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	ShoreCDF-I_bse	50	100	0	71.25	221.25	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	IslandCDF-L_bse	50	100	0	70.94	220.94	Yes	Yes	$29,602,771	186,900	$158	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Hempstead Harbor	IslandCDF-L_cap	50	100	0	70.94	220.94	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	ShoreCDF-O_cap	50	100	0	69.95	219.95	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	ShoreCDF-K_bse	50	100	0	67.68	217.68	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	IslandCDF-R_cap	50	100	0	67.53	217.53	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	IslandCDF-R_bse	50	100	0	67.53	217.53	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	ShoreCDF-J_cap	50	100	0	66.72	216.72	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	ShoreCDF-J_bse	50	100	0	66.72	216.72	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	Berm-454A	50	83	0	83.72	216.71	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-381/382	50	83	0	82.47	215.35	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	CAD-M_cap	50	77	0	85.16	212.15	Yes	Yes	$12,728,095	186,900	$68	
Hempstead Harbor	Berm-323	50	77	0	80.39	206.93	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-365	50	75	0	81.28	206.19	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-445	50	69	0	81.98	201.34	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-179	50	70	0	77.11	197.26	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Habitat-427	50	34	50	59.77	194.23	Yes	Yes	$14,527,325	186,900	$78	
Hempstead Harbor	Berm-453	50	56	0	84.53	190.79	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-449	50	57	0	82.4	189.08	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-178	50	45	0	82.14	177.26	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	ShoreCDF-I_cap	50	55	0	71.25	175.88	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	Berm-384	50	38	0	84.56	172.26	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-454B	50	39	0	83.23	172.18	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-368	50	39	0	81.61	170.28	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-620	50	43	0	75	167.80	No	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-337	50	30	0	83.93	163.67	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-440	50	31	0	79.87	161.09	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-447	50	29	0	80.1	159.52	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-367	50	26	0	83.31	159.30	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-Grove Beach	50	34	0	75	158.61	No	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-467	50	24	0	82.19	156.45	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-320	50	16	0	87.24	153.42	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-441	50	15	0	87.76	152.85	Yes	Yes	$10,951,350	186,900	$59	
Hempstead Harbor	Berm-455/82	50	19	0	83.93	152.73	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-177	50	18	0	84.64	152.67	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	ShoreCDF-O_bse	50	32	0	69.95	151.97	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	Berm-433	50	15	0	82.92	147.48	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-364b/364c	50	14	0	82.6	146.18	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	ShoreCDF-K_cap	50	27	0	67.68	144.92	Yes	Yes	$29,602,771	186,900	$158	
Hempstead Harbor	Berm-434	50	11	0	81.35	142.09	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-457	50	5	0	86.95	141.62	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-438	50	7	0	81.67	138.47	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Berm-451	50	4	0	82.29	136.65	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-445	50	87	-1	73.2	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-320	50	23	-1	73.83	-1.00	Yes	Yes	$12,202,863	186,900	$65	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Hempstead Harbor	Beach-467	50	17	-1	73.83	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-111	50	17	-1	73.2	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-459	50	4	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-468	50	23	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-381	50	16	-1	72.66	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-442	50	28	-1	74.53	-1.00	Yes	Yes	$10,951,350	186,900	$59	
Hempstead Harbor	Beach-440	50	48	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-181	50	18	-1	74.14	-1.00	Yes	Yes	$9,080,367	186,900	$49	
Hempstead Harbor	Beach-433	50	11	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-339	50	5	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-332	50	20	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-441	50	14	-1	74.14	-1.00	Yes	Yes	$10,951,350	186,900	$59	
Hempstead Harbor	Beach-474	50	0	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-180	50	87	-1	72.89	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-444	50	4	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-457	50	3	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-121	50	7	-1	73.2	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-436	50	18	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-364	50	15	-1	73.83	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-454 East	50	100	-1	70.45	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-610	50	36	-1	70.67	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-178	50	56	-1	72.89	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-438	50	2	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-79	50	10	-1	73.2	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-454 West	50	37	-1	73.2	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-480	50	2	-1	72.89	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-449	50	52	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-63	50	100	-1	73.2	-1.00	Yes	Yes	$10,951,350	186,900	$59	
Hempstead Harbor	Beach-171	50	100	-1	72.89	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-382	50	49	-1	72.27	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-76	50	17	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-368	50	95	-1	72.89	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-384	50	23	-1	72.89	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-365	50	100	-1	73.83	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-64	50	93	-1	73.2	-1.00	Yes	Yes	$10,951,350	186,900	$59	
Hempstead Harbor	Beach-67	50	3	-1	74.14	-1.00	Yes	Yes	$10,951,350	186,900	$59	
Hempstead Harbor	Beach-173	50	100	-1	72.89	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-325	50	37	-1	74.53	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-367	50	8	-1	73.59	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-331	50	22	-1	74.53	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-345	50	30	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-451	50	0	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-450	50	39	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Hempstead Harbor	Beach-68	50	2	-1	73.2	-1.00	Yes	Yes	$10,951,350	186,900	$59	
Hempstead Harbor	Beach-437	50	30	-1	72.27	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-333	50	1	-1	74.53	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-344	50	0	-1	74.53	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-177	50	14	-1	72.89	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-323	50	95	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-453	50	100	-1	73.2	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-348	50	1	-1	73.83	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-343	50	1	-1	73.83	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-337	50	2	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-329	50	13	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-170	50	100	-1	72.89	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-330	50	13	-1	74.53	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-434	50	5	-1	74.14	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-447	50	46	-1	74.53	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-455/82	50	54	-1	70.43	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-446	50	100	-1	72.89	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-456	50	56	-1	72.89	-1.00	Yes	Yes	$9,080,367	186,900	$49	
Hempstead Harbor	Beach-600	50	36	-1	70.67	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-179	50	100	-1	72.89	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-327	50	8	-1	74.53	-1.00	Yes	Yes	$12,202,863	186,900	$65	
Hempstead Harbor	Beach-620	50	43	-1	75	-1.00	No	Yes	$12,202,863	186,900	$65	
Glen Cove Creek	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$2,843,304	17,800	$160	
Glen Cove Creek	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$2,516,583	17,800	$141	
Glen Cove Creek	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$2,516,583	17,800	$141	
Glen Cove Creek	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$2,843,304	17,800	$160	
Glen Cove Creek	ShoreCDF-F_bse	100	100	50	59.43	309.43	Yes	Yes	$2,968,865	17,800	$167	
Glen Cove Creek	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$1,985,081	17,800	$112	
Glen Cove Creek	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	ShoreCDF-O_bse	100	100	0	69.95	269.95	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	ShoreCDF-K_bse	100	100	0	67.68	267.68	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$1,802,661	17,800	$101	
Glen Cove Creek	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$1,985,081	17,800	$112	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Glen Cove Creek	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$2,516,583	17,800	$141	
Glen Cove Creek	COW-E_cap	-1	0	0	0	-1.00	Yes	Yes	$1,409,702	17,800	$79	
Glen Cove Creek	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$2,025,334	17,800	$114	
Glen Cove Creek	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$1,586,699	17,800	$89	
Glen Cove Creek	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$1,582,962	17,800	$89	
Glen Cove Creek	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,409,702	17,800	$79	
Glen Cove Creek	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$1,582,962	17,800	$89	
Glen Cove Creek	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$1,802,661	17,800	$101	
Glen Cove Creek	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$2,025,334	17,800	$114	
Glen Cove Creek	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Glen Cove Creek	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$2,025,334	17,800	$114	
Glen Cove Creek	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$2,025,334	17,800	$114	
Glen Cove Creek	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$2,025,334	17,800	$114	
Glen Cove Creek	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$1,582,962	17,800	$89	
Glen Cove Creek	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Glen Cove Creek	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$2,025,334	17,800	$114	
Glen Cove Creek	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$2,025,334	17,800	$114	
Glen Cove Creek	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$2,025,334	17,800	$114	
Glen Cove Creek	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	UOW-CSDS	-1	0	0	0	-1.00	No	Yes	$2,760,004	17,800	$155	
Glen Cove Creek	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	UOW-CSDS	-1	0	0	0	-1.00	No	Yes	$2,760,004	17,800	$155	
Glen Cove Creek	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$2,843,304	17,800	$160	
Glen Cove Creek	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$2,310,566	17,800	$130	
Glen Cove Creek	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	Beach-620	-1	0	-1	0	-1.00	No	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$2,843,304	17,800	$160	
Glen Cove Creek	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$2,516,583	17,800	$141	
Glen Cove Creek	Berm-620	-1	0	0	0	-1.00	No	Yes	$2,443,140	17,800	$137	
Glen Cove Creek	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	UOW-WLDS	-1	0	0	0	-1.00	No	Yes	$1,121,504	17,800	$63	
Glen Cove Creek	UOW-CLDS	-1	0	0	0	-1.00	No	Yes	$1,895,813	17,800	$107	
Glen Cove Creek	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$2,310,566	17,800	$130	
Glen Cove Creek	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$2,968,865	17,800	$167	
Glen Cove Creek	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$1,586,699	17,800	$89	
Glen Cove Creek	UOW-NLDS	-1	0	0	0	-1.00	No	Yes	$2,760,004	17,800	$155	
Glen Cove Creek	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$3,586,502	17,800	$201	
Glen Cove Creek	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$3,586,502	17,800	$201	
Huntington Harbor - Sand	ShoreCDF-D_cap	100	100	100	70.36	370.36	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Sand	IslandCDF-B_cap	100	100	100	68.28	368.28	Yes	Yes	$2,362,803	13,900	$170	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Huntington Harbor - Sand	ShoreCDF-A_cap	100	100	100	67.58	367.58	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Sand	ShoreCDF-C_cap	100	100	100	66.9	366.90	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Sand	ShoreCDF-F_cap	100	100	100	59.43	359.43	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Sand	COW-E_cap	50	100	100	85.57	335.57	Yes	Yes	$1,043,416	13,900	$75	
Huntington Harbor - Sand	Berm-63	100	100	50	83.57	333.57	Yes	Yes	$1,277,150	13,900	$92	
Huntington Harbor - Sand	Berm-170	100	100	50	82.37	332.37	Yes	Yes	$1,447,871	13,900	$104	
Huntington Harbor - Sand	Berm-456	100	100	50	80.39	330.39	Yes	Yes	$1,447,871	13,900	$104	
Huntington Harbor - Sand	UOW-WLDS	50	100	100	75.43	325.43	No	Yes	$1,003,094	13,900	$72	
Huntington Harbor - Sand	Beach-64	100	100	50	73.2	323.20	Yes	Yes	$1,277,150	13,900	$92	
Huntington Harbor - Sand	Beach-63	100	100	50	73.2	323.20	Yes	Yes	$1,277,150	13,900	$92	
Huntington Harbor - Sand	ShoreCDF-I_cap	100	100	50	71.25	321.25	Yes	Yes	$2,553,721	13,900	$184	
Huntington Harbor - Sand	ShoreCDF-K_cap	100	100	50	67.68	317.68	Yes	Yes	$2,553,721	13,900	$184	
Huntington Harbor - Sand	ShoreCDF-J_cap	100	100	50	66.72	316.72	Yes	Yes	$2,553,721	13,900	$184	
Huntington Harbor - Sand	Beach-67	100	35	100	74.14	308.67	Yes	Yes	$987,067	13,900	$71	
Huntington Harbor - Sand	Beach-68	100	23	100	73.2	296.22	Yes	Yes	$849,791	13,900	$61	
Huntington Harbor - Sand	Berm-441	100	100	0	87.76	287.76	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Berm-320	100	100	0	87.24	287.24	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	CAD-M_cap	100	100	0	85.16	285.16	Yes	Yes	$1,698,188	13,900	$122	
Huntington Harbor - Sand	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-453	100	100	0	84.53	284.53	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-455/82	100	100	0	83.93	283.93	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-337	100	100	0	83.93	283.93	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-367	100	100	0	83.31	283.31	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-454B	100	100	0	83.23	283.23	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-449	100	100	0	82.4	282.40	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Berm-467	100	100	0	82.19	282.19	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-368	100	100	0	81.61	281.61	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-433	100	98	0	82.92	280.83	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-447	100	100	0	80.1	280.10	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-440	100	100	0	79.87	279.87	Yes	Yes	$1,865,815	13,900	$134	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Huntington Harbor - Sand	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-Grove Beach	100	100	0	75	275.00	No	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-620	100	100	0	75	275.00	No	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-364b/364c	100	91	0	82.6	273.88	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	IslandCDF-N_cap	100	100	0	73.28	273.28	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Sand	IslandCDF-P_cap	100	100	0	72.76	272.76	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Sand	IslandCDF-Q_cap	100	100	0	71.51	271.51	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Sand	IslandCDF-L_cap	100	100	0	70.94	270.94	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Sand	ShoreCDF-O_cap	100	100	0	69.95	269.95	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Sand	IslandCDF-R_cap	100	100	0	67.53	267.53	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Sand	Berm-434	100	72	0	81.35	253.57	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Berm-438	100	46	0	81.67	227.38	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$1,730,063	13,900	$124	
Huntington Harbor - Sand	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$1,730,063	13,900	$124	
Huntington Harbor - Sand	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$2,162,158	13,900	$156	
Huntington Harbor - Sand	Berm-457	100	31	0	86.95	218.34	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Berm-451	100	29	0	82.29	211.63	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$1,964,888	13,900	$141	
Huntington Harbor - Sand	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$1,964,888	13,900	$141	
Huntington Harbor - Sand	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Sand	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$1,447,871	13,900	$104	
Huntington Harbor - Sand	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$1,698,188	13,900	$122	
Huntington Harbor - Sand	Beach-364	100	100	-1	73.83	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-444	100	51	-1	74.14	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-480	100	32	-1	72.89	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$1,447,871	13,900	$104	
Huntington Harbor - Sand	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-348	100	17	-1	73.83	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-451	100	5	-1	74.14	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$2,282,426	13,900	$164	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Huntington Harbor - Sand	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-79	100	100	-1	73.2	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-381	100	100	-1	72.66	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-434	100	61	-1	74.14	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-433	100	100	-1	74.14	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,043,416	13,900	$75	
Huntington Harbor - Sand	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-367	100	100	-1	73.59	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Beach-327	100	100	-1	74.53	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-329	100	100	-1	74.14	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-330	100	100	-1	74.53	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-474	100	1	-1	74.14	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Beach-438	100	27	-1	74.14	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Sand	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$1,964,888	13,900	$141	
Huntington Harbor - Sand	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-459	100	51	-1	74.14	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-343	100	12	-1	73.83	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-457	100	41	-1	74.14	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-337	100	33	-1	74.14	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-339	100	62	-1	74.14	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-333	100	17	-1	74.53	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-344	100	6	-1	74.53	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$3,084,057	13,900	$222	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Huntington Harbor - Sand	Beach-121	100	88	-1	73.2	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	Beach-620	100	100	-1	75	-1.00	No	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Sand	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Sand	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$2,553,721	13,900	$184	
Huntington Harbor - Sand	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Sand	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Sand	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$1,964,888	13,900	$141	
Huntington Harbor - Sand	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Sand	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Sand	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$1,649,879	13,900	$119	
Huntington Harbor - Sand	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Sand	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$1,489,905	13,900	$107	
Huntington Harbor - Sand	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$2,553,721	13,900	$184	
Huntington Harbor - Sand	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Sand	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Sand	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Sand	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$2,553,721	13,900	$184	
Huntington Harbor - Silt	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Silt	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Silt	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Silt	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Silt	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Silt	COW-E_cap	50	100	100	85.57	335.57	Yes	Yes	$1,043,416	13,900	$75	
Huntington Harbor - Silt	COW-E_bse	50	100	100	85.57	335.57	Yes	Yes	$1,043,416	13,900	$75	
Huntington Harbor - Silt	UOW-WLDS	50	100	100	75.43	325.43	No	Yes	$1,003,094	13,900	$72	
Huntington Harbor - Silt	ShoreCDF-I_bse	100	100	50	71.25	321.25	Yes	Yes	$2,553,721	13,900	$184	
Huntington Harbor - Silt	ShoreCDF-K_bse	100	100	50	67.68	317.68	Yes	Yes	$2,553,721	13,900	$184	
Huntington Harbor - Silt	ShoreCDF-J_bse	100	100	50	66.72	316.72	Yes	Yes	$2,553,721	13,900	$184	
Huntington Harbor - Silt	LFPlace-59	50	100	50	85.27	285.27	Yes	Yes	$1,489,905	13,900	$107	
Huntington Harbor - Silt	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$1,698,188	13,900	$122	
Huntington Harbor - Silt	LFCap-61	50	100	50	77.41	277.41	Yes	Yes	$1,649,879	13,900	$119	
Huntington Harbor - Silt	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Silt	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Silt	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Silt	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Silt	ShoreCDF-O_bse	100	100	0	69.95	269.95	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Silt	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Silt	LFCap-251	50	100	0	77.41	227.41	Yes	Yes	$1,964,888	13,900	$141	
Huntington Harbor - Silt	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$1,730,063	13,900	$124	
Huntington Harbor - Silt	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$2,162,158	13,900	$156	
Huntington Harbor - Silt	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$1,730,063	13,900	$124	
Huntington Harbor - Silt	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$1,964,888	13,900	$141	
Huntington Harbor - Silt	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$1,964,888	13,900	$141	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Huntington Harbor - Silt	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$1,964,888	13,900	$141	
Huntington Harbor - Silt	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$1,698,188	13,900	$122	
Huntington Harbor - Silt	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-67	-1	0	0	0	-1.00	Yes	Yes	$987,067	13,900	$71	
Huntington Harbor - Silt	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$1,447,871	13,900	$104	
Huntington Harbor - Silt	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$1,447,871	13,900	$104	
Huntington Harbor - Silt	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$1,447,871	13,900	$104	
Huntington Harbor - Silt	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-64	-1	0	0	0	-1.00	Yes	Yes	$1,277,150	13,900	$92	
Huntington Harbor - Silt	Beach-63	-1	0	0	0	-1.00	Yes	Yes	$1,277,150	13,900	$92	
Huntington Harbor - Silt	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Huntington Harbor - Silt	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$1,447,871	13,900	$104	
Huntington Harbor - Silt	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Huntington Harbor - Silt	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Beach-68	-1	0	0	0	-1.00	Yes	Yes	$849,791	13,900	$61	
Huntington Harbor - Silt	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$1,865,815	13,900	$134	
Huntington Harbor - Silt	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$1,277,150	13,900	$92	
Huntington Harbor - Silt	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Silt	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Silt	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$2,553,721	13,900	$184	
Huntington Harbor - Silt	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Silt	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$2,553,721	13,900	$184	
Huntington Harbor - Silt	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Silt	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Silt	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$2,553,721	13,900	$184	
Huntington Harbor - Silt	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	Beach-620	-1	0	-1	0	-1.00	No	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Silt	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Silt	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$3,084,057	13,900	$222	
Huntington Harbor - Silt	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Silt	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$2,362,803	13,900	$170	
Huntington Harbor - Silt	Berm-620	-1	0	0	0	-1.00	No	Yes	$2,282,426	13,900	$164	
Huntington Harbor - Silt	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$3,084,057	13,900	$222	
Northport Harbor - Sand	ShoreCDF-D_cap	100	100	100	70.36	370.36	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Sand	IslandCDF-B_cap	100	100	100	68.28	368.28	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Sand	ShoreCDF-A_cap	100	100	100	67.58	367.58	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Sand	ShoreCDF-C_cap	100	100	100	66.9	366.90	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Sand	ShoreCDF-J_cap	100	100	100	66.72	366.72	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Sand	ShoreCDF-F_cap	100	100	100	59.43	359.43	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Sand	COW-E_cap	50	100	100	85.57	335.57	Yes	Yes	$1,273,674	25,400	$50	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Northport Harbor - Sand	Berm-63	100	100	50	83.57	333.57	Yes	Yes	$1,544,238	25,400	$61	
Northport Harbor - Sand	Berm-170	100	100	50	82.37	332.37	Yes	Yes	$1,846,216	25,400	$73	
Northport Harbor - Sand	Berm-456	100	100	50	80.39	330.39	Yes	Yes	$1,846,216	25,400	$73	
Northport Harbor - Sand	UOW-WLDS	50	100	100	75.43	325.43	No	Yes	$1,208,833	25,400	$48	
Northport Harbor - Sand	Beach-64	100	100	50	73.2	323.20	Yes	Yes	$1,544,238	25,400	$61	
Northport Harbor - Sand	Beach-63	100	100	50	73.2	323.20	Yes	Yes	$1,544,238	25,400	$61	
Northport Harbor - Sand	ShoreCDF-I_cap	100	100	50	71.25	321.25	Yes	Yes	$3,777,863	25,400	$149	
Northport Harbor - Sand	ShoreCDF-K_cap	100	100	50	67.68	317.68	Yes	Yes	$3,777,863	25,400	$149	
Northport Harbor - Sand	CAD-M_cap	100	100	0	85.16	285.16	Yes	Yes	$2,544,155	25,400	$100	
Northport Harbor - Sand	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-453	100	100	0	84.53	284.53	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-337	100	100	0	83.93	283.93	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-454B	100	100	0	83.23	283.23	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-449	100	100	0	82.4	282.40	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-368	100	100	0	81.61	281.61	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Berm-447	100	100	0	80.1	280.10	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-440	100	100	0	79.87	279.87	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Berm-367	100	96	0	83.31	278.93	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-620	100	100	0	75	275.00	No	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-Grove Beach	100	100	0	75	275.00	No	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	IslandCDF-N_cap	100	100	0	73.28	273.28	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Sand	IslandCDF-P_cap	100	100	0	72.76	272.76	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Sand	IslandCDF-Q_cap	100	100	0	71.51	271.51	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Sand	Berm-467	100	89	0	82.19	271.45	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	IslandCDF-L_cap	100	100	0	70.94	270.94	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Sand	ShoreCDF-O_cap	100	100	0	69.95	269.95	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Sand	IslandCDF-R_cap	100	100	0	67.53	267.53	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Sand	Berm-455/82	100	69	0	83.93	253.09	Yes	Yes	$2,756,326	25,400	$109	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Northport Harbor - Sand	Berm-320	100	60	0	87.24	246.77	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Berm-441	100	56	0	87.76	243.26	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Beach-67	100	19	50	74.14	243.04	Yes	Yes	$1,544,238	25,400	$61	
Northport Harbor - Sand	Berm-433	100	54	0	82.92	236.50	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Beach-68	100	13	50	73.2	235.80	Yes	Yes	$1,544,238	25,400	$61	
Northport Harbor - Sand	Berm-364b/364c	100	50	0	82.6	232.55	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$2,218,814	25,400	$87	
Northport Harbor - Sand	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$3,925,037	25,400	$155	
Northport Harbor - Sand	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$2,218,814	25,400	$87	
Northport Harbor - Sand	Berm-434	100	40	0	81.35	220.87	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Berm-438	100	25	0	81.67	206.68	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Berm-457	100	17	0	86.95	204.13	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Berm-451	100	16	0	82.29	198.35	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-343	100	6	-1	73.83	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-344	100	4	-1	74.53	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,273,674	25,400	$50	
Northport Harbor - Sand	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-367	100	56	-1	73.59	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-433	100	83	-1	74.14	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$2,100,389	25,400	$83	
Northport Harbor - Sand	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Beach-337	100	18	-1	74.14	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-457	100	22	-1	74.14	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-480	100	18	-1	72.89	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$1,846,216	25,400	$73	
Northport Harbor - Sand	Beach-438	100	15	-1	74.14	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Beach-329	100	94	-1	74.14	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$2,984,195	25,400	$117	
Northport Harbor - Sand	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Beach-381	100	100	-1	72.66	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-330	100	94	-1	74.53	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-459	100	28	-1	74.14	-1.00	Yes	Yes	$2,756,326	25,400	$109	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Northport Harbor - Sand	Beach-121	100	48	-1	73.2	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-79	100	77	-1	73.2	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-451	100	3	-1	74.14	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$2,544,155	25,400	$100	
Northport Harbor - Sand	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$2,984,195	25,400	$117	
Northport Harbor - Sand	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Sand	Beach-348	100	9	-1	73.83	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-434	100	33	-1	74.14	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Beach-327	100	61	-1	74.53	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$1,846,216	25,400	$73	
Northport Harbor - Sand	Beach-364	100	100	-1	73.83	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-339	100	34	-1	74.14	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Beach-333	100	9	-1	74.53	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-474	100	0	-1	74.14	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Sand	Beach-444	100	28	-1	74.14	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Sand	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Sand	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Sand	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Sand	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$1,775,324	25,400	$70	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Northport Harbor - Sand	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$3,777,863	25,400	$149	
Northport Harbor - Sand	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Sand	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Sand	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$2,100,389	25,400	$83	
Northport Harbor - Sand	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Sand	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Sand	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$2,984,195	25,400	$117	
Northport Harbor - Sand	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Sand	Beach-620	100	100	-1	75	-1.00	No	Yes	$2,756,326	25,400	$109	
Northport Harbor - Sand	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$3,777,863	25,400	$149	
Northport Harbor - Sand	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Sand	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Silt	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Silt	IslandCDF-B_bse	100	100	100	68.28	368.28	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Silt	ShoreCDF-A_bse	100	100	100	67.58	367.58	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Silt	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Silt	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Silt	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Silt	COW-E_cap	50	100	100	85.57	335.57	Yes	Yes	$1,273,674	25,400	$50	
Northport Harbor - Silt	COW-E_bse	50	100	100	85.57	335.57	Yes	Yes	$1,273,674	25,400	$50	
Northport Harbor - Silt	UOW-WLDS	50	100	100	75.43	325.43	No	Yes	$1,208,833	25,400	$48	
Northport Harbor - Silt	ShoreCDF-I_bse	100	100	50	71.25	321.25	Yes	Yes	$3,777,863	25,400	$149	
Northport Harbor - Silt	ShoreCDF-K_bse	100	100	50	67.68	317.68	Yes	Yes	$3,777,863	25,400	$149	
Northport Harbor - Silt	LFPlace-59	50	100	50	85.27	285.27	Yes	Yes	$1,775,324	25,400	$70	
Northport Harbor - Silt	CAD-M_bse	100	100	0	85.16	285.16	Yes	Yes	$2,544,155	25,400	$100	
Northport Harbor - Silt	LFCap-61	50	100	50	77.41	277.41	Yes	Yes	$2,100,389	25,400	$83	
Northport Harbor - Silt	IslandCDF-N_bse	100	100	0	73.28	273.28	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Silt	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Silt	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Silt	IslandCDF-L_bse	100	100	0	70.94	270.94	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Silt	ShoreCDF-O_bse	100	100	0	69.95	269.95	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Silt	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Silt	LFCap-251	50	100	0	77.41	227.41	Yes	Yes	$2,984,195	25,400	$117	
Northport Harbor - Silt	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$2,218,814	25,400	$87	
Northport Harbor - Silt	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$2,218,814	25,400	$87	
Northport Harbor - Silt	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$3,925,037	25,400	$155	
Northport Harbor - Silt	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$2,100,389	25,400	$83	
Northport Harbor - Silt	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$2,984,195	25,400	$117	
Northport Harbor - Silt	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$2,984,195	25,400	$117	
Northport Harbor - Silt	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Northport Harbor - Silt	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$2,544,155	25,400	$100	
Northport Harbor - Silt	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-68	-1	0	0	0	-1.00	Yes	Yes	$1,544,238	25,400	$61	
Northport Harbor - Silt	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$1,846,216	25,400	$73	
Northport Harbor - Silt	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Silt	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-64	-1	0	0	0	-1.00	Yes	Yes	$1,544,238	25,400	$61	
Northport Harbor - Silt	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-67	-1	0	0	0	-1.00	Yes	Yes	$1,544,238	25,400	$61	
Northport Harbor - Silt	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Northport Harbor - Silt	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$1,544,238	25,400	$61	
Northport Harbor - Silt	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$1,846,216	25,400	$73	
Northport Harbor - Silt	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$1,846,216	25,400	$73	
Northport Harbor - Silt	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$2,336,192	25,400	$92	
Northport Harbor - Silt	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$1,846,216	25,400	$73	
Northport Harbor - Silt	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Northport Harbor - Silt	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-63	-1	0	0	0	-1.00	Yes	Yes	$1,544,238	25,400	$61	
Northport Harbor - Silt	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Silt	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Silt	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Silt	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Silt	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Silt	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Silt	Beach-620	-1	0	-1	0	-1.00	No	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$3,777,863	25,400	$149	
Northport Harbor - Silt	Berm-620	-1	0	0	0	-1.00	No	Yes	$2,756,326	25,400	$109	
Northport Harbor - Silt	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Silt	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$3,777,863	25,400	$149	
Northport Harbor - Silt	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Silt	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$4,565,624	25,400	$180	
Northport Harbor - Silt	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$3,779,664	25,400	$149	
Northport Harbor - Silt	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$4,565,624	25,400	$180	
U.S. Coast Guard, Station Eatons Neck	COW-E_cap	50	100	100	85.57	335.57	Yes	Yes	$879,889	8,000	$110	
U.S. Coast Guard, Station Eatons Neck	COW-E_bse	50	100	100	85.57	335.57	Yes	Yes	$879,889	8,000	$110	
U.S. Coast Guard, Station Eatons Neck	UOW-WLDS	50	100	100	75.43	325.43	No	Yes	$851,673	8,000	$106	
U.S. Coast Guard, Station Eatons Neck	Beach-64	50	100	100	73.2	323.20	Yes	Yes	$888,562	8,000	$111	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-I_bse	50	100	100	71.25	321.25	Yes	Yes	$1,696,047	8,000	$212	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-I_cap	50	100	100	71.25	321.25	Yes	Yes	$1,696,047	8,000	$212	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-D_cap	50	100	100	70.36	320.36	Yes	Yes	$1,550,748	8,000	$194	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-D_bse	50	100	100	70.36	320.36	Yes	Yes	$1,550,748	8,000	$194	
U.S. Coast Guard, Station Eatons Neck	IslandCDF-B_bse	50	100	100	68.28	318.28	Yes	Yes	$1,696,047	8,000	$212	
U.S. Coast Guard, Station Eatons Neck	IslandCDF-B_cap	50	100	100	68.28	318.28	Yes	Yes	$1,696,047	8,000	$212	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-A_bse	50	100	100	67.58	317.58	Yes	Yes	$1,696,047	8,000	$212	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-A_cap	50	100	100	67.58	317.58	Yes	Yes	$1,696,047	8,000	$212	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-C_cap	50	100	100	66.9	316.90	Yes	Yes	$1,550,748	8,000	$194	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-C_bse	50	100	100	66.9	316.90	Yes	Yes	$1,550,748	8,000	$194	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-J_cap	50	100	100	66.72	316.72	Yes	Yes	$1,696,047	8,000	$212	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-J_bse	50	100	100	66.72	316.72	Yes	Yes	$1,696,047	8,000	$212	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-F_bse	50	100	100	59.43	309.43	Yes	Yes	$1,696,047	8,000	$212	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-F_cap	50	100	100	59.43	309.43	Yes	Yes	$1,696,047	8,000	$212	
U.S. Coast Guard, Station Eatons Neck	Berm-441	50	100	50	87.76	287.76	Yes	Yes	$1,212,980	8,000	$152	
U.S. Coast Guard, Station Eatons Neck	Berm-320	50	100	50	87.24	287.24	Yes	Yes	$1,212,980	8,000	$152	
U.S. Coast Guard, Station Eatons Neck	LFPlace-59	50	100	50	85.27	285.27	Yes	Yes	$1,228,753	8,000	$154	
U.S. Coast Guard, Station Eatons Neck	Berm-63	50	100	50	83.57	283.57	Yes	Yes	$1,105,768	8,000	$138	
U.S. Coast Guard, Station Eatons Neck	Berm-170	50	100	50	82.37	282.37	Yes	Yes	$1,212,980	8,000	$152	
U.S. Coast Guard, Station Eatons Neck	Berm-456	50	100	50	80.39	280.39	Yes	Yes	$1,212,980	8,000	$152	
U.S. Coast Guard, Station Eatons Neck	LFCap-61	50	100	50	77.41	277.41	Yes	Yes	$1,371,836	8,000	$171	
U.S. Coast Guard, Station Eatons Neck	Beach-63	50	100	50	73.2	273.20	Yes	Yes	$1,105,768	8,000	$138	
U.S. Coast Guard, Station Eatons Neck	IslandCDF-L_bse	50	100	50	70.94	270.94	Yes	Yes	$1,848,788	8,000	$231	
U.S. Coast Guard, Station Eatons Neck	IslandCDF-L_cap	50	100	50	70.94	270.94	Yes	Yes	$1,848,788	8,000	$231	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-K_cap	50	100	50	67.68	267.68	Yes	Yes	$1,848,788	8,000	$231	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-K_bse	50	100	50	67.68	267.68	Yes	Yes	$1,848,788	8,000	$231	
U.S. Coast Guard, Station Eatons Neck	CAD-M_cap	50	100	0	85.16	235.16	Yes	Yes	$1,251,067	8,000	$156	
U.S. Coast Guard, Station Eatons Neck	CAD-M_bse	50	100	0	85.16	235.16	Yes	Yes	$1,251,067	8,000	$156	
U.S. Coast Guard, Station Eatons Neck	Berm-177	50	100	0	84.64	234.64	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-384	50	100	0	84.56	234.56	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-453	50	100	0	84.53	234.53	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-121/446	50	100	0	84.45	234.45	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-67	50	60	50	74.14	234.14	Yes	Yes	$1,105,768	8,000	$138	
U.S. Coast Guard, Station Eatons Neck	Berm-455/82	50	100	0	83.93	233.93	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-337	50	100	0	83.93	233.93	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-454A	50	100	0	83.72	233.72	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-367	50	100	0	83.31	233.31	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-327/333/330	50	100	0	83.23	233.23	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-454B	50	100	0	83.23	233.23	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-173	50	100	0	83.2	233.20	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-433	50	100	0	82.92	232.92	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Berm-171	50	100	0	82.68	232.68	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-600	50	100	0	82.66	232.66	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-364b/364c	50	100	0	82.6	232.60	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-381/382	50	100	0	82.47	232.47	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-449	50	100	0	82.4	232.40	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Berm-467	50	100	0	82.19	232.19	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Berm-178	50	100	0	82.14	232.14	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-445	50	100	0	81.98	231.98	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-368	50	100	0	81.61	231.61	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-434	50	100	0	81.35	231.35	Yes	Yes	$1,583,182	8,000	$198	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard, Station Eatons Neck	Berm-365	50	100	0	81.28	231.28	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-610	50	100	0	81.25	231.25	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-323	50	100	0	80.39	230.39	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Berm-447	50	100	0	80.1	230.10	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-440	50	100	0	79.87	229.87	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Berm-180	50	100	0	78.31	228.31	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	LFCap-251	50	100	0	77.41	227.41	Yes	Yes	$1,537,264	8,000	$192	
U.S. Coast Guard, Station Eatons Neck	Berm-179	50	100	0	77.11	227.11	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$1,413,308	8,000	$177	
U.S. Coast Guard, Station Eatons Neck	Berm-Grove Beach	50	100	0	75	225.00	No	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-620	50	100	0	75	225.00	No	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	IslandCDF-N_bse	50	100	0	73.28	223.28	Yes	Yes	$2,231,755	8,000	$279	
U.S. Coast Guard, Station Eatons Neck	IslandCDF-N_cap	50	100	0	73.28	223.28	Yes	Yes	$2,231,755	8,000	$279	
U.S. Coast Guard, Station Eatons Neck	IslandCDF-P_cap	50	100	0	72.76	222.76	Yes	Yes	$2,231,755	8,000	$279	
U.S. Coast Guard, Station Eatons Neck	IslandCDF-P_bse	50	100	0	72.76	222.76	Yes	Yes	$2,231,755	8,000	$279	
U.S. Coast Guard, Station Eatons Neck	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$1,413,308	8,000	$177	
U.S. Coast Guard, Station Eatons Neck	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$1,413,308	8,000	$177	
U.S. Coast Guard, Station Eatons Neck	IslandCDF-Q_cap	50	100	0	71.51	221.51	Yes	Yes	$2,231,755	8,000	$279	
U.S. Coast Guard, Station Eatons Neck	IslandCDF-Q_bse	50	100	0	71.51	221.51	Yes	Yes	$2,231,755	8,000	$279	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-O_cap	50	100	0	69.95	219.95	Yes	Yes	$2,231,755	8,000	$279	
U.S. Coast Guard, Station Eatons Neck	ShoreCDF-O_bse	50	100	0	69.95	219.95	Yes	Yes	$2,231,755	8,000	$279	
U.S. Coast Guard, Station Eatons Neck	IslandCDF-R_cap	50	100	0	67.53	217.53	Yes	Yes	$2,231,755	8,000	$279	
U.S. Coast Guard, Station Eatons Neck	IslandCDF-R_bse	50	100	0	67.53	217.53	Yes	Yes	$2,231,755	8,000	$279	
U.S. Coast Guard, Station Eatons Neck	Beach-68	50	40	50	73.2	213.20	Yes	Yes	$1,105,768	8,000	$138	
U.S. Coast Guard, Station Eatons Neck	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$1,537,264	8,000	$192	
U.S. Coast Guard, Station Eatons Neck	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$1,537,264	8,000	$192	
U.S. Coast Guard, Station Eatons Neck	Berm-438	50	79	0	81.67	211.08	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$1,537,264	8,000	$192	
U.S. Coast Guard, Station Eatons Neck	Berm-457	50	55	0	86.95	191.49	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Berm-451	50	51	0	82.29	183.27	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-456	50	100	-1	72.89	-1.00	Yes	Yes	$1,212,980	8,000	$152	
U.S. Coast Guard, Station Eatons Neck	Beach-480	50	56	-1	72.89	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-348	50	29	-1	73.83	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-433	50	100	-1	74.14	-1.00	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Beach-442	50	100	-1	74.53	-1.00	Yes	Yes	$1,212,980	8,000	$152	
U.S. Coast Guard, Station Eatons Neck	Beach-332	50	100	-1	74.14	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-444	50	89	-1	74.14	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-449	50	100	-1	74.14	-1.00	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Beach-345	50	100	-1	74.14	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-441	50	100	-1	74.14	-1.00	Yes	Yes	$1,212,980	8,000	$152	
U.S. Coast Guard, Station Eatons Neck	Beach-325	50	100	-1	74.53	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-121	50	100	-1	73.2	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-343	50	20	-1	73.83	-1.00	Yes	Yes	$1,978,557	8,000	$247	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard, Station Eatons Neck	Beach-450	50	100	-1	74.14	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-111	50	100	-1	73.2	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-180	50	100	-1	72.89	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-384	50	100	-1	72.89	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-455/82	50	100	-1	70.43	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-76	50	100	-1	74.14	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-434	50	100	-1	74.14	-1.00	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Beach-177	50	100	-1	72.89	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-367	50	100	-1	73.59	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-344	50	11	-1	74.53	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-445	50	100	-1	73.2	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-474	50	1	-1	74.14	-1.00	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Beach-337	50	58	-1	74.14	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-327	50	100	-1	74.53	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-436	50	100	-1	74.14	-1.00	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Beach-454 East	50	100	-1	70.45	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-330	50	100	-1	74.53	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-438	50	46	-1	74.14	-1.00	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Beach-459	50	89	-1	74.14	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-79	50	100	-1	73.2	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-381	50	100	-1	72.66	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-451	50	9	-1	74.14	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-320	50	100	-1	73.83	-1.00	Yes	Yes	$1,212,980	8,000	$152	
U.S. Coast Guard, Station Eatons Neck	Beach-171	50	100	-1	72.89	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-446	50	100	-1	72.89	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-457	50	71	-1	74.14	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-333	50	30	-1	74.53	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-368	50	100	-1	72.89	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-329	50	100	-1	74.14	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-437	50	100	-1	72.27	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-178	50	100	-1	72.89	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-453	50	100	-1	73.2	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-339	50	100	-1	74.14	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-382	50	100	-1	72.27	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-447	50	100	-1	74.53	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-454 West	50	100	-1	73.2	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-364	50	100	-1	73.83	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-440	50	100	-1	74.14	-1.00	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Beach-170	50	100	-1	72.89	-1.00	Yes	Yes	$1,212,980	8,000	$152	
U.S. Coast Guard, Station Eatons Neck	Beach-468	50	100	-1	74.14	-1.00	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Beach-181	50	100	-1	74.14	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-173	50	100	-1	72.89	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-600	50	100	-1	70.67	-1.00	Yes	Yes	$1,978,557	8,000	$247	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard, Station Eatons Neck	Beach-323	50	100	-1	74.14	-1.00	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Beach-365	50	100	-1	73.83	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-179	50	100	-1	72.89	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-331	50	100	-1	74.53	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-610	50	100	-1	70.67	-1.00	Yes	Yes	$1,978,557	8,000	$247	
U.S. Coast Guard, Station Eatons Neck	Beach-467	50	100	-1	73.83	-1.00	Yes	Yes	$1,583,182	8,000	$198	
U.S. Coast Guard, Station Eatons Neck	Beach-620	50	100	-1	75	-1.00	No	Yes	$1,978,557	8,000	$247	
Port Jefferson Harbor - Sand	ShoreCDF-I_cap	100	100	100	71.25	371.25	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Sand	IslandCDF-L_cap	100	100	100	70.94	370.94	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Sand	ShoreCDF-D_cap	100	100	100	70.36	370.36	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Sand	ShoreCDF-K_cap	100	100	100	67.68	367.68	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Sand	ShoreCDF-C_cap	100	100	100	66.9	366.90	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Sand	ShoreCDF-J_cap	100	100	100	66.72	366.72	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Sand	ShoreCDF-F_cap	100	100	100	59.43	359.43	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Sand	COW-E_cap	50	100	100	85.57	335.57	Yes	Yes	$751,730	5,000	$150	
Port Jefferson Harbor - Sand	CAD-M_cap	100	100	50	85.16	335.16	Yes	Yes	$1,010,724	5,000	$202	
Port Jefferson Harbor - Sand	Berm-170	100	100	50	82.37	332.37	Yes	Yes	$1,063,281	5,000	$213	
Port Jefferson Harbor - Sand	UOW-CLDS	50	100	100	75.43	325.43	No	Yes	$751,730	5,000	$150	
Port Jefferson Harbor - Sand	IslandCDF-N_cap	100	100	50	73.28	323.28	Yes	Yes	$1,414,105	5,000	$283	
Port Jefferson Harbor - Sand	IslandCDF-B_cap	100	100	50	68.28	318.28	Yes	Yes	$1,414,105	5,000	$283	
Port Jefferson Harbor - Sand	Berm-441	100	100	0	87.76	287.76	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-320	100	100	0	87.24	287.24	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Berm-457	100	100	0	86.95	286.95	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-453	100	100	0	84.53	284.53	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-337	100	100	0	83.93	283.93	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-455/82	100	100	0	83.93	283.93	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Berm-367	100	100	0	83.31	283.31	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-454B	100	100	0	83.23	283.23	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-433	100	100	0	82.92	282.92	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-364b/364c	100	100	0	82.6	282.60	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-449	100	100	0	82.4	282.40	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Berm-451	100	100	0	82.29	282.29	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Berm-467	100	100	0	82.19	282.19	Yes	Yes	$1,398,513	5,000	$280	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Port Jefferson Harbor - Sand	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-438	100	100	0	81.67	281.67	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Berm-368	100	100	0	81.61	281.61	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-434	100	100	0	81.35	281.35	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-456	100	100	0	80.39	280.39	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Berm-447	100	100	0	80.1	280.10	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-440	100	100	0	79.87	279.87	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	UOW-WLDS	50	100	50	75.43	275.43	No	Yes	$917,106	5,000	$183	
Port Jefferson Harbor - Sand	Berm-Grove Beach	100	100	0	75	275.00	No	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Berm-620	100	100	0	75	275.00	No	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	IslandCDF-P_cap	100	100	0	72.76	272.76	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Sand	IslandCDF-Q_cap	100	100	0	71.51	271.51	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Sand	ShoreCDF-O_cap	100	100	0	69.95	269.95	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Sand	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Sand	IslandCDF-R_cap	100	100	0	67.53	267.53	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Sand	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$1,186,802	5,000	$237	
Port Jefferson Harbor - Sand	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$1,186,802	5,000	$237	
Port Jefferson Harbor - Sand	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-327	100	100	-1	74.53	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$1,063,281	5,000	$213	
Port Jefferson Harbor - Sand	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-337	100	92	-1	74.14	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-67	100	96	-1	74.14	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$1,414,344	5,000	$283	
Port Jefferson Harbor - Sand	Beach-79	100	100	-1	73.2	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-451	100	14	-1	74.14	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$1,763,825	5,000	$353	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Port Jefferson Harbor - Sand	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$1,414,344	5,000	$283	
Port Jefferson Harbor - Sand	Beach-457	100	100	-1	74.14	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$751,730	5,000	$150	
Port Jefferson Harbor - Sand	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-474	100	2	-1	74.14	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-339	100	100	-1	74.14	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-459	100	100	-1	74.14	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-438	100	74	-1	74.14	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-330	100	100	-1	74.53	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-381	100	100	-1	72.66	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-367	100	100	-1	73.59	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-333	100	48	-1	74.53	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-344	100	18	-1	74.53	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$1,010,724	5,000	$202	
Port Jefferson Harbor - Sand	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-329	100	100	-1	74.14	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-480	100	90	-1	72.89	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-68	100	64	-1	73.2	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-433	100	100	-1	74.14	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-343	100	32	-1	73.83	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-434	100	100	-1	74.14	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-348	100	46	-1	73.83	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-444	100	100	-1	74.14	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$1,414,344	5,000	$283	
Port Jefferson Harbor - Sand	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$1,398,513	5,000	$280	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Port Jefferson Harbor - Sand	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$1,414,105	5,000	$283	
Port Jefferson Harbor - Sand	Beach-121	100	100	-1	73.2	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	Beach-364	100	100	-1	73.83	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Sand	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$1,414,344	5,000	$283	
Port Jefferson Harbor - Sand	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Sand	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Sand	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$1,414,105	5,000	$283	
Port Jefferson Harbor - Sand	Beach-620	100	100	-1	75	-1.00	No	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Sand	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Sand	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Sand	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Sand	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Sand	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Sand	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Sand	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$1,183,944	5,000	$237	
Port Jefferson Harbor - Sand	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Sand	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Sand	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Sand	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$1,414,344	5,000	$283	
Port Jefferson Harbor - Sand	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	ShoreCDF-I_bse	100	100	100	71.25	371.25	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	IslandCDF-L_bse	100	100	100	70.94	370.94	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	ShoreCDF-D_bse	100	100	100	70.36	370.36	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	ShoreCDF-K_bse	100	100	100	67.68	367.68	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	ShoreCDF-C_bse	100	100	100	66.9	366.90	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	ShoreCDF-J_bse	100	100	100	66.72	366.72	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	ShoreCDF-F_bse	100	100	100	59.43	359.43	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	COW-E_cap	50	100	100	85.57	335.57	Yes	Yes	$751,730	5,000	$150	
Port Jefferson Harbor - Silt	COW-E_bse	50	100	100	85.57	335.57	Yes	Yes	$751,730	5,000	$150	
Port Jefferson Harbor - Silt	CAD-M_bse	100	100	50	85.16	335.16	Yes	Yes	$1,010,724	5,000	$202	
Port Jefferson Harbor - Silt	UOW-CLDS	50	100	100	75.43	325.43	No	Yes	$751,730	5,000	$150	
Port Jefferson Harbor - Silt	IslandCDF-N_bse	100	100	50	73.28	323.28	Yes	Yes	$1,414,105	5,000	$283	
Port Jefferson Harbor - Silt	IslandCDF-B_bse	100	100	50	68.28	318.28	Yes	Yes	$1,414,105	5,000	$283	
Port Jefferson Harbor - Silt	LFCap-61	50	100	50	77.41	277.41	Yes	Yes	$1,183,944	5,000	$237	
Port Jefferson Harbor - Silt	UOW-WLDS	50	100	50	75.43	275.43	No	Yes	$917,106	5,000	$183	
Port Jefferson Harbor - Silt	IslandCDF-P_bse	100	100	0	72.76	272.76	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Silt	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$1,706,969	5,000	$341	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Port Jefferson Harbor - Silt	ShoreCDF-O_bse	100	100	0	69.95	269.95	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Silt	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Silt	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Silt	LFPlace-59	50	100	0	85.27	235.27	Yes	Yes	$1,414,344	5,000	$283	
Port Jefferson Harbor - Silt	LFCap-251	50	100	0	77.41	227.41	Yes	Yes	$1,414,344	5,000	$283	
Port Jefferson Harbor - Silt	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$1,186,802	5,000	$237	
Port Jefferson Harbor - Silt	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$1,186,802	5,000	$237	
Port Jefferson Harbor - Silt	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$1,414,344	5,000	$283	
Port Jefferson Harbor - Silt	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$1,414,344	5,000	$283	
Port Jefferson Harbor - Silt	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$1,414,344	5,000	$283	
Port Jefferson Harbor - Silt	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Port Jefferson Harbor - Silt	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$1,063,281	5,000	$213	
Port Jefferson Harbor - Silt	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$1,063,281	5,000	$213	
Port Jefferson Harbor - Silt	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$1,414,105	5,000	$283	
Port Jefferson Harbor - Silt	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$1,010,724	5,000	$202	
Port Jefferson Harbor - Silt	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Port Jefferson Harbor - Silt	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$1,398,513	5,000	$280	
Port Jefferson Harbor - Silt	Beach-620	-1	0	-1	0	-1.00	No	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Silt	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Silt	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Silt	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$1,706,969	5,000	$341	
Port Jefferson Harbor - Silt	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$1,416,665	5,000	$283	
Port Jefferson Harbor - Silt	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$1,706,969	5,000	$341	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Port Jefferson Harbor - Silt	Berm-620	-1	0	0	0	-1.00	No	Yes	$1,763,825	5,000	$353	
Port Jefferson Harbor - Silt	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$1,414,105	5,000	$283	
Mattituck Harbor and Inlet	IslandCDF-N_cap	100	100	100	73.28	373.28	Yes	Yes	$7,381,816	56,600	$130	
Mattituck Harbor and Inlet	IslandCDF-P_cap	100	100	100	72.76	372.76	Yes	Yes	$7,381,816	56,600	$130	
Mattituck Harbor and Inlet	Beach-455/82	100	100	100	70.43	370.43	Yes	Yes	$1,587,444	56,600	$28	
Mattituck Harbor and Inlet	ShoreCDF-O_cap	100	100	100	69.95	369.95	Yes	Yes	$7,381,816	56,600	$130	
Mattituck Harbor and Inlet	CAD-M_cap	100	100	50	85.16	335.16	Yes	Yes	$4,646,550	56,600	$82	
Mattituck Harbor and Inlet	Berm-454A	100	100	50	83.72	333.72	Yes	Yes	$3,265,990	56,600	$58	
Mattituck Harbor and Inlet	Berm-445	100	100	50	81.98	331.98	Yes	Yes	$2,598,152	56,600	$46	
Mattituck Harbor and Inlet	UOW-CLDS	50	100	100	75.43	325.43	No	Yes	$2,365,280	56,600	$42	
Mattituck Harbor and Inlet	Beach-445	100	100	50	73.2	323.20	Yes	Yes	$2,598,152	56,600	$46	
Mattituck Harbor and Inlet	UOW-CSDS	50	100	100	72.31	322.31	No	Yes	$2,365,280	56,600	$42	
Mattituck Harbor and Inlet	IslandCDF-Q_cap	100	100	50	71.51	321.51	Yes	Yes	$7,755,978	56,600	$137	
Mattituck Harbor and Inlet	IslandCDF-L_cap	100	100	50	70.94	320.94	Yes	Yes	$7,755,978	56,600	$137	
Mattituck Harbor and Inlet	Berm-455/82	100	31	100	83.93	314.97	Yes	Yes	$1,587,444	56,600	$28	
Mattituck Harbor and Inlet	Berm-454B	100	64	50	83.23	297.54	Yes	Yes	$3,265,990	56,600	$58	
Mattituck Harbor and Inlet	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Berm-453	100	93	0	84.53	277.41	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-449	100	94	0	82.4	275.98	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	ShoreCDF-D_cap	100	100	0	70.36	270.36	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	IslandCDF-R_cap	100	100	0	67.53	267.53	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	ShoreCDF-J_cap	100	100	0	66.72	266.72	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	Berm-456	100	85	0	80.39	265.36	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	ShoreCDF-K_cap	100	45	50	67.68	262.65	Yes	Yes	$7,755,978	56,600	$137	
Mattituck Harbor and Inlet	ShoreCDF-I_cap	100	90	0	71.25	261.44	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$9,346,592	56,600	$165	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mattituck Harbor and Inlet	Berm-620	100	71	0	75	245.67	No	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-368	100	64	0	81.61	245.46	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-177	100	60	0	84.64	244.18	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	COW-E_cap	50	100	0	85.57	235.57	Yes	Yes	$3,841,739	56,600	$68	
Mattituck Harbor and Inlet	Berm-337	100	49	0	83.93	233.03	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-440	100	52	0	79.87	231.42	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-Grove Beach	100	55	0	75	230.49	No	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Berm-447	100	49	0	80.1	228.68	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-367	100	43	0	83.31	226.22	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$3,841,739	56,600	$68	
Mattituck Harbor and Inlet	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$3,841,739	56,600	$68	
Mattituck Harbor and Inlet	Berm-467	100	40	0	82.19	222.25	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-320	100	27	0	87.24	213.96	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-441	100	25	0	87.76	212.67	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-433	100	24	0	82.92	206.96	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-364b/364c	100	22	0	82.6	205.02	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-434	100	18	0	81.35	199.08	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-457	100	8	0	86.95	194.66	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Berm-438	100	11	0	81.67	192.89	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Berm-451	100	7	0	82.29	189.50	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-480	100	8	-1	72.89	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-177	100	48	-1	72.89	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-76	100	55	-1	74.14	-1.00	Yes	Yes	$3,265,990	56,600	$58	
Mattituck Harbor and Inlet	Beach-441	100	48	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-433	100	37	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-181	100	60	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$3,841,739	56,600	$68	
Mattituck Harbor and Inlet	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$6,114,794	56,600	$108	
Mattituck Harbor and Inlet	Beach-442	100	92	-1	74.53	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-121	100	22	-1	73.2	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-444	100	13	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-332	100	66	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-348	100	4	-1	73.83	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-339	100	15	-1	74.14	-1.00	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Beach-68	100	6	-1	73.2	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$7,755,978	56,600	$137	
Mattituck Harbor and Inlet	Beach-327	100	28	-1	74.53	-1.00	Yes	Yes	$4,618,907	56,600	$82	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mattituck Harbor and Inlet	Beach-467	100	55	-1	73.83	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-468	100	76	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-384	100	76	-1	72.89	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-343	100	3	-1	73.83	-1.00	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-364	100	50	-1	73.83	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-434	100	15	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$6,114,794	56,600	$108	
Mattituck Harbor and Inlet	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-67	100	8	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$3,265,990	56,600	$58	
Mattituck Harbor and Inlet	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-367	100	25	-1	73.59	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-457	100	10	-1	74.14	-1.00	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-330	100	42	-1	74.53	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-451	100	1	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Beach-437	100	99	-1	72.27	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-438	100	7	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-381	100	54	-1	72.66	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-474	100	0	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-333	100	4	-1	74.53	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-111	100	57	-1	73.2	-1.00	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$6,114,794	56,600	$108	
Mattituck Harbor and Inlet	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-459	100	13	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-320	100	76	-1	73.83	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Beach-329	100	42	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-337	100	8	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-436	100	59	-1	74.14	-1.00	Yes	Yes	$4,618,907	56,600	$82	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mattituck Harbor and Inlet	Beach-331	100	71	-1	74.53	-1.00	Yes	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$4,646,550	56,600	$82	
Mattituck Harbor and Inlet	Beach-79	100	34	-1	73.2	-1.00	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	Beach-344	100	2	-1	74.53	-1.00	Yes	Yes	$3,998,880	56,600	$71	
Mattituck Harbor and Inlet	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$7,381,816	56,600	$130	
Mattituck Harbor and Inlet	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$7,755,978	56,600	$137	
Mattituck Harbor and Inlet	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$7,755,978	56,600	$137	
Mattituck Harbor and Inlet	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$6,114,794	56,600	$108	
Mattituck Harbor and Inlet	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$6,114,794	56,600	$108	
Mattituck Harbor and Inlet	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$4,537,807	56,600	$80	
Mattituck Harbor and Inlet	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$7,381,816	56,600	$130	
Mattituck Harbor and Inlet	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$7,381,816	56,600	$130	
Mattituck Harbor and Inlet	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$9,346,592	56,600	$165	
Mattituck Harbor and Inlet	Beach-620	100	100	-1	75	-1.00	No	Yes	$4,618,907	56,600	$82	
Mattituck Harbor and Inlet - Silt - Example	IslandCDF-N_bse	100	100	100	73.28	373.28	Yes	Yes	$1,602,920	7,000	$229	
Mattituck Harbor and Inlet - Silt - Example	IslandCDF-P_bse	100	100	100	72.76	372.76	Yes	Yes	$1,602,920	7,000	$229	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-O_bse	100	100	100	69.95	369.95	Yes	Yes	$1,602,920	7,000	$229	
Mattituck Harbor and Inlet - Silt - Example	CAD-M_bse	100	100	50	85.16	335.16	Yes	Yes	$1,170,952	7,000	$167	
Mattituck Harbor and Inlet - Silt - Example	UOW-CLDS	50	100	100	75.43	325.43	No	Yes	$837,169	7,000	$120	
Mattituck Harbor and Inlet - Silt - Example	UOW-CSDS	50	100	100	72.31	322.31	No	Yes	$837,169	7,000	$120	
Mattituck Harbor and Inlet - Silt - Example	IslandCDF-Q_bse	100	100	50	71.51	321.51	Yes	Yes	$1,703,893	7,000	$243	
Mattituck Harbor and Inlet - Silt - Example	IslandCDF-L_bse	100	100	50	70.94	320.94	Yes	Yes	$1,703,893	7,000	$243	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-K_bse	100	100	50	67.68	317.68	Yes	Yes	$1,703,893	7,000	$243	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-J_bse	100	100	0	66.72	266.72	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	COW-E_cap	50	100	0	85.57	235.57	Yes	Yes	$1,337,806	7,000	$191	
Mattituck Harbor and Inlet - Silt - Example	COW-E_bse	50	100	0	85.57	235.57	Yes	Yes	$1,337,806	7,000	$191	
Mattituck Harbor and Inlet - Silt - Example	LFPlace-59	50	100	0	85.27	235.27	Yes	Yes	$1,496,291	7,000	$214	
Mattituck Harbor and Inlet - Silt - Example	LFCap-251	50	100	0	77.41	227.41	Yes	Yes	$1,496,291	7,000	$214	
Mattituck Harbor and Inlet - Silt - Example	LFCap-61	50	100	0	77.41	227.41	Yes	Yes	$1,309,206	7,000	$187	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mattituck Harbor and Inlet - Silt - Example	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$1,337,806	7,000	$191	
Mattituck Harbor and Inlet - Silt - Example	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$1,337,806	7,000	$191	
Mattituck Harbor and Inlet - Silt - Example	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$1,496,291	7,000	$214	
Mattituck Harbor and Inlet - Silt - Example	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$1,496,291	7,000	$214	
Mattituck Harbor and Inlet - Silt - Example	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$1,496,291	7,000	$214	
Mattituck Harbor and Inlet - Silt - Example	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$1,163,081	7,000	$166	
Mattituck Harbor and Inlet - Silt - Example	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$1,170,952	7,000	$167	
Mattituck Harbor and Inlet - Silt - Example	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$1,163,081	7,000	$166	
Mattituck Harbor and Inlet - Silt - Example	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-445	-1	0	0	0	-1.00	Yes	Yes	$1,065,365	7,000	$152	
Mattituck Harbor and Inlet - Silt - Example	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-455/82	-1	0	0	0	-1.00	Yes	Yes	$762,802	7,000	$109	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mattituck Harbor and Inlet - Silt - Example	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$1,163,081	7,000	$166	
Mattituck Harbor and Inlet - Silt - Example	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$1,163,081	7,000	$166	
Mattituck Harbor and Inlet - Silt - Example	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Mattituck Harbor and Inlet - Silt - Example	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$1,065,365	7,000	$152	
Mattituck Harbor and Inlet - Silt - Example	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$762,802	7,000	$109	
Mattituck Harbor and Inlet - Silt - Example	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$1,703,893	7,000	$243	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$1,703,893	7,000	$243	
Mattituck Harbor and Inlet - Silt - Example	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$1,521,626	7,000	$217	
Mattituck Harbor and Inlet - Silt - Example	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$1,602,920	7,000	$229	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	Beach-620	-1	0	-1	0	-1.00	No	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	Berm-620	-1	0	0	0	-1.00	No	Yes	$1,906,980	7,000	$272	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$1,703,893	7,000	$243	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Mattituck Harbor and Inlet - Silt - Example	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$1,602,920	7,000	$229	
Mattituck Harbor and Inlet - Silt - Example	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$1,602,920	7,000	$229	
Peconic River	CAD-M_bse	100	100	50	85.16	335.16	Yes	Yes	$1,654,051	13,300	$124	
Peconic River	IslandCDF-N_bse	100	100	50	73.28	323.28	Yes	Yes	$2,489,852	13,300	$187	
Peconic River	IslandCDF-P_bse	100	100	50	72.76	322.76	Yes	Yes	$2,489,852	13,300	$187	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Peconic River	IslandCDF-L_bse	100	100	50	70.94	320.94	Yes	Yes	$2,489,852	13,300	$187	
Peconic River	ShoreCDF-O_bse	100	100	50	69.95	319.95	Yes	Yes	$2,489,852	13,300	$187	
Peconic River	ShoreCDF-K_bse	100	100	50	67.68	317.68	Yes	Yes	$2,489,852	13,300	$187	
Peconic River	ShoreCDF-J_bse	100	100	50	66.72	316.72	Yes	Yes	$2,489,852	13,300	$187	
Peconic River	LFCap-61	50	100	50	77.41	277.41	Yes	Yes	$1,626,375	13,300	$122	
Peconic River	IslandCDF-Q_bse	100	100	0	71.51	271.51	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	ShoreCDF-I_bse	100	100	0	71.25	271.25	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	ShoreCDF-D_bse	100	100	0	70.36	270.36	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	IslandCDF-B_bse	100	100	0	68.28	268.28	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	ShoreCDF-A_bse	100	100	0	67.58	267.58	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	IslandCDF-R_bse	100	100	0	67.53	267.53	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	ShoreCDF-C_bse	100	100	0	66.9	266.90	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	ShoreCDF-F_bse	100	100	0	59.43	259.43	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	COW-E_cap	50	100	0	85.57	235.57	Yes	Yes	$1,704,563	13,300	$128	
Peconic River	LFPlace-59	50	100	0	85.27	235.27	Yes	Yes	$1,911,707	13,300	$144	
Peconic River	LFCap-251	50	100	0	77.41	227.41	Yes	Yes	$1,911,707	13,300	$144	
Peconic River	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$2,070,182	13,300	$156	
Peconic River	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$1,704,563	13,300	$128	
Peconic River	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$1,704,563	13,300	$128	
Peconic River	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$1,704,563	13,300	$128	
Peconic River	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$1,911,707	13,300	$144	
Peconic River	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$1,911,707	13,300	$144	
Peconic River	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$1,911,707	13,300	$144	
Peconic River	Beach-459	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-177	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-329	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-111	-1	0	-1	0	-1.00	Yes	Yes	$1,841,273	13,300	$138	
Peconic River	Beach-79	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-381	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-384	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-63	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-446	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-365	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-610	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-449	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-433	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-467	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-121/446	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-67	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-337	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-441	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-367	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-173	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Peconic River	Beach-320	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-382	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-180	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-456	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	CAD-M_cap	-1	0	0	0	-1.00	Yes	Yes	$1,654,051	13,300	$124	
Peconic River	Beach-337	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-454 East	-1	0	-1	0	-1.00	Yes	Yes	$1,841,273	13,300	$138	
Peconic River	Beach-468	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-444	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-368	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-171	-1	0	-1	0	-1.00	Yes	Yes	$1,427,088	13,300	$107	
Peconic River	Beach-343	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-445	-1	0	0	0	-1.00	Yes	Yes	$1,427,088	13,300	$107	
Peconic River	Beach-178	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-454 West	-1	0	-1	0	-1.00	Yes	Yes	$1,841,273	13,300	$138	
Peconic River	Berm-368	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-455/82	-1	0	0	0	-1.00	Yes	Yes	$1,427,088	13,300	$107	
Peconic River	IslandCDF-B_cap	-1	0	0	0	-1.00	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	Berm-320	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-323	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-453	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-600	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-330	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-437	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-367	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-447	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-436	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-323	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-64	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-454B	-1	0	0	0	-1.00	Yes	Yes	$1,841,273	13,300	$138	
Peconic River	Beach-438	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-381/382	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-173	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-331	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-348	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-332	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-364b/364c	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-68	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-438	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-453	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-178	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-445	-1	0	-1	0	-1.00	Yes	Yes	$1,427,088	13,300	$107	
Peconic River	Beach-440	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Peconic River	Beach-450	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-384	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-480	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-449	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-179	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-180	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-440	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-177	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,704,563	13,300	$128	
Peconic River	Berm-457	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-456	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-345	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-121	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-181	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-325	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-433	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-76	-1	0	-1	0	-1.00	Yes	Yes	$1,841,273	13,300	$138	
Peconic River	Berm-451	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-170	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-454A	-1	0	0	0	-1.00	Yes	Yes	$1,841,273	13,300	$138	
Peconic River	Beach-451	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-441	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-339	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-364	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-365	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-457	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-447	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-600	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-179	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-434	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-63	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-327/333/330	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-344	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-333	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-455/82	-1	0	-1	0	-1.00	Yes	Yes	$1,427,088	13,300	$107	
Peconic River	Berm-170	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-610	-1	0	0	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-327	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-474	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-467	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-171	-1	0	0	0	-1.00	Yes	Yes	$1,427,088	13,300	$107	
Peconic River	Beach-442	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	
Peconic River	Beach-434	-1	0	-1	0	-1.00	Yes	Yes	$2,257,700	13,300	$170	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Peconic River	ShoreCDF-D_cap	-1	0	0	0	-1.00	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	ShoreCDF-K_cap	-1	0	0	0	-1.00	Yes	Yes	$2,489,852	13,300	$187	
Peconic River	ShoreCDF-I_cap	-1	0	0	0	-1.00	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	IslandCDF-N_cap	-1	0	0	0	-1.00	Yes	Yes	$2,489,852	13,300	$187	
Peconic River	Berm-620	-1	0	0	0	-1.00	No	Yes	$2,257,700	13,300	$170	
Peconic River	Berm-Grove Beach	-1	0	0	0	-1.00	No	Yes	$2,257,700	13,300	$170	
Peconic River	ShoreCDF-O_cap	-1	0	0	0	-1.00	Yes	Yes	$2,489,852	13,300	$187	
Peconic River	IslandCDF-Q_cap	-1	0	0	0	-1.00	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	IslandCDF-P_cap	-1	0	0	0	-1.00	Yes	Yes	$2,489,852	13,300	$187	
Peconic River	IslandCDF-R_cap	-1	0	0	0	-1.00	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	Beach-620	-1	0	-1	0	-1.00	No	Yes	$2,257,700	13,300	$170	
Peconic River	ShoreCDF-C_cap	-1	0	0	0	-1.00	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	ShoreCDF-F_cap	-1	0	0	0	-1.00	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	ShoreCDF-A_cap	-1	0	0	0	-1.00	Yes	Yes	$3,006,758	13,300	$226	
Peconic River	ShoreCDF-J_cap	-1	0	0	0	-1.00	Yes	Yes	$2,489,852	13,300	$187	
Peconic River	IslandCDF-L_cap	-1	0	0	0	-1.00	Yes	Yes	$2,489,852	13,300	$187	
Peconic River - Sand - Example	CAD-M_cap	100	100	50	85.16	335.16	Yes	Yes	$1,170,952	7,000	$167	
Peconic River - Sand - Example	Berm-455/82	100	100	50	83.93	333.93	Yes	Yes	$1,163,081	7,000	$166	
Peconic River - Sand - Example	Berm-171	100	100	50	82.68	332.68	Yes	Yes	$1,163,081	7,000	$166	
Peconic River - Sand - Example	Berm-445	100	100	50	81.98	331.98	Yes	Yes	$1,163,081	7,000	$166	
Peconic River - Sand - Example	IslandCDF-N_cap	100	100	50	73.28	323.28	Yes	Yes	$1,703,893	7,000	$243	
Peconic River - Sand - Example	IslandCDF-P_cap	100	100	50	72.76	322.76	Yes	Yes	$1,703,893	7,000	$243	
Peconic River - Sand - Example	IslandCDF-L_cap	100	100	50	70.94	320.94	Yes	Yes	$1,703,893	7,000	$243	
Peconic River - Sand - Example	ShoreCDF-O_cap	100	100	50	69.95	319.95	Yes	Yes	$1,703,893	7,000	$243	
Peconic River - Sand - Example	ShoreCDF-K_cap	100	100	50	67.68	317.68	Yes	Yes	$1,703,893	7,000	$243	
Peconic River - Sand - Example	ShoreCDF-J_cap	100	100	50	66.72	316.72	Yes	Yes	$1,703,893	7,000	$243	
Peconic River - Sand - Example	Berm-441	100	100	0	87.76	287.76	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-320	100	100	0	87.24	287.24	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-457	100	100	0	86.95	286.95	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-453	100	100	0	84.53	284.53	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-337	100	100	0	83.93	283.93	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$1,521,626	7,000	$217	
Peconic River - Sand - Example	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-367	100	100	0	83.31	283.31	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-454B	100	100	0	83.23	283.23	Yes	Yes	$1,521,626	7,000	$217	
Peconic River - Sand - Example	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-433	100	100	0	82.92	282.92	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-364b/364c	100	100	0	82.6	282.60	Yes	Yes	$1,906,980	7,000	$272	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Peconic River - Sand - Example	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-449	100	100	0	82.4	282.40	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-451	100	100	0	82.29	282.29	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-467	100	100	0	82.19	282.19	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-438	100	100	0	81.67	281.67	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-368	100	100	0	81.61	281.61	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-434	100	100	0	81.35	281.35	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-456	100	100	0	80.39	280.39	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-447	100	100	0	80.1	280.10	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-440	100	100	0	79.87	279.87	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-Grove Beach	100	100	0	75	275.00	No	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Berm-620	100	100	0	75	275.00	No	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	IslandCDF-Q_cap	100	100	0	71.51	271.51	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	ShoreCDF-I_cap	100	100	0	71.25	271.25	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	ShoreCDF-D_cap	100	100	0	70.36	270.36	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	IslandCDF-R_cap	100	100	0	67.53	267.53	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	COW-E_cap	50	100	0	85.57	235.57	Yes	Yes	$1,337,806	7,000	$191	
Peconic River - Sand - Example	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$1,337,806	7,000	$191	
Peconic River - Sand - Example	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$1,337,806	7,000	$191	
Peconic River - Sand - Example	UOW-CSDS	50	100	0	72.31	222.31	No	Yes	$1,337,806	7,000	$191	
Peconic River - Sand - Example	UOW-NLDS	50	100	0	72.31	222.31	No	Yes	$1,337,806	7,000	$191	
Peconic River - Sand - Example	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-480	100	64	-1	72.89	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-121	100	100	-1	73.2	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$1,163,081	7,000	$166	
Peconic River - Sand - Example	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,337,806	7,000	$191	
Peconic River - Sand - Example	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-459	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-344	100	13	-1	74.53	-1.00	Yes	Yes	$1,906,980	7,000	$272	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Peconic River - Sand - Example	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-337	100	66	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-68	100	46	-1	73.2	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-339	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Peconic River - Sand - Example	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$1,163,081	7,000	$166	
Peconic River - Sand - Example	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$1,496,291	7,000	$214	
Peconic River - Sand - Example	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-330	100	100	-1	74.53	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-474	100	1	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-457	100	81	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-367	100	100	-1	73.59	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-329	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-333	100	34	-1	74.53	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-343	100	23	-1	73.83	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-348	100	33	-1	73.83	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$1,496,291	7,000	$214	
Peconic River - Sand - Example	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Peconic River - Sand - Example	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Peconic River - Sand - Example	Beach-364	100	100	-1	73.83	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-67	100	69	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-327	100	100	-1	74.53	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-381	100	100	-1	72.66	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-451	100	10	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$1,496,291	7,000	$214	
Peconic River - Sand - Example	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$1,906,980	7,000	$272	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Peconic River - Sand - Example	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$1,163,081	7,000	$166	
Peconic River - Sand - Example	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-434	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-433	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$1,170,952	7,000	$167	
Peconic River - Sand - Example	Beach-79	100	100	-1	73.2	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$1,521,626	7,000	$217	
Peconic River - Sand - Example	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-438	100	53	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-444	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$1,703,893	7,000	$243	
Peconic River - Sand - Example	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$1,703,893	7,000	$243	
Peconic River - Sand - Example	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$1,703,893	7,000	$243	
Peconic River - Sand - Example	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$1,496,291	7,000	$214	
Peconic River - Sand - Example	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	Beach-620	100	100	-1	75	-1.00	No	Yes	$1,906,980	7,000	$272	
Peconic River - Sand - Example	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$1,496,291	7,000	$214	
Peconic River - Sand - Example	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$1,309,206	7,000	$187	
Peconic River - Sand - Example	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$1,703,893	7,000	$243	
Peconic River - Sand - Example	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$2,056,826	7,000	$294	
Peconic River - Sand - Example	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$1,703,893	7,000	$243	
Peconic River - Sand - Example	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$1,703,893	7,000	$243	
Greenport Harbor	IslandCDF-N_cap	100	100	100	73.28	373.28	Yes	Yes	$1,242,115	3,200	$388	
Greenport Harbor	Beach-79	100	100	100	73.2	373.20	Yes	Yes	$720,574	3,200	$225	
Greenport Harbor	IslandCDF-P_cap	100	100	100	72.76	372.76	Yes	Yes	$1,242,115	3,200	$388	
Greenport Harbor	IslandCDF-Q_cap	100	100	100	71.51	371.51	Yes	Yes	$1,242,115	3,200	$388	
Greenport Harbor	ShoreCDF-O_cap	100	100	100	69.95	369.95	Yes	Yes	$1,242,115	3,200	$388	
Greenport Harbor	Berm-454A	100	100	50	83.72	333.72	Yes	Yes	$920,203	3,200	$288	
Greenport Harbor	Berm-454B	100	100	50	83.23	333.23	Yes	Yes	$970,660	3,200	$303	
Greenport Harbor	Berm-180	100	100	50	78.31	328.31	Yes	Yes	$970,660	3,200	$303	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Greenport Harbor	Beach-76	100	100	50	74.14	324.14	Yes	Yes	$920,203	3,200	$288	
Greenport Harbor	Beach-111	100	100	50	73.2	323.20	Yes	Yes	$920,203	3,200	$288	
Greenport Harbor	Beach-180	100	100	50	72.89	322.89	Yes	Yes	$920,203	3,200	$288	
Greenport Harbor	UOW-CSDS	50	100	100	72.31	322.31	No	Yes	$675,697	3,200	$211	
Greenport Harbor	UOW-NLDS	50	100	100	72.31	322.31	No	Yes	$783,934	3,200	$245	
Greenport Harbor	Beach-454 East	100	100	50	70.45	320.45	Yes	Yes	$920,203	3,200	$288	
Greenport Harbor	IslandCDF-R_cap	100	100	50	67.53	317.53	Yes	Yes	$1,174,121	3,200	$367	
Greenport Harbor	Berm-441	100	100	0	87.76	287.76	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-320	100	100	0	87.24	287.24	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-457	100	100	0	86.95	286.95	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	CAD-M_cap	100	100	0	85.16	285.16	Yes	Yes	$878,036	3,200	$274	
Greenport Harbor	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-453	100	100	0	84.53	284.53	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-337	100	100	0	83.93	283.93	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-455/82	100	100	0	83.93	283.93	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-367	100	100	0	83.31	283.31	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Berm-433	100	100	0	82.92	282.92	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-364b/364c	100	100	0	82.6	282.60	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-449	100	100	0	82.4	282.40	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-451	100	100	0	82.29	282.29	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-467	100	100	0	82.19	282.19	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Berm-438	100	100	0	81.67	281.67	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-368	100	100	0	81.61	281.61	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-434	100	100	0	81.35	281.35	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-456	100	100	0	80.39	280.39	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-447	100	100	0	80.1	280.10	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-440	100	100	0	79.87	279.87	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	UOW-CLDS	50	100	50	75.43	275.43	No	Yes	$863,217	3,200	$270	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Greenport Harbor	Berm-Grove Beach	100	100	0	75	275.00	No	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Berm-620	100	100	0	75	275.00	No	Yes	$1,648,471	3,200	$515	
Greenport Harbor	ShoreCDF-I_cap	100	100	0	71.25	271.25	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	IslandCDF-L_cap	100	100	0	70.94	270.94	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	ShoreCDF-D_cap	100	100	0	70.36	270.36	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	ShoreCDF-K_cap	100	100	0	67.68	267.68	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	ShoreCDF-J_cap	100	100	0	66.72	266.72	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	COW-E_cap	50	100	0	85.57	235.57	Yes	Yes	$1,091,134	3,200	$341	
Greenport Harbor	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$1,091,134	3,200	$341	
Greenport Harbor	Beach-327	100	100	-1	74.53	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-434	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-364	100	100	-1	73.83	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-474	100	3	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$1,033,364	3,200	$323	
Greenport Harbor	Beach-457	100	100	-1	74.14	-1.00	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-344	100	28	-1	74.53	-1.00	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-381	100	100	-1	72.66	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-329	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$1,033,364	3,200	$323	
Greenport Harbor	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Beach-333	100	75	-1	74.53	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Greenport Harbor	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$1,033,364	3,200	$323	
Greenport Harbor	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$970,660	3,200	$303	
Greenport Harbor	Beach-121	100	100	-1	73.2	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-433	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-480	100	100	-1	72.89	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$970,660	3,200	$303	
Greenport Harbor	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-339	100	100	-1	74.14	-1.00	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Beach-330	100	100	-1	74.53	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-438	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-367	100	100	-1	73.59	-1.00	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$878,036	3,200	$274	
Greenport Harbor	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,091,134	3,200	$341	
Greenport Harbor	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-444	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-67	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-68	100	100	-1	73.2	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-348	100	72	-1	73.83	-1.00	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-337	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-459	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-343	100	50	-1	73.83	-1.00	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Beach-451	100	22	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$1,257,124	3,200	$393	
Greenport Harbor	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$1,648,471	3,200	$515	
Greenport Harbor	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	Beach-620	100	100	-1	75	-1.00	No	Yes	$1,648,471	3,200	$515	
Greenport Harbor	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$1,242,115	3,200	$388	
Greenport Harbor	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$1,033,364	3,200	$323	
Greenport Harbor	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$1,033,364	3,200	$323	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Greenport Harbor	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$1,033,364	3,200	$323	
Greenport Harbor	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$1,174,121	3,200	$367	
Greenport Harbor	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$1,242,115	3,200	$388	
Greenport Harbor	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$1,242,115	3,200	$388	
Greenport Harbor	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$1,291,267	3,200	$404	
Greenport Harbor	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$1,242,115	3,200	$388	
US DHS Plum Gut Harbor and Orient Point	IslandCDF-P_cap	100	100	100	72.76	372.76	Yes	Yes	$1,882,303	10,000	$188	
US DHS Plum Gut Harbor and Orient Point	UOW-CSDS	100	100	100	72.31	372.31	No	Yes	$933,321	10,000	$93	
US DHS Plum Gut Harbor and Orient Point	UOW-NLDS	100	100	100	72.31	372.31	No	Yes	$933,321	10,000	$93	
US DHS Plum Gut Harbor and Orient Point	Beach-437	100	100	100	72.27	372.27	Yes	Yes	$818,195	10,000	$82	
US DHS Plum Gut Harbor and Orient Point	IslandCDF-Q_cap	100	100	100	71.51	371.51	Yes	Yes	$1,805,427	10,000	$181	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-O_cap	100	100	100	69.95	369.95	Yes	Yes	$1,882,303	10,000	$188	
US DHS Plum Gut Harbor and Orient Point	IslandCDF-R_cap	100	100	100	67.53	367.53	Yes	Yes	$1,882,303	10,000	$188	
US DHS Plum Gut Harbor and Orient Point	Berm-367	100	100	50	83.31	333.31	Yes	Yes	$1,312,780	10,000	$131	
US DHS Plum Gut Harbor and Orient Point	Berm-180	100	100	50	78.31	328.31	Yes	Yes	$1,186,572	10,000	$119	
US DHS Plum Gut Harbor and Orient Point	IslandCDF-N_cap	100	100	50	73.28	323.28	Yes	Yes	$2,138,577	10,000	$214	
US DHS Plum Gut Harbor and Orient Point	Beach-180	100	100	50	72.89	322.89	Yes	Yes	$1,186,572	10,000	$119	
US DHS Plum Gut Harbor and Orient Point	Berm-441	100	100	0	87.76	287.76	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-320	100	100	0	87.24	287.24	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	COW-E_cap	100	100	0	85.57	285.57	Yes	Yes	$1,564,312	10,000	$156	
US DHS Plum Gut Harbor and Orient Point	CAD-M_cap	100	100	0	85.16	285.16	Yes	Yes	$1,411,295	10,000	$141	
US DHS Plum Gut Harbor and Orient Point	Berm-177	100	100	0	84.64	284.64	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-453	100	100	0	84.53	284.53	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Berm-121/446	100	100	0	84.45	284.45	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Berm-337	100	100	0	83.93	283.93	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-455/82	100	100	0	83.93	283.93	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-454A	100	100	0	83.72	283.72	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-454B	100	100	0	83.23	283.23	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Berm-173	100	100	0	83.2	283.20	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Berm-433	100	100	0	82.92	282.92	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-600	100	100	0	82.66	282.66	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-364b/364c	100	100	0	82.6	282.60	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Berm-449	100	100	0	82.4	282.40	Yes	Yes	$2,121,712	10,000	$212	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
US DHS Plum Gut Harbor and Orient Point	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-467	100	100	0	82.19	282.19	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-178	100	100	0	82.14	282.14	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Berm-445	100	100	0	81.98	281.98	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-368	100	100	0	81.61	281.61	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Berm-434	100	100	0	81.35	281.35	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-365	100	100	0	81.28	281.28	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-323	100	100	0	80.39	280.39	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-456	100	100	0	80.39	280.39	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-447	100	100	0	80.1	280.10	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-440	100	100	0	79.87	279.87	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-179	100	100	0	77.11	277.11	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	UOW-CLDS	100	100	0	75.43	275.43	No	Yes	$1,564,312	10,000	$156	
US DHS Plum Gut Harbor and Orient Point	UOW-WLDS	100	100	0	75.43	275.43	No	Yes	$1,564,312	10,000	$156	
US DHS Plum Gut Harbor and Orient Point	Berm-620	100	100	0	75	275.00	No	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Berm-Grove Beach	100	100	0	75	275.00	No	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-I_cap	100	100	0	71.25	271.25	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	IslandCDF-L_cap	100	100	0	70.94	270.94	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-D_cap	100	100	0	70.36	270.36	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-K_cap	100	100	0	67.68	267.68	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-J_cap	100	100	0	66.72	266.72	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	Berm-438	100	64	0	81.67	245.20	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-457	100	44	0	86.95	230.58	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Berm-451	100	41	0	82.29	223.08	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-348	100	23	-1	73.83	-1.00	Yes	Yes	$1,312,780	10,000	$131	
US DHS Plum Gut Harbor and Orient Point	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-364	100	100	-1	73.83	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-438	100	37	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$1,411,295	10,000	$141	
US DHS Plum Gut Harbor and Orient Point	Beach-178	100	100	-1	72.89	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$1,706,295	10,000	$171	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
US DHS Plum Gut Harbor and Orient Point	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-480	100	45	-1	72.89	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Beach-446	100	100	-1	72.89	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$1,619,210	10,000	$162	
US DHS Plum Gut Harbor and Orient Point	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-121	100	100	-1	73.2	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-441	100	100	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-67	100	48	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-434	100	85	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Beach-451	100	7	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-79	100	100	-1	73.2	-1.00	Yes	Yes	$1,312,780	10,000	$131	
US DHS Plum Gut Harbor and Orient Point	Beach-330	100	100	-1	74.53	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$1,619,210	10,000	$162	
US DHS Plum Gut Harbor and Orient Point	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-457	100	57	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-444	100	71	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-333	100	24	-1	74.53	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-381	100	100	-1	72.66	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-459	100	71	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-433	100	100	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$1,564,312	10,000	$156	
US DHS Plum Gut Harbor and Orient Point	Beach-68	100	32	-1	73.2	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-327	100	100	-1	74.53	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-467	100	100	-1	73.83	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-339	100	86	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-177	100	100	-1	72.89	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Beach-76	100	100	-1	74.14	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-337	100	46	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-344	100	9	-1	74.53	-1.00	Yes	Yes	$1,706,295	10,000	$171	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
US DHS Plum Gut Harbor and Orient Point	Beach-343	100	16	-1	73.83	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$1,619,210	10,000	$162	
US DHS Plum Gut Harbor and Orient Point	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-179	100	100	-1	72.89	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Beach-367	100	100	-1	73.59	-1.00	Yes	Yes	$1,312,780	10,000	$131	
US DHS Plum Gut Harbor and Orient Point	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-453	100	100	-1	73.2	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Beach-474	100	1	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	Beach-329	100	100	-1	74.14	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$2,121,712	10,000	$212	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	Beach-620	100	100	-1	75	-1.00	No	Yes	$1,706,295	10,000	$171	
US DHS Plum Gut Harbor and Orient Point	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$1,619,210	10,000	$162	
US DHS Plum Gut Harbor and Orient Point	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$1,619,210	10,000	$162	
US DHS Plum Gut Harbor and Orient Point	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$1,882,303	10,000	$188	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$1,882,303	10,000	$188	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$1,619,210	10,000	$162	
US DHS Plum Gut Harbor and Orient Point	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$2,138,577	10,000	$214	
US DHS Plum Gut Harbor and Orient Point	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$1,882,303	10,000	$188	
US DHS Plum Gut Harbor and Orient Point	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$2,581,613	10,000	$258	
US DHS Plum Gut Harbor and Orient Point	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$1,805,427	10,000	$181	
Lake Montauk Harbor	Berm-121/446	100	100	100	84.45	384.45	Yes	Yes	$1,082,324	32,200	$34	
Lake Montauk Harbor	Beach-453	100	100	100	73.2	373.20	Yes	Yes	$1,082,324	32,200	$34	
Lake Montauk Harbor	Beach-446	100	100	100	72.89	372.89	Yes	Yes	$1,273,612	32,200	$40	
Lake Montauk Harbor	IslandCDF-Q_cap	100	100	100	71.51	371.51	Yes	Yes	$4,584,387	32,200	$142	
Lake Montauk Harbor	IslandCDF-R_cap	100	100	100	67.53	367.53	Yes	Yes	$4,584,387	32,200	$142	
Lake Montauk Harbor	Berm-453	100	54	100	84.53	338.95	Yes	Yes	$1,082,324	32,200	$34	
Lake Montauk Harbor	Berm-177	100	100	50	84.64	334.64	Yes	Yes	$1,771,193	32,200	$55	
Lake Montauk Harbor	Berm-173	100	100	50	83.2	333.20	Yes	Yes	$2,152,643	32,200	$67	
Lake Montauk Harbor	Berm-178	100	100	50	82.14	332.14	Yes	Yes	$1,771,193	32,200	$55	
Lake Montauk Harbor	Beach-179	100	100	50	72.89	322.89	Yes	Yes	$1,771,193	32,200	$55	
Lake Montauk Harbor	Beach-178	100	100	50	72.89	322.89	Yes	Yes	$1,771,193	32,200	$55	
Lake Montauk Harbor	UOW-NLDS	50	100	100	72.31	322.31	No	Yes	$1,517,556	32,200	$47	
Lake Montauk Harbor	Beach-121	100	38	100	73.2	311.09	Yes	Yes	$1,082,324	32,200	$34	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Lake Montauk Harbor	Beach-177	100	84	50	72.89	307.05	Yes	Yes	$1,771,193	32,200	$55	
Lake Montauk Harbor	Berm-179	100	68	50	77.11	294.98	Yes	Yes	$1,771,193	32,200	$55	
Lake Montauk Harbor	Berm-384	100	100	0	84.56	284.56	Yes	Yes	$2,691,995	32,200	$84	
Lake Montauk Harbor	Berm-63	100	100	0	83.57	283.57	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-327/333/330	100	100	0	83.23	283.23	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-171	100	100	0	82.68	282.68	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-381/382	100	100	0	82.47	282.47	Yes	Yes	$2,691,995	32,200	$84	
Lake Montauk Harbor	Berm-170	100	100	0	82.37	282.37	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-600	100	100	0	82.66	282.18	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-610	100	100	0	81.25	281.25	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-180	100	100	0	78.31	278.31	Yes	Yes	$2,691,995	32,200	$84	
Lake Montauk Harbor	IslandCDF-N_cap	100	100	0	73.28	273.28	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	IslandCDF-P_cap	100	100	0	72.76	272.76	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	UOW-CSDS	50	100	50	72.31	272.31	No	Yes	$1,835,720	32,200	$57	
Lake Montauk Harbor	IslandCDF-L_cap	100	100	0	70.94	270.94	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	ShoreCDF-O_cap	100	100	0	69.95	269.95	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	IslandCDF-B_cap	100	100	0	68.28	268.28	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	ShoreCDF-A_cap	100	100	0	67.58	267.58	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	ShoreCDF-C_cap	100	100	0	66.9	266.90	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	ShoreCDF-J_cap	100	100	0	66.72	266.72	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	Berm-454A	100	80	0	83.72	264.01	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	CAD-M_cap	100	74	0	85.16	259.64	Yes	Yes	$2,987,925	32,200	$93	
Lake Montauk Harbor	ShoreCDF-F_cap	100	100	0	59.43	259.43	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	Berm-323	100	74	0	80.39	254.44	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-365	100	72	0	81.28	253.75	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	ShoreCDF-D_cap	100	81	0	70.36	251.85	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	Berm-445	100	67	0	81.98	249.08	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-449	100	55	0	82.4	237.23	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	COW-E_cap	50	100	0	85.57	235.57	Yes	Yes	$4,531,248	32,200	$141	
Lake Montauk Harbor	Berm-456	100	50	0	80.39	230.17	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$2,569,892	32,200	$80	
Lake Montauk Harbor	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$4,531,248	32,200	$141	
Lake Montauk Harbor	ShoreCDF-I_cap	100	53	0	71.25	224.10	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	Berm-454B	100	38	0	83.23	220.91	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-368	100	37	0	81.61	219.02	Yes	Yes	$2,691,995	32,200	$84	
Lake Montauk Harbor	Berm-620	100	41	0	75	216.41	No	Yes	$2,691,995	32,200	$84	
Lake Montauk Harbor	Berm-337	100	29	0	83.93	212.70	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-440	100	30	0	79.87	210.07	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-447	100	28	0	80.1	208.56	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-367	100	25	0	83.31	208.45	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-Grove Beach	100	33	0	75	207.51	No	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-467	100	23	0	82.19	205.66	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-320	100	16	0	87.24	202.89	Yes	Yes	$3,157,195	32,200	$98	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Lake Montauk Harbor	Berm-441	100	15	0	87.76	202.35	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-455/82	100	18	0	83.93	202.11	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-433	100	14	0	82.92	197.01	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-364b/364c	100	13	0	82.6	195.73	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	ShoreCDF-K_cap	100	26	0	67.68	194.03	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	Berm-434	100	10	0	81.35	191.74	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-457	100	5	0	86.95	191.47	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-438	100	7	0	81.67	188.25	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Berm-451	100	4	0	82.29	186.51	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-64	100	100	-1	73.2	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-610	100	100	-1	70.67	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-474	100	0	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-381	100	95	-1	72.66	-1.00	Yes	Yes	$2,691,995	32,200	$84	
Lake Montauk Harbor	Beach-447	100	100	-1	74.53	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-79	100	61	-1	73.2	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-329	100	74	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-436	100	100	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-173	100	100	-1	72.89	-1.00	Yes	Yes	$2,152,643	32,200	$67	
Lake Montauk Harbor	Beach-344	100	3	-1	74.53	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-67	100	15	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-323	100	100	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-459	100	22	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-441	100	84	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-368	100	100	-1	72.89	-1.00	Yes	Yes	$2,691,995	32,200	$84	
Lake Montauk Harbor	Beach-454 East	100	100	-1	70.45	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-330	100	74	-1	74.53	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-437	100	100	-1	72.27	-1.00	Yes	Yes	$2,691,995	32,200	$84	
Lake Montauk Harbor	Beach-333	100	7	-1	74.53	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-63	100	100	-1	73.2	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-171	100	100	-1	72.89	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-345	100	100	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-457	100	18	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-442	100	100	-1	74.53	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-467	100	97	-1	73.83	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	BF-422/423	-1	0	0	0	-1.00	Yes	Yes	$3,678,066	32,200	$114	
Lake Montauk Harbor	Beach-433	100	66	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-339	100	27	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-450	100	100	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	IslandCDF-L_bse	-1	0	0	0	-1.00	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	Beach-76	100	97	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-111	100	100	-1	73.2	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	COW-E_bse	-1	0	0	0	-1.00	Yes	Yes	$4,531,248	32,200	$141	
Lake Montauk Harbor	Beach-325	100	100	-1	74.53	-1.00	Yes	Yes	$3,157,195	32,200	$98	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Lake Montauk Harbor	Beach-382	100	100	-1	72.27	-1.00	Yes	Yes	$2,691,995	32,200	$84	
Lake Montauk Harbor	Beach-327	100	48	-1	74.53	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-367	100	44	-1	73.59	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-68	100	10	-1	73.2	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-384	100	100	-1	72.89	-1.00	Yes	Yes	$2,691,995	32,200	$84	
Lake Montauk Harbor	Beach-434	100	26	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-444	100	22	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-449	100	100	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-468	100	100	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-451	100	2	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-337	100	14	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-181	100	100	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-343	100	5	-1	73.83	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-180	100	100	-1	72.89	-1.00	Yes	Yes	$2,691,995	32,200	$84	
Lake Montauk Harbor	Beach-600	100	100	-1	70.67	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-455/82	100	100	-1	70.43	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	CAD-M_bse	-1	0	0	0	-1.00	Yes	Yes	$2,987,925	32,200	$93	
Lake Montauk Harbor	Beach-170	100	100	-1	72.89	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-454 West	100	100	-1	73.2	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-320	100	100	-1	73.83	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Habitat-429	-1	0	0	0	-1.00	Yes	Yes	$3,678,066	32,200	$114	
Lake Montauk Harbor	Habitat-427	-1	0	0	0	-1.00	Yes	Yes	$3,678,066	32,200	$114	
Lake Montauk Harbor	IslandCDF-B_bse	-1	0	0	0	-1.00	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	Beach-480	100	14	-1	72.89	-1.00	Yes	Yes	$2,691,995	32,200	$84	
Lake Montauk Harbor	Beach-332	100	100	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-438	100	11	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-440	100	100	-1	74.14	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-331	100	100	-1	74.53	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-456	100	100	-1	72.89	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-445	100	100	-1	73.2	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-348	100	7	-1	73.83	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-365	100	100	-1	73.83	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-364	100	88	-1	73.83	-1.00	Yes	Yes	$3,157,195	32,200	$98	
Lake Montauk Harbor	Beach-620	100	100	-1	75	-1.00	No	Yes	$2,691,995	32,200	$84	
Lake Montauk Harbor	ShoreCDF-A_bse	-1	0	0	0	-1.00	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	LFCap-251	-1	0	0	0	-1.00	Yes	Yes	$3,678,066	32,200	$114	
Lake Montauk Harbor	IslandCDF-P_bse	-1	0	0	0	-1.00	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	IslandCDF-R_bse	-1	0	0	0	-1.00	Yes	Yes	$4,584,387	32,200	$142	
Lake Montauk Harbor	ShoreCDF-O_bse	-1	0	0	0	-1.00	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	ShoreCDF-K_bse	-1	0	0	0	-1.00	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	LFCap-61	-1	0	0	0	-1.00	Yes	Yes	$3,678,066	32,200	$114	
Lake Montauk Harbor	ShoreCDF-C_bse	-1	0	0	0	-1.00	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	ShoreCDF-J_bse	-1	0	0	0	-1.00	Yes	Yes	$5,602,196	32,200	$174	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
Lake Montauk Harbor	ShoreCDF-D_bse	-1	0	0	0	-1.00	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	IslandCDF-Q_bse	-1	0	0	0	-1.00	Yes	Yes	$4,584,387	32,200	$142	
Lake Montauk Harbor	IslandCDF-N_bse	-1	0	0	0	-1.00	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	LFPlace-59	-1	0	0	0	-1.00	Yes	Yes	$3,678,066	32,200	$114	
Lake Montauk Harbor	ShoreCDF-I_bse	-1	0	0	0	-1.00	Yes	Yes	$5,602,196	32,200	$174	
Lake Montauk Harbor	ShoreCDF-F_bse	-1	0	0	0	-1.00	Yes	Yes	$5,602,196	32,200	$174	
U.S. Coast Guard Station	Berm-453	50	100	100	84.53	334.53	Yes	Yes	$683,633	0	$0	
U.S. Coast Guard Station	Berm-121/446	50	100	100	84.45	334.45	Yes	Yes	$710,385	0	$0	
U.S. Coast Guard Station	Beach-453	50	100	100	73.2	323.20	Yes	Yes	$683,633	0	$0	
U.S. Coast Guard Station	Beach-121	50	100	100	73.2	323.20	Yes	Yes	$683,633	0	$0	
U.S. Coast Guard Station	Beach-446	50	100	100	72.89	322.89	Yes	Yes	$710,385	0	$0	
U.S. Coast Guard Station	UOW-NLDS	50	100	100	72.31	322.31	No	Yes	$772,251	0	$0	
U.S. Coast Guard Station	IslandCDF-Q_bse	50	100	100	71.51	321.51	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	IslandCDF-Q_cap	50	100	100	71.51	321.51	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	IslandCDF-R_cap	50	100	100	67.53	317.53	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	IslandCDF-R_bse	50	100	100	67.53	317.53	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	Berm-177	50	100	50	84.64	284.64	Yes	Yes	$841,969	0	$0	
U.S. Coast Guard Station	Berm-173	50	100	50	83.2	283.20	Yes	Yes	$857,713	0	$0	
U.S. Coast Guard Station	Berm-178	50	100	50	82.14	282.14	Yes	Yes	$841,969	0	$0	
U.S. Coast Guard Station	Berm-179	50	100	50	77.11	277.11	Yes	Yes	$841,969	0	$0	
U.S. Coast Guard Station	Beach-177	50	100	50	72.89	272.89	Yes	Yes	$841,969	0	$0	
U.S. Coast Guard Station	Beach-179	50	100	50	72.89	272.89	Yes	Yes	$841,969	0	$0	
U.S. Coast Guard Station	Beach-178	50	100	50	72.89	272.89	Yes	Yes	$841,969	0	$0	
U.S. Coast Guard Station	UOW-CSDS	50	100	50	72.31	272.31	No	Yes	$790,171	0	$0	
U.S. Coast Guard Station	Berm-441	50	100	0	87.76	237.76	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-320	50	100	0	87.24	237.24	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-457	50	100	0	86.95	236.95	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	COW-E_cap	50	100	0	85.57	235.57	Yes	Yes	$790,171	0	$0	
U.S. Coast Guard Station	COW-E_bse	50	100	0	85.57	235.57	Yes	Yes	$790,171	0	$0	
U.S. Coast Guard Station	LFPlace-59	50	100	0	85.27	235.27	Yes	Yes	$686,193	0	$0	
U.S. Coast Guard Station	CAD-M_bse	50	100	0	85.16	235.16	Yes	Yes	$680,010	0	$0	
U.S. Coast Guard Station	CAD-M_cap	50	100	0	85.16	235.16	Yes	Yes	$680,010	0	$0	
U.S. Coast Guard Station	Berm-384	50	100	0	84.56	234.56	Yes	Yes	$1,116,017	0	$0	
U.S. Coast Guard Station	Berm-337	50	100	0	83.93	233.93	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-455/82	50	100	0	83.93	233.93	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-454A	50	100	0	83.72	233.72	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-63	50	100	0	83.57	233.57	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-367	50	100	0	83.31	233.31	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-454B	50	100	0	83.23	233.23	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-327/333/330	50	100	0	83.23	233.23	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-433	50	100	0	82.92	232.92	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-171	50	100	0	82.68	232.68	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-600	50	100	0	82.66	232.66	Yes	Yes	$1,507,825	0	$0	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard Station	Berm-364b/364c	50	100	0	82.6	232.60	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-381/382	50	100	0	82.47	232.47	Yes	Yes	$1,116,017	0	$0	
U.S. Coast Guard Station	Berm-449	50	100	0	82.4	232.40	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-170	50	100	0	82.37	232.37	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-451	50	100	0	82.29	232.29	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-467	50	100	0	82.19	232.19	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-445	50	100	0	81.98	231.98	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-438	50	100	0	81.67	231.67	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-368	50	100	0	81.61	231.61	Yes	Yes	$1,116,017	0	$0	
U.S. Coast Guard Station	Berm-434	50	100	0	81.35	231.35	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-365	50	100	0	81.28	231.28	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-610	50	100	0	81.25	231.25	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-456	50	100	0	80.39	230.39	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-323	50	100	0	80.39	230.39	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-447	50	100	0	80.1	230.10	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-440	50	100	0	79.87	229.87	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-180	50	100	0	78.31	228.31	Yes	Yes	$1,116,017	0	$0	
U.S. Coast Guard Station	LFCap-251	50	100	0	77.41	227.41	Yes	Yes	$686,193	0	$0	
U.S. Coast Guard Station	LFCap-61	50	100	0	77.41	227.41	Yes	Yes	$686,193	0	$0	
U.S. Coast Guard Station	UOW-CLDS	50	100	0	75.43	225.43	No	Yes	$790,171	0	$0	
U.S. Coast Guard Station	UOW-WLDS	50	100	0	75.43	225.43	No	Yes	$790,171	0	$0	
U.S. Coast Guard Station	Berm-Grove Beach	50	100	0	75	225.00	No	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Berm-620	50	100	0	75	225.00	No	Yes	$1,116,017	0	$0	
U.S. Coast Guard Station	IslandCDF-N_cap	50	100	0	73.28	223.28	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	IslandCDF-N_bse	50	100	0	73.28	223.28	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	IslandCDF-P_cap	50	100	0	72.76	222.76	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	IslandCDF-P_bse	50	100	0	72.76	222.76	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-I_cap	50	100	0	71.25	221.25	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-I_bse	50	100	0	71.25	221.25	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	IslandCDF-L_bse	50	100	0	70.94	220.94	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	IslandCDF-L_cap	50	100	0	70.94	220.94	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-D_bse	50	100	0	70.36	220.36	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-D_cap	50	100	0	70.36	220.36	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-O_bse	50	100	0	69.95	219.95	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-O_cap	50	100	0	69.95	219.95	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	IslandCDF-B_bse	50	100	0	68.28	218.28	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	IslandCDF-B_cap	50	100	0	68.28	218.28	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-K_cap	50	100	0	67.68	217.68	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-K_bse	50	100	0	67.68	217.68	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-A_cap	50	100	0	67.58	217.58	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-A_bse	50	100	0	67.58	217.58	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-C_cap	50	100	0	66.9	216.90	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-C_bse	50	100	0	66.9	216.90	Yes	Yes	$868,468	0	$0	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard Station	ShoreCDF-J_cap	50	100	0	66.72	216.72	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-J_bse	50	100	0	66.72	216.72	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	BF-422/423	50	100	0	62.03	212.03	Yes	Yes	$686,193	0	$0	
U.S. Coast Guard Station	Habitat-429	50	100	0	61.33	211.33	Yes	Yes	$686,193	0	$0	
U.S. Coast Guard Station	Habitat-427	50	100	0	59.77	209.77	Yes	Yes	$686,193	0	$0	
U.S. Coast Guard Station	ShoreCDF-F_bse	50	100	0	59.43	209.43	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	ShoreCDF-F_cap	50	100	0	59.43	209.43	Yes	Yes	$868,468	0	$0	
U.S. Coast Guard Station	Beach-76	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-474	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-467	50	100	-1	73.83	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-68	50	100	-1	73.2	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-449	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-454 West	50	100	-1	73.2	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-344	50	100	-1	74.53	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-610	50	100	-1	70.67	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-450	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-337	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-348	50	100	-1	73.83	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-339	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-384	50	100	-1	72.89	-1.00	Yes	Yes	$1,116,017	0	$0	
U.S. Coast Guard Station	Beach-171	50	100	-1	72.89	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-180	50	100	-1	72.89	-1.00	Yes	Yes	$1,116,017	0	$0	
U.S. Coast Guard Station	Beach-438	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-63	50	100	-1	73.2	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-345	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-367	50	100	-1	73.59	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-454 East	50	100	-1	70.45	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-330	50	100	-1	74.53	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-456	50	100	-1	72.89	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-442	50	100	-1	74.53	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-433	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-437	50	100	-1	72.27	-1.00	Yes	Yes	$1,116,017	0	$0	
U.S. Coast Guard Station	Beach-181	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-325	50	100	-1	74.53	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-455/82	50	100	-1	70.43	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-365	50	100	-1	73.83	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-64	50	100	-1	73.2	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-451	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-170	50	100	-1	72.89	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-332	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-468	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-440	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-67	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	

Table G-7. Screening Results for Project and Alternative Pairings.

		Scores					Benefits					
Sub-Project Name	Screening ID	Suit-ability	Capacity	Distance	Impacts	Total	Environ-mental	Socio-economic	Cost	Average Event Volume (CY)	Cost/CY	Cost Qualifier
U.S. Coast Guard Station	Beach-382	50	100	-1	72.27	-1.00	Yes	Yes	$1,116,017	0	$0	
U.S. Coast Guard Station	Beach-381	50	100	-1	72.66	-1.00	Yes	Yes	$1,116,017	0	$0	
U.S. Coast Guard Station	Beach-111	50	100	-1	73.2	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-173	50	100	-1	72.89	-1.00	Yes	Yes	$857,713	0	$0	
U.S. Coast Guard Station	Beach-480	50	100	-1	72.89	-1.00	Yes	Yes	$1,116,017	0	$0	
U.S. Coast Guard Station	Beach-441	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-323	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-459	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-457	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-343	50	100	-1	73.83	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-364	50	100	-1	73.83	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-331	50	100	-1	74.53	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-320	50	100	-1	73.83	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-368	50	100	-1	72.89	-1.00	Yes	Yes	$1,116,017	0	$0	
U.S. Coast Guard Station	Beach-79	50	100	-1	73.2	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-333	50	100	-1	74.53	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-444	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-329	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-434	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-447	50	100	-1	74.53	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-445	50	100	-1	73.2	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-327	50	100	-1	74.53	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-600	50	100	-1	70.67	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-436	50	100	-1	74.14	-1.00	Yes	Yes	$1,507,825	0	$0	
U.S. Coast Guard Station	Beach-620	50	100	-1	75	-1.00	No	Yes	$1,116,017	0	$0	

Table G-8. List of Alternative Sites by Dredging Center for Consideration by Non-Federal Dredging Proponents.

Dredging Center	Town	Screening ID	Alternative Site Name
Bridgeport Area	Bridgeport	CAD-H_bse	Bridgeport Southeast
Bridgeport Area	Bridgeport	CAD-H_cap	Bridgeport Southeast
Bridgeport Area	Bridgeport	CAD-G_bse	Bridgeport West
Bridgeport Area	Bridgeport	CAD-G_cap	Bridgeport West
Bridgeport Area	Bridgeport	ShoreCDF-I_bse	Bridgeport Yellow Mill Channel
Bridgeport Area	Bridgeport	ShoreCDF-I_cap	Bridgeport Yellow Mill Channel
Bridgeport Area	Bridgeport	N/A	O&G Industries, Inc.
Bridgeport Area	Bridgeport	Beach-323	Seaside Beach
Bridgeport Area	Bridgeport	Berm-323	Seaside Beach
Bridgeport Area	Fairfield	Beach-436	Jennings Beach (FSPP)
Bridgeport Area	Fairfield	ShoreCDF-F_bse	Penfield Reef
Bridgeport Area	Fairfield	ShoreCDF-F_cap	Penfield Reef
Bridgeport Area	Fairfield	Berm-434	Sasco Hill Beach
Bridgeport Area	Fairfield	Beach-434	Sasco Hill Beach (FSPP)
Bridgeport Area	Fairfield	Beach-474	South Pine Creek Beach
Bridgeport Area	Fairfield	Berm-433	Southport Beach
Bridgeport Area	Fairfield	Beach-433	Southport Beach (FSPP)
Clinton/Westbrook Area	Clinton	ShoreCDF-O_bse	Clinton Harbor
Clinton/Westbrook Area	Clinton	ShoreCDF-O_cap	Clinton Harbor
Clinton/Westbrook Area	Clinton	Beach-343	Clinton Town Beach
Clinton/Westbrook Area	Clinton	IslandCDF-P_bse	Duck Island Roads
Clinton/Westbrook Area	Clinton	IslandCDF-P_cap	Duck Island Roads
Clinton/Westbrook Area	Westbrook	Berm-Grove Beach	Grove Beach
Clinton/Westbrook Area	Westbrook	Beach-344	Middle Beach
Clinton/Westbrook Area	Westbrook	Beach-345	West Beach
Connecticut River	East Lyme	Beach-367	Rocky Neck State Park
Connecticut River	East Lyme	Berm-367	Rocky Neck State Park
Connecticut River	Old Lyme	Beach-348	White Sands Beach
Fishers Island Sound/Little Narragansett Bay Area	Stonington	Beach-480	duBois Beach
Fishers Island Sound/Little Narragansett Bay Area	Westerly	N/A	Atlantic Beach Park
Fishers Island Sound/Little Narragansett Bay Area	Westerly	Beach-384	Misquamicut State Beach
Fishers Island Sound/Little Narragansett Bay Area	Westerly	Berm-384	Misquamicut State Beach
Fishers Island Sound/Little Narragansett Bay Area	Westerly	Beach-382	Napatree Point Beach
Fishers Island Sound/Little Narragansett Bay Area	Westerly	Beach-620	Sandy Point Beach (Westerly)
Fishers Island Sound/Little Narragansett Bay Area	Westerly	Berm-620	Sandy Point Beach (Westerly)
Fishers Island Sound/Little Narragansett Bay Area	Westerly	Beach-381	Watch Hill Beach

Table G-8. List of Alternative Sites by Dredging Center for Consideration by Non-Federal Dredging Proponents.

Dredging Center	Town	Screening ID	Alternative Site Name
Fishers Island Sound/Little Narragansett Bay Area	Westerly	Berm-381/382	Watch Hill Beach & Napatree Point Beach
Fishers Island Sound/Little Narragansett Bay Area	Westerly	N/A	Westerly Town Beach
Fishers Island Sound/Little Narragansett Bay Area	Westerly	N/A	Wuskenau (New Town) Beach
Great & Little Peconic Bays	Cutchogue	N/A	Corazzini Asphalt Inc.
Great & Little Peconic Bays	East Quogue	N/A	East Coast Mines
Great & Little Peconic Bays	Mattituck	Berm-455/82	Mattituck Harbor 111 & Bailie's Beach
Great & Little Peconic Bays	Riverhead	N/A	Iron Pier Beach
Great & Little Peconic Bays	Riverhead	Beach-445	Jamesport State Park
Great & Little Peconic Bays	Riverhead	Berm-445	Jamesport State Park
Great & Little Peconic Bays	Riverhead	N/A	Reeves Beach
Great & Little Peconic Bays	Riverhead	N/A	South Jamesport Beach
Great & Little Peconic Bays	Riverhead	N/A	Wading River Beach
Greenwich Area	Greenwich	IslandCDF-B_bse	Greenwich Captain Harbor
Greenwich Area	Greenwich	IslandCDF-B_cap	Greenwich Captain Harbor
Guilford/Branford Area	Guilford	IslandCDF-N_bse	Falkner Island
Guilford/Branford Area	Guilford	IslandCDF-N_cap	Falkner Island
Guilford/Branford Area	Guilford	Beach-339	Jacobs Beach
Guilford/Branford Area	Madison	Beach-457	East Wharf Beach
Guilford/Branford Area	Madison	N/A	East Wharf Beach
Guilford/Branford Area	Madison	Berm-457	East Wharf Beach
Guilford/Branford Area	Madison	Beach-365	Hammonasset State Park
Guilford/Branford Area	Madison	Berm-365	Hammonasset State Park
Guilford/Branford Area	Madison	N/A	Surf Club Beach
Guilford/Branford Area	Madison	N/A	West Wharf Beach
Hempstead Harbor Area	Glen Cove	N/A	Crescent Beach
Hempstead Harbor Area	Glen Cove	N/A	Morgan Park Beach
Hempstead Harbor Area	Glen Cove	N/A	Nassau Ready Mix Corp.
Hempstead Harbor Area	Glen Cove	N/A	Prybil Beach
Hempstead Harbor Area	Glen Cove	N/A	Rason Asphalt Inc. - Glen Cove
Housatonic River/Milford Area	Milford	Beach-444	Gulf Beach
Housatonic River/Milford Area	Milford	ShoreCDF-K_bse	Milford Harbor
Housatonic River/Milford Area	Milford	ShoreCDF-K_cap	Milford Harbor
Housatonic River/Milford Area	Milford	N/A	O&G Industries, Inc.
Housatonic River/Milford Area	Milford	Beach-364	Silver Sands State Park (FSPP)
Housatonic River/Milford Area	Milford	Berm-364b/364c	Silver Sands State Park (west side)

Table G-8. List of Alternative Sites by Dredging Center for Consideration by Non-Federal Dredging Proponents.

Dredging Center	Town	Screening ID	Alternative Site Name
Housatonic River/Milford Area	Milford	Beach-451	Woodmont Shore Beach
Housatonic River/Milford Area	Milford	Berm-451	Woodmont Shore Beach
Housatonic River/Milford Area	Stratford	Beach-467	Long Beach
Housatonic River/Milford Area	Stratford	Berm-467	Long Beach
Housatonic River/Milford Area	Stratford	Beach-468	Russian Beach
Housatonic River/Milford Area	Stratford	Beach-450	Short Beach
Housatonic River/Milford Area	Stratford	ShoreCDF-J_bse	Stratford Point
Housatonic River/Milford Area	Stratford	ShoreCDF-J_cap	Stratford Point
Huntington & Northport Bay Area	Huntington	Beach-63	Asharoken Beach
Huntington & Northport Bay Area	Huntington	N/A	Asharoken Beach
Huntington & Northport Bay Area	Huntington	Berm-63	Asharoken Beach
Huntington & Northport Bay Area	Huntington	N/A	Centerport Beach
Huntington & Northport Bay Area	Huntington	N/A	Crabmeadow Beach
Huntington & Northport Bay Area	Huntington	Beach-67	Crescent Beach (Huntington)
Huntington & Northport Bay Area	Huntington	N/A	Fleet's Cove Beach
Huntington & Northport Bay Area	Huntington	Beach-68	Gold Star Battalion Beach
Huntington & Northport Bay Area	Huntington	Beach-64	Hobart Beach
Huntington & Northport Bay Area	Huntington	N/A	Hobart Beach
Huntington & Northport Bay Area	Huntington	N/A	West Neck Beach
Mamaroneck Area/New Rochelle	Mamaroneck	N/A	Harbor Island Beach
Mamaroneck Area/New Rochelle	New Rochelle	N/A	Glen Island Beach
Mamaroneck Area/New Rochelle	New Rochelle	N/A	Hudson Park Beach
Montauk Area	East Hampton	N/A	Alberts Landing Beach
Montauk Area	East Hampton	N/A	Atlantic Avenue Beach
Montauk Area	East Hampton	N/A	Beach Lane Beach
Montauk Area	East Hampton	N/A	Bistrian Gravel Corp.

Table G-8. List of Alternative Sites by Dredging Center for Consideration by Non-Federal Dredging Proponents.

Dredging Center	Town	Screening ID	Alternative Site Name
Montauk Area	East Hampton	N/A	Bistrian Materials, Inc.
Montauk Area	East Hampton	Beach-178	Camp Hero State Park
Montauk Area	East Hampton	Berm-178	Camp Hero State Park
Montauk Area	East Hampton	N/A	Ditch Plain Beach
Montauk Area	East Hampton	N/A	Ditch Plain Beach
Montauk Area	East Hampton	N/A	Egypt Beach
Montauk Area	East Hampton	N/A	Essex Street Beach
Montauk Area	East Hampton	N/A	Georgica Beach
Montauk Area	East Hampton	Beach-121	Gin Beach
Montauk Area	East Hampton	Beach-173	Hither Hills State Park
Montauk Area	East Hampton	Berm-173	Hither Hills State Park
Montauk Area	East Hampton	N/A	Indian Wells Beach
Montauk Area	East Hampton	N/A	Kirk Park Beach
Montauk Area	East Hampton	Beach-453	Lake Montauk Harbor
Montauk Area	East Hampton	Berm-453	Lake Montauk Harbor
Montauk Area	East Hampton	N/A	Louse Point Town Beach
Montauk Area	East Hampton	N/A	Main Beach
Montauk Area	East Hampton	Beach-179	Montauk Point State Park
Montauk Area	East Hampton	Berm-179	Montauk Point State Park
Montauk Area	East Hampton	Beach-177	Shadmoor State Park
Montauk Area	East Hampton	Berm-177	Shadmoor State Park
Montauk Area	East Hampton	Beach-446	Theodore Roosevelt County Park
Montauk Area	East Hampton	Berm-121/446	Theodore Roosevelt County Park & Gin Beach
Montauk Area	East Hampton	N/A	Two Mile Hollow Beach
Montauk Area	East Hampton	N/A	Wiborg Beach
Montauk Area	Montauk	N/A	Bistrian Materials, Inc.
N/A	Beacon Falls	N/A	O&G Industries, Inc.
N/A	Danbury	N/A	O&G Industries, Inc.
N/A	Dayville	N/A	Killingly Asphalt Products, LLC (Hot-Mix Asphalt Plant)
N/A	Harwinton	N/A	O&G Industries, Inc.
N/A	Inwood	N/A	ADA Construction Corp
N/A	Inwood	N/A	South Island Industries Inc.
N/A	Lindenhurst	N/A	Nicolia Ready Mix Concrete
N/A	Narragansett	N/A	Town Beach
N/A	New Milford	N/A	O&G Industries, Inc.
N/A	Oceanside	N/A	JP Equipment Contracting
N/A	Queens	N/A	Rockaway Beach
N/A	South Kingstown	N/A	Town Beach
N/A	Southampton	N/A	Lashley Beach
N/A	Southampton	N/A	Quogue Village Beach
N/A	Southampton	N/A	Rogers Beach
N/A	Southbury	N/A	O&G Industries, Inc.

Table G-8. List of Alternative Sites by Dredging Center for Consideration by Non-Federal Dredging Proponents.

Dredging Center	Town	Screening ID	Alternative Site Name
N/A	Speonk	N/A	Hampton Sand Corp.
N/A	Waterbury	N/A	O&G Industries, Inc.
N/A	Yaphank	N/A	DeChiaro Associates Corp. (Lot 2 & 2A)
N/A	Yaphank	N/A	DeChiaro Associates Corp. (Lot 4 & 4A)
New Haven Area	New Haven	Beach-459	Fort Nathan Hale Park
New Haven Area	New Haven	Beach-337	Lighthouse Point Park Beach
New Haven Area	New Haven	Berm-337	Lighthouse Point Park Beach
New Haven Area	New Haven	CAD-M_bse	Morris Cove
New Haven Area	New Haven	CAD-M_cap	Morris Cove
New Haven Area	New Haven	IslandCDF-L_bse	New Haven Breakwaters
New Haven Area	New Haven	IslandCDF-L_cap	New Haven Breakwaters
New Haven Area	West Haven	Beach-325	Altschuler Beach
New Haven Area	West Haven	Beach-327	Bradley Point Park
New Haven Area	West Haven	Berm-327/333/330	Bradley Point Park, Savin Rock & Oak Street Beach
New Haven Area	West Haven	Beach-329	Morse Beach
New Haven Area	West Haven	Beach-330	Oak Street Beach
New Haven Area	West Haven	Beach-331	Peck Beach
New Haven Area	West Haven	Beach-447	Prospect Beach
New Haven Area	West Haven	Berm-447	Prospect Beach
New Haven Area	West Haven	Beach-332	Sandy Point (West Haven)
New Haven Area	West Haven	Beach-333	Savin Rock
New London Area	Groton	Beach-368	Bluff Point State Park
New London Area	Groton	Berm-368	Bluff Point State Park
New London Area	Groton	IslandCDF-R_bse	Groton Black Ledge
New London Area	Groton	IslandCDF-R_cap	Groton Black Ledge
Niantic Area	Waterford	N/A	Jordan Cove Beach
Niantic Area	Waterford	N/A	Kiddie Beach
Niantic Area	Waterford	N/A	Pleasure Beach
Niantic Area	Waterford	IslandCDF-Q_bse	Twotree Island
Niantic Area	Waterford	IslandCDF-Q_cap	Twotree Island
Niantic Area	Waterford	N/A	Waterford Beach Park
Norwalk Area	Norwalk	Beach-320	Calf Pasture Beach
Norwalk Area	Norwalk	Berm-320	Calf Pasture Beach
Norwalk Area	Norwalk	ShoreCDF-D_bse	Norwalk Outer Harbor Islands - Containment
Norwalk Area	Norwalk	ShoreCDF-D_cap	Norwalk Outer Harbor Islands - Containment
Norwalk Area	Norwalk	ShoreCDF-C_bse	Norwalk Outer Harbor Islands - Marsh
Norwalk Area	Norwalk	ShoreCDF-C_cap	Norwalk Outer Harbor Islands - Marsh
Norwalk Area	Norwalk	N/A	O&G Industries, Inc.

Table G-8. List of Alternative Sites by Dredging Center for Consideration by Non-Federal Dredging Proponents.

Dredging Center	Town	Screening ID	Alternative Site Name
Norwalk Area	Westport	Beach-438	Burial Hill Beach
Norwalk Area	Westport	Berm-438	Burial Hill Beach
Norwalk Area	Westport	Beach-440	Compo Beach
Norwalk Area	Westport	Berm-440	Compo Beach
Norwalk Area	Westport	COW-E_bse	Sherwood Island Borrow Pit
Norwalk Area	Westport	COW-E_cap	Sherwood Island Borrow Pit
Norwalk Area	Westport	Beach-449	Sherwood Island State Park
Norwalk Area	Westport	Berm-449	Sherwood Island State Park
Oyster Bay/Cold Spring Harbor Area	Oyster Bay	Beach-456	Bayville
Oyster Bay/Cold Spring Harbor Area	Oyster Bay	Berm-456	Bayville
Port Chester/Rye Area	Rye	N/A	Oakland Beach / Rye Town Beach
Port Chester/Rye Area	Rye	N/A	Playland Beach
Shelter Island/Gardiner's Bay Are	East Hampton	N/A	Maidstone Park Beach
Shelter Island/Gardiner's Bay Area	Orient	Beach-180	Orient Beach State Park
Shelter Island/Gardiner's Bay Area	Orient	Berm-180	Orient Beach State Park
Shelter Island/Gardiner's Bay Area	Orient	Beach-437	Plum Island
Shelter Island/Gardiner's Bay Area	Shelter Island	Beach-111	Crescent Beach (Shelter Island)
Shelter Island/Gardiner's Bay Area	Southold	Beach-79	Gull Pond Beach (Norman E. Klipp Park)
Shelter Island/Gardiner's Bay Area	Southold	Beach-454 West	Hashamomuck Cove - Kenney's Beach
Shelter Island/Gardiner's Bay Area	Southold	Beach-454 East	Hashamomuck Cove - County Road 48
Shelter Island/Gardiner's Bay Area	Southold	Berm-454A	Hashamomuck Cove - County Road 48
Shelter Island/Gardiner's Bay Area	Southold	Berm-454B	Hashamomuck Cove - Kenney's Beach
Shelter Island/Gardiner's Bay Area	Southold	N/A	Kenny's Beach
Shelter Island/Gardiner's Bay Area	Southold	N/A	McCabe's Beach
Shelter Island/Gardiner's Bay Area	Southold	N/A	Nassau Point Beach
Shelter Island/Gardiner's Bay Area	Southold	N/A	Pequash Avenue Beach (Fleets Neck Beach)
Shelter Island/Gardiner's Bay Area	Southold	Beach-76	Town Beach
Shelter Island/Gardiner's Bay Area	Southold	N/A	Town Beach

Table G-8. List of Alternative Sites by Dredging Center for Consideration by Non-Federal Dredging Proponents.

Dredging Center	Town	Screening ID	Alternative Site Name
Shelter Island/Gardiner's Bay Area	Southold	N/A	Truman's Beach
Smithtown Bay/Stony Brook Area	Kings Park	N/A	D'Agostino Brothers Enterprises, Inc.
Smithtown Bay/Stony Brook Area	Kings Park	N/A	Izzo Brothers Material, Inc.
Smithtown Bay/Stony Brook Area	Kings Park	N/A	Kings Park Bluff Beach
Smithtown Bay/Stony Brook Area	Kings Park	Beach-170	Sunken Meadow State Park
Smithtown Bay/Stony Brook Area	Kings Park	Berm-170	Sunken Meadow State Park
Smithtown Bay/Stony Brook Area	Smithtown	N/A	Callahan's Beach
Smithtown Bay/Stony Brook Area	Smithtown	N/A	Long Beach
Smithtown Bay/Stony Brook Area	Smithtown	N/A	Schubert's Beach
Smithtown Bay/Stony Brook Area	Smithtown	N/A	Short Beach
Stamford Area	Stamford	Beach-441	Cove Island Beach
Stamford Area	Stamford	Berm-441	Cove Island Beach
Stamford Area	Stamford	Beach-442	Cummings Park Beaches
Stamford Area	Stamford	N/A	O&G Industries, Inc.
Stamford Area	Stamford	N/A	O&G Industries, Inc.

LONG ISLAND SOUND

FINAL
DREDGED MATERIAL MANAGEMENT PLAN
AND FINAL PROGRAMMATIC
ENVIRONMENTAL IMPACT STATEMENT

APPENDIX H

BENEFICIAL USE AND SEDIMENT REMEDIATION/TREATMENT TECHNOLOGIES IN THE PORT OF NEW YORK AND NEW JERSEY

APPENDIX H

Beneficial Use and Sediment Remediation/Treatment Technologies in the Port of New York and New Jersey

As emphasized throughout this report, maintenance dredging and deepening is necessary to maintain the Nation's ports and waterways. Also well documented is the on-going challenge to identify and create storage capacity or placement sites for the amount of material anticipated to be dredged. Further adding to the challenge is the variety of sediments dredged and the contaminants often found in this material.

In and around the Port of New York and New Jersey, the closing of the Mud Dump site and lower standards for contaminant levels, which are suitable for ocean disposal, essentially eliminated ocean disposal of dredged material. Previously, the Mud Dump had been the open water disposal site used for most, if not all dredged material. This 'perfect storm' of restriction and ever growing need for dredging, particularly with the planned deepening of the harbor and its potential to generate a significant amount of dredged material requiring disposal resulted in the Federal government, as well as the States of New Jersey and New York and the City of New York to rethink and re-design their dredged management programs (Maher et al 2013; Stern 2012).

Decontamination Technology Demonstrations

Authorized and appropriated through three Water Resources Development Act, the US Environmental Protection Agency (Region 2), the US Army Corps of Engineers, New York District, and the Department of Energy, Brookhaven National Laboratory, established and funded a program to "demonstrate decontamination of at least 500,000 cy per year of dredged material from the Harbor with the creation of marketable beneficial use end products." A variety of decontamination strategies were tested for their ability to meet the program objectives (Stern et al 2004; Stern 2012).

Some of the decontamination technologies examined under this program included:

Manufactured Topsoil

To create manufactured topsoil, processed dredged material is amended with organic matter, such as wood chips, yard waste, animal manure or other biosolids and composted. The resulting material can be used to supply organic content and nutrients to depleted agricultural soils. Dredged material with fine sediments processed in this way, may also be used to reduce the percolation rate of rainwater promoting soil moisture (IRC 2007).

In 2005 and 2006, approximately 205,000 cubic meters of dredged material removed from Naval Weapons Station Earle (NWSE) located along Raritan Bay in New Jersey as part of maintenance dredging of the NWSE wharf. This material was transported to the Shirley Plantation confined disposal facility located in Virginia. The Shirley Plantation site was

developed between 2000 and 2005 as a pilot project to determine if dredged material could be used to create agricultural soil using material dredged as part of the replacement of the Woodrow Wilson Bridge (Baker et al 2007; Haus 2011; Weaneck Land LLP 2012).

After dewatering for several years, common sunflower and German millet were over seeded but the salt levels in the soil stunted or killed all of the plants. No vegetation was present on the site before 2009, with the exception of a few clumps of salt-tolerant species. After 2009, a crop of winter wheat was established. The project also reported no negative environmental impact as a result of the placement of the saline dredged materials into the area (Haus 2011).

In 2010, 70,000 cy of saline dredge material from the US Navy Cheatham Annex in Yorktown, Virginia, was placed in the same area as the NWSE material. The Cheatham Annex material was lower in salt and had no contaminants. The purpose of this placement was to fill in low wet areas in the NWSE area to reestablish wheat production. By 2012, the site was dried and low enough in salts for winter wheat production. Some of the material from the NSWE cell has been used and is awaiting for its next project for full agricultural production (Weanack Land LLP).

Cement Filler

Dredged material can be substituted as raw material for manufacturing Portland cement. Proprietary commercial processes, such as Cement-Lock/Ecomelt, have been developed to create a product that can be ground to a powder and mixed with Portland cement (up to approximately 40%) as a filler (IRC:2007:13; Mensinger 2008). In 2005 a demonstration project sponsored by the New Jersey Department of Transportation, Office of Maritime Resources (NJDOT/OMR) was initiated to determine if decontamination processing plant could function to process dredged material into a product that could be used at a cost that was competitive with other management options (upland placement, CDF, etc) for dredged material. A demonstration plant at the International Matex Tank Terminal (IMTT) in Bayonne, using dredged material from Newark Bay successfully created Ecomelt and EcoAggMat, which contained low levels of contaminants. A second phase was added to the project to allow for plant modifications to improve performance and conduct additional tests using more highly contaminated sediment dredged from the Passaic River (Mensinger 2008).

The additional tests suffered from equipment and weather-related issues that suggest further and more extensive plant modifications. The resulting Ecomelt was blended into Portland cement to create a blended concrete that was used in a general construction demonstration project at Montclair State University. Approximately one ton of Passaic River sediment Ecomelt was used as a partial replacement for Portland cement that was then used successfully in concrete for a length of sidewalk, measuring 165 feet long and six feet wide, in a high-use area of the University's campus (Mensinger 2008). The remaining Ecomelt was used as geotechnical fill at the ProLogis Elizabeth Seaport Business Park in Elizabeth New Jersey (Mensinger 2008)

The Passaic River Coalition, a regional environmental group with a focus on the Passaic River Basin, received a grant to evaluate the technologies either being tested in other areas in the Harbor and for the Lower Passaic River, with a special consideration for the effect on dioxin

contaminated sediments and how these technologies might be applied to the Diamond Alkali Superfund site located on the Lower Passaic River. The reviewers noted that the process seemed to be able to remove PCBs and dioxin from the final product. They also noted the final product when mixed with the Portland cement resulted in a high quality concrete paving as illustrated by the 'high quality concrete paving' that was constructed at Montclair University (Kruger and Filippone 2012). Additionally, the National Advisory Council for Environmental Policy and Technology (NACEPT), an advisory board established by the USEPA, supports the use of the Cement-Lock technology as the process to be used as part of the cleanup of the Lower Passaic River and Newark Bay (NACEPT 2012).

Columbia University sponsored research has developed a treatment method for the preparation of dredged material as an aggregate replacement in concrete. The goal of the research was to develop an acceptable mortar that used large quantities of dredged material in its production. Testing shows the detoxification method developed as part of this research prevents contaminants from leaching out and may encapsulate organic compounds, including PCBs. Also, the developed technique could be implemented on the dredging barge, that may help reduce costs (Milrath et al 2001:i-ii). When added to concrete, the Columbia University research shows that the concrete products exhibited an improvement of certain properties (Milrath et all 2001:29).

Georemediation Technology

Under the sponsorship of NJDOT/OMR, BEM Systems, Inc., conducted a project to evaluate the efficacy of geo-remediation technology to produce material for fill, cover, and/or capping projects from dredged materials. The proprietary process requires the mixture of additives to the sediment. During an incubation period, the organic contaminants are oxidized and the resulting material can be used as fill for remediation or capping (NJDOT/OMR 2015b). The results of the tests were inconclusive. Reductions in some of the organic contaminants did occur but reduction in dioxin and other contaminants were 'erratic and unpredictable'. The resulting product did not meet the New Jersey Residential Direct Contact Soil Cleanup Criteria nor did it meet the criteria for use as a landfill liner, cap or daily cover or fill. This process did not go forward to a demonstration project (BEM Systems, Inc. 2004).

Sediment Washing Technology

In 2005 and 2006, BioGenesis Enterprises completed a pilot project and demonstration scale tests of their sediment washing technology at the Bayshore Recycling Facility in Keasbey, New Jersey. The technique involves mixing violently a slurry of dredged material and surfactants then extracting the mineral from the water/organic faction of the sediment. The clean aggregate that is left can be used as a base for topsoil manufacture. In its testing, BioGenesis treated about 15,000 cy of sediment from the Raritan River, Arthur Kill and Passaic River, in the vicinity of the Diamond Alkali Superfund site, and was used in the remediation of a brownfields site. The decontamination successfully showed this technology has the potential to process dredged material. When blended with topsoil it met the standards for residential use in New Jersey. Some of the material was provided to a build a demonstration project at Montclair State University and to Connecticut. The projected cost based on a processing rate of 250,000 cy was anticipated to be competitive with other dredged material management costs (NJDOT/OMR 2015b; BioGenesis 2009).

The Passaic River Coalition evaluated the BioGenesis sediment washing project in 2012. Based on their assessment, the reviewers determined that this treatment is not appropriate for sediments contaminated with PCBs or dioxin. Their concern is for the PCB contaminants which would be present in the waste water that would be sent to the sewage treatment plant where they would contaminate the treated water. In addition, the Coalition was concerned that the dioxin would be present in the sewage treatment plant water as well as the manufactured soil (Kruger and Filippone 2012).

Thermal Destruction for Lightweight Aggregate

Upcycle Associates completed a pilot project to manufacture lightweight aggregate from dredged material. After mixing the dredged material with shale fines, the material is pelletized and heated in a kiln, where the organics are vaporized. The remaining material is inert suitable for use in concrete applications as lightweight aggregate. The pilot program indicated the material produced did not contain detectable organic pollutants and no leachable metals, thereby meeting the goals of the program (Upcycle Associates, 2004; NJDOT/OMR 2015b).

Chemical Oxidation

Based on the success of a pilot project to process and decontaminate about 650 gallons of dredged material, a demonstration project was initiated in 2005 to test the process' effectiveness on a commercial scale. The process used consisted of chemical oxidation through the addition of potassium permanganate to reduce contaminants. The potassium permanganate is added in an aqueous solution followed by mechanical dewatering with the addition of cement for solidification and stabilization. The results indicated that contaminant reduction could be achieved through the addition of chemicals and use the resultant material, with the addition of cement, as fill and/or capping material. Furthermore the economic analysis associated with the demonstration project indicated the range of processing costs (based on 2005 dollars) centered on the target cost of $35 per cubic yard (HREG 2005).

PROPAT additive for Fill Material

As part of the dredging of the Claremont Channel in the Harbor, a demonstration project was conducted to evaluate the use of PROPAT as an additive to condition dredged material for use as fill. Propat is manufactured from the non-metallic materials recovered from scrap cars and other objects, and combined with a proprietary mix of additives. The use of PROPAT has been approved as interim daily landfill cover and as 'cushion material' above the liner at landfills in New Jersey (Hart Crowser 2005).

Although a number of decontamination technologies were tested and some indicated potential, none are used on a regular basis or have continued to become a measure that is regularly used to decontaminate sediments in the New York-New Jersey Harbor. The one exception is the Cement-Lock/Ecomelt technology, which may continue to be explored to remediate the sediments removed from the Lower Passaic River Superfund sites. The alternative in use is the use of dredged material to cap and fill brownfields, landfills and other sites.

Associated with the exploration for new dredged material decontamination technologies were changes to legislation, particularly in New Jersey, to supported dredged material placement and beneficial use (Maher et al 2013). Currently, all of the Harbor's dredged material is beneficially used either at the Historic Area Remediation Site (HARS) or one of a number of brownfields and development sites. Sand removed from Federal channels along the south shore of Long Island is placed on adjacent beaches.

Historic Area Remediation Site (HARS)

The Historic Area Remediation Site (HARS) is the site of the former Mud Dump site, which had been the area's ocean disposal site, as well as the area surrounding the Mud Dump site. Subject to strict evaluation criteria, material deemed acceptable for placement at the HARS must be suitably clean for beneficial use as capping material (Maher et al 2013). From 2009 through 2014, approximately 16,026,528 cy of material was placed at the HARS from federal, state and city projects as well as from private enterprises (USACE 2015a).

Upland Landfills, Construction or Fill Projects

The majority of the dredging in and around the Harbor, East River and lower Long Island Sound, ends up beneficially used in one of a number of sites that require amended and unamended dredged material for permanent and daily landfill covers, capping of brownfields prior to development. Between 2009 and 2014, approximately 7,377,788 cy of dredged material were placed in one of 32 sites. Starting January 2015, the Corps has identified a total of 12 sites for upland disposal, including two mine sites in Pennsylvania and the Tire Pond located outside Hartford, Connecticut (USACE 2015c and d).

It is estimated that the remaining available capacity of the open sites in New Jersey is approximately 1,277,364 cy. The available capacity at the two Pennsylvania mine is estimated in the tens of millions of cubic yard and a site in New York with several million cubic yards (Table H-1). Dredged material from the harbor and other areas that cannot be placed at one of the open sites have been transported Pennsylvania for disposal at one of the mine sites. The cost of transportation from the New York-New Jersey metropolitan area makes this an expensive option for all material, except that which cannot be used at any of the existing sites (USACE 2015c).

The New York/New Jersey Harbor Regional Dredging Team (NY/NJ RDT) and includes representatives from the Corps, the US Environmental Protection Agency, New Jersey Department of Environmental Protection, New Jersey Department of Transportation, Office of Maritime Resource the New York Department of Environmental Conservation, the New York City Economic Development Corporation, and the New York Department of State. The team meets regularly to maintain the list of available sites, the anticipated remaining capacity of each site, ongoing and upcoming dredging projects and their anticipated amount of dredged material. It is through this coordination that the agencies with responsibility for dredging or permitting dredging projects can manage the balance between placement options and amount

of material being dredged. To this, the team looks to add other opportunities for beneficial use.

Richard Stockton College, Coastal Research Center, working in partnership with Ocean Coastal Consultants, Inc., and the NJDOT/OMR, has developed a "study program" to look at dredging project and dredged material placement with the overall objective of turning different types of dredge material into a commodity. The program consists of three projects: 1) a GIS database of dredged material disposal facilities, the characterization of dredged material holdings, estimated quantity, use history, and ownership; 2) characterization of the bay waters through sediment distribution mapping that will note areas that need dredging and characterize the materials to be excavated; and 3) spatial data analysis and modeling to identify potential sites for processing centers and prioritize maintenance dredging activities (Richard Stockton College of New Jersey).

Table H-1
Active Upland Dredged Material Placement Sites with Estimated Volume Placed and Estimated Remaining Capacity (USACE 2015c)

Project Location/Name	Total Permitted Capacity (CY)	Total Volume Places (CY)	Estimated Remaining Capacity (CY)
New Jersey			
Koppers Coke	550,000	445,636	104,364
Bellmawr Landfill	2,345,000	2,032,605	312,395
Dupont Grasseli	1,500,000	1,179,087	320,913
NL Industries (Sayreville Seaport Assoc)	Not Available	Not Available	431,398
AHA Meadowlands Landfill	Not Available	Not Available	62,968
Lincoln Park Landfill Site	1,200,000	1,175,328	24,672
ASARCO-Perth Amboy	Not Available	Not Available	11,006
ILR Landfill	Not Available	Not Available	9,648
Total Capacity - NJ			**1,277,364**
New York			
UTEX A380 Development	Not Available	Not Available	5-7 Million
Pennsylvania			
Hazelton Mines	Not Available	Not Available	10-20 Million
Coplay Quarry	Not Available	Not Available	Not Available
Connecticut			
Tire Pond	Not Available	Not Available	<600,000

Habitat Creation, Enhancement and Restoration

HARS-approved material, primarily sand removed from Ambrose Channel and other areas, has been used to restore and reconstruct marsh islands located in Jamaica Bay, located in

southern Kings and Queens Counties, along the Atlantic Coast. Despite intense development along its shoreline, Jamaica provides habitat for a variety of fish and wildlife species and is an important stop-over for migratory birds. Analyses have indicated that nearly 1,400 acres of tidal salt marsh have been lost since the early 20th century and most recently is has been estimated that salt marsh was being lost at approximately 47 acres per year. Under Section 207 of the Corps' Continuing Authority Program, the Corps, in partnership with the Port Authority of New York and New Jersey, the New York City Department of Environmental Protection, and the New York State Department of Environmental Conservation, restored salt marsh habitat through the placement of sand from Ambrose Channel and other areas as part of the Corps' harbor deepening project being conducted in partnership with the Port Authority of New York and New Jersey (Baron 2014; USACE 2015b).

In 2006 and 2009, approximately 80 acres of marshland were restored at Elders Point East Marsh Island and Elders Point West Marsh Island. Sand was placed in existing vegetated areas and exposed mudflats to raise the islands to an elevation suitable for low marsh growth. The areas were then vegetated. Subsequently, a total of 625,000 cy of sand was placed at Yellow Bar, Rulers Bar and Black Wall and included plantings to create a variety of salt marsh habitat (Baron 2014; USACE 2015). The marsh islands are being monitored and, although they suffered some damage during Hurricane Sandy, the islands are being maintained.

Sand Placement for Coastal Storm Risk Reduction

Sand dredged as part of Operations and Maintenance (O&M) of Federal Channels along Long Island from Brooklyn to Montauk Point is typically placed along adjacent shorelines as beach nourishment. From 2009 through 2014, a total of 720,110 cubic yards (cy) of sand was dredged and placed on adjacent beaches as part of O&M work (Table X). In addition, approximately 2,751,000 cy were removed from federal channels along the South Shore of Long Island in 2013 and 2014 as part of the Corps' Flood Control and Coastal Emergencies Act, PL 84-99, emergency response to the deposition and shoaling of sand as a result of Hurricane Sandy (Table H-2). Under PL 84-99, the Corps is authorized to repair previously constructed projects, enabling both the dredging of the channels to remove excess sand and the placement of this sand on adjacent beaches for coastal storm risk reduction.

This table does not capture the permitted private dredging of marinas and other areas along the Atlantic Coast and the North Shore of Long Island. The majority of the permitted dredging includes the placement of sand on adjacent beaches.

Current practice within the Port of New York and New Jersey is to utilize the nearby open disposal sites as the most cost effective practice that has the benefit of working to create useable, developable land from former contaminated industrial sites. Along the Atlantic Coast and North Shore of Long Island, sand removed from federal channels, marinas, and other areas, is typically replaced on the adjacent beaches or behind bulkheads, a cost-effective practice with the added benefit of increasing beaches ability to withstand storms. It is likely that this will continue to be the practice in the Harbor as long as new disposal sites come on line as others reach capacity and the NY/NJ RDT continues to function to balance the various interests and needs of the Port's stakeholders. Other technologies and other alternatives have

been explored, it is likely that the pursuit of these options, as well as the development of new ones will continue as upland disposal sites are no longer available or the dredged material is not suitable for placement at these sites.

TABLE H-2
Sand Placement Totals and Locations
for Federal O&M/Emergency Dredging (USACE-NAN 2015)

Project Location/Name	Year Completed	Volume Placed (CY)	Placement Site
Operations and Maintenance Dredging			
East Rockaway Inlet	2009	285,640	Rockaway Beach
East Rockaway Inlet	2010	137,265	Rockaway Beach
East Rockaway Inlet	2012	271,505	Rockaway Beach
Mattituck Harbor	2014	13,785	Beach East of East Jetty
Lake Montauk	2014	11,915	Beach West of West Jetty
Total Operations and Maintenance		720,110	
Hurricane Sandy (PL 84.99-FCCE)			
Jamaica Bay Inlet/Rockaway Inlet Federal Navigation Channel	2013	951,000	Coney Island
East Rockaway Inlet	2014	600,000	Rockaway Beach
Fire Island Inlet	2014	1,200,00	Gilgo Beach
Total Hurricane Sandy		2,751,000	
Total Beach Placement (2009-2014)		**3,471,110**	

References

Baker, Mike, Lee Daniels, Rich Whittecar and Charles Carter
2007 "Beneficial Reuse of Dredge Materials for Agriculture and Revegetation". http://www.trb-adc60.org/downloads/1-5_Baker_DredgeReuse.pdf

Baron, Lisa
2014 Fact Sheet: Jamaica Bay Marsh Islands, Beneficial Use of Dredged Material http://www.nan.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/11241/Article/487604/fact-sheet-jamaica-bay-marsh-islands.aspx

BEM Systems, Inc.
2004 Project Update for BEM Systems, Inc, Georemediation Technology. Prepared NJ Department of Transportation, Office of Maritime Resources, Sediment Decontamination Program.

BioGenesis Washing, LLC
2009 Demonstration Testing and Full-Scale Operation of the BioGenesis Sediment Decontamination Process: Final Report.

Harbor Resource Environmental Group, Inc.
2005 Sediment Decontamination Demonstration Project: Final Report. Submitted to State of New Jersey Department of Transportation, Office of Maritime Resources.

HartCrowser
2005 Final Report PROPAT as Dredged Material Stabilizing Agent, Claremont Channel Dredging Channel Deepening Project. Prepared for Hugo Neu Schnitzer East.

Haus, Nicholas Wes
2011 Beneficial Use of Dredged Materials in Upland Environments. Thesis submitted to the faculty of the Virgnia Polytechnic Institute and State University, Master of Science, Crop and Soil Environmental Sciences.

Innovative Reuse Committee
2007 Innovative Reuse of Dredged Material: Report to the Executive Committee of Maryland's Dredged Material Management Program

Kruger, Anne L. and Ella F. Filippone
2012 *Lower Passaic River, Newark Bay and NY/NJ Harbor: Dredged Material Management (DMM) of Dioxin Contaminated Sediments*. Passaic River Coalition.

Mensinger, Michael C.
2008 Sediment Decontamination Demonstration Program-Cement-Lock Technology Final Report: Phase II Demonstration Tests with Stratus Petroleum and Passaic River Sediments Prepared for ENDESCO Clean Harbors LLC. Submitted to NJ Department of Transportation, Office of Maritime Resources and US Department of Energy, Brookhaven Science Associates.

Maher, Ali, W. Scott Douglas, Farhad Jafari, and Joel Pecchioli
2013 The Processing and Beneficial Use of Fine-Grained Dredged Material: A Manual for Engineers. Rutgers University Center for Advanced Infrastructure and Transportation.

McDonough, F.M, G.A. Boehm, and W.S. Douglas
20 Dredged Material Management in New Jersey: A Multifaceted Approach for Meeting Statewide Dredging Needs in the 21st Century.

Milrath, K, S. Kozlova, S. Shimanovich, and C. Meyer
2001 Beneficial Use of Dredged Materials 2, Second Progress Report. Columbia University in the City of New York, Department of Civil Engineering and Engineering Mechanics.

DredgingToday.com
2012 "NACEPT Recommends Cement-Lock Process for Passaic River Cleanup (USA)". http://www.dredgingtoday.com/2012/04/30/nacept-recommends-cement-lock-process-for-passaic-river-cleanup-usa/

New Jersey Department of Transportation, Office of Maritime Resources
2015a http://www.state.nj.us/transportation/airwater/maritime/

2015b http://www.state.nj.us/transportation/airwater/maritime/dresediment.shtm

The Richard Stockton College of New Jersey, Coastal Research Center
2015 http://intraweb.stockton.edu/eyos/page.cfm?siteID=149&pageID=124

Stern E.A., K.W. Jones, W.S. Douglas, H. Feng, and N.L. Clesceri
2004 "Sediment Decontamination for Navigational and Environmental Remediation and Restoration *Case Study – Passaic River, NJ"*. Passaic River Symposium, Montclair State University, 9 June 2004.

Stern, Eric A.
2012 Technology Applications for Integrated Sediment Management. *Klimauken*. Organized by the Municipality of Bergen, Bergen Harbor, Norway. Batelle Memorial Institute, Montclair, New Jersey.

Upcycle Associates, LLC
2004 Project Update for Upcycle Associates, LLC. Prepared for NJ Department of Transportation, Office of Maritime Resources, Sediment Decontamination Program.

US Army Corps of Engineers, New York District
2015a http://www.nan.usace.army.mil/Portals/37/docs/harbor/dredmgmt/DMMP%20TAB1%20Jan%202015 .pdf

2015b http://www.nan.usace.army.mil/Missions/CivilWorks/ProjectsinNewYork/EldersPointJamaicaBaySaltMarshIslands .aspx

2015c Table 1: NY/NJ Harbor Dredged Material Management Dredging Activities, Volumes and Placement Sites (As of January 2015). http://www.nan.usace.army.mil/Portals/37/docs/harbor/dredmgmt/DMMP%20TAB1%20Jan%202015.pdf

2015d Table 2: Active Upland Dredged Material Placement Sites, Total Volume Placed and Remaining Capacity (As of January 2015). http://www.nan.usace.army.mil/Portals/37/docs/harbor/dredmgmt/DMMP%20TAB2-%20Jan%202015.pdf

US Environmental Protection Agency and the US Army Corps of Engineers
2004 Evaluating Environmental Effects of Dredged Material Management Alternatives –A Technical Framework.

US Environmental Protection Agency, US Army Corps of Engineers, and New Jersey Department of Transportation Office of Maritime Resources
2012 Lower Passaic Restoration Project: Environmental Dredging Pilot Study Report

Weanack Land, LLP
2012 "Weanack Upland Beneficial Reuse of "Treatable" Dredged Material and Associated Studies" http://remadeland.com/projects.html

LONG ISLAND SOUND

FINAL
DREDGED MATERIAL MANAGEMENT PLAN
AND FINAL PROGRAMMATIC
ENVIRONMENTAL IMPACT STATEMENT

APPENDIX I

PROJECT MANAGEMENT PLAN

Project Management Plan
for Regional Dredged Material Management Plan
and Programmatic Environmental Impact Statement

Long Island Sound

October 2007

Table of Contents

TITLE	PAGE
Section 1 – Project Management Plan	
1.1 Introduction	1
1.2 PMP Purpose and Policy	4
1.3 DMMP Policy and Authority	5
1.4 DMMP Goals and Objectives	5
Section 2 – DMMP and PEIS Scope and Process	
2.1 Project Area	8
2.2 DMMP Scope	8
2.3 PEIS Scope	8
2.4 LIS DMMP and PEIS Process	9
Section 3 – Plan Requirements	
3.1 Phase I: Evaluation of Existing Placement Needs and Existing Management Options – Establish Study Goals and Objectives	10
3.2 Phase II: Formulate Placement Alternatives with Special Emphasis on Beneficial Uses	13
3.3 Phase III: Analyze and Compare Alternatives	18
3.4 Phase IV: Recommend Management Plan	19
3.5 Phase V: Periodic Plan Review and Update	23
Section 4 – Team Establishment and Management	25
Section 5 – Resource Estimate Development	26
Section 6 – Schedule	26
Section 7 –Other Plans	
7.1 Communication Strategy	26
7.2 Acquisition Strategy	27
7.3 Public Involvement Plan	27
7.4 Risk and Uncertainty	27
7.5 Commitments to Customers	27
7.6 Change Management	28
7.7 Quality Management Plan	28
Section 8 – Approvals	28

FIGURES **PAGE**

Figure 1: Navigation Project Areas under Review in DMMP & Current Open Water Disposal Sites 2

Figure 2: Long Island Sound Dredging Centers – From 2001 Survey from Designation EIS 11

APPENDICES

Appendix A: Public Involvement Plan
Appendix B: Study Tasks and Budget
Appendix C: Study Schedule

Long Island Sound Dredged Material Management Plan

SECTION 1- PROJECT MANAGEMENT PLAN

1.1 Introduction

In June 2005, the Environmental Protection Agency (EPA) designated two open-water dredged material disposal sites in Long Island Sound to provide long-term, environmentally acceptable disposal options for potential use by federal, state, municipal and private entities, which must dredge channels, harbors, marinas and other aquatic areas in the Long Island Sound vicinity in order to maintain conditions safe for marine commerce and recreational navigation (40 CFR 228.15(b)(4) Designation for Central and Western Long Island Sound Dredged Material Disposal Sites). The two designated disposal sites are identified as the Central Long Island Sound disposal site (CLIS) and the Western Long Island Sound disposal site (WLIS) (Figure 1). A Final Environmental Impact Statement (FEIS), completed in May 2005, described this action and evaluated alternatives to the designations.

The CLIS disposal site is a 1.1 nautical mile (nmi) by 2.2 nmi rectangular area, about 2.4 square nmi in size, in water depths ranging from 56 to 77 feet (17 to 23.5 meters) (see Figure 1). The CLIS disposal site has been used for the disposal of dredged material from central and western Long Island Sound since, at least, the early 1940s. It is an actively used site and has received almost 14 million cubic yards of material since 1941. . The CLIS site is entirely within Connecticut State waters, approximately 2.5 nmi from the New York State border.

The WLIS site is a 1.2 nmi by 1.3 nmi rectangular area approximately 1.56 square nmi in size in water depths of 79 to 118 feet (24 to 36 meters). The WLIS disposal site was initially identified in 1982 by the Corps as the preferred alternative for a regional dredged material disposal site to serve the dredging needs of western Long Island Sound (see Figure 1). The site is entirely within Connecticut State waters, approximately 200 yards north of the New York State border. The designation has also moved the location of the entire disposal site to the west and north to place it out of a shallower area in the southeast portion of the original site.

In addition to the two disposal sites designated by EPA in 2005, there are two other active dredged material disposal sites in eastern LIS that are used and managed under MPRSA's Section 103 Site Selection procedures and under the CWA. These sites are the Cornfield Shoals Disposal Site (CSDS) located off the mouth of the Connecticut River, and the New London Disposal Site (NLDS) (see Figure 1) located seaward of the entrance channel approach into New London Harbor.

Figure 1: Navigation Project Areas under Review in DMMP & Current Open Water Disposal Sites

The Designation Rule anticipated the development of a regional Dredged Material Management Plan. This Project Management Plan outlines the scope and activities of the LIS DMMP. To build upon the work undertaken as part of the site designation process, and in response to comments received as part of the EIS process, the EPA and the Corps, with the Connecticut Department of Environmental Protection (CTDEP), the New York Department of Environmental Conservation (NYDEC), the New York Department of State (NYDOS) and the Rhode Island Coastal Management Resource Council (RICMRC), agreed to partner in the development of a Long Island Sound Dredged Material Management Plan (LIS DMMP) for the Long Island Sound region. The LIS DMMP will include an in-depth planning analysis of all potential dredged material placement/ disposal alternatives including open-water disposal, beneficial use, upland disposal, and treatment technologies, which will be used as a basis for future individual permit and project approval decisions related to alternatives analysis for dredging in the Long Island Sound vicinity (Figure 1). To accomplish this, the LIS DMMP will examine dredging needs, sediment and water quality, disposal alternatives and impacts on a harbor-by-harbor basis.

The LIS DMMP will also include an evaluation of the use of the CLIS and WLIS sites in its analysis of alternatives to manage dredged material. The use of the CLIS and WLIS sites could be suspended or terminated as early as eight years after the effective date of the site designations, unless a LIS DMMP is completed, although, under certain circumstances, extensions of additional time may be granted. It is anticipated that subsequent to the completion of a LIS DMMP, the use of the sites may continue as they are now or may be restricted in accordance with LIS DMMP recommendations.

In June 2006, the Corps of Engineers New England District completed a Preliminary Assessment to document the need for a comprehensive DMMP for the LIS region. The PA concluded that successful completion of a LIS DMMP is critical to the Corps ability to maintain the region's civil works navigation projects and provide future navigation improvements to the system of Federal waterways in the Long Island Sound region. Analysis of the economic contribution of navigation dependent facilities indicates that future maintenance of at least a majority of the Federal navigation projects in the Sound is likely warranted and would be found to be in the Federal interest when examined on a project-by-project basis. Appropriate future cost-effective management methods and capacities must be identified to serve both Federal and non-Federal project needs in this region for the long-term health of the region's economy and environment. The PA was approved by the North Atlantic Division which allows for the preparation of a Dredged Material Management Plan. This PMP is the first step in the preparation of that plan.

For compliance with the National Environmental Policy Act (NEPA), a Programmatic Environmental Impact Statement (PEIS) will be prepared by the U.S. Army Corps of Engineers. The PEIS will cover the analyses and recommendations of the DMMP.

The LIS DMMP, after undergoing a public review, will be approved by the Corps of Engineers North Atlantic Division. This DMMP approval will constitute the completion of the DMMP as referenced in the Designation Rule. Additional long-term studies may be recommended that extend beyond the DMMP approval date.

1.2 PMP Purpose

The purpose of this PMP, as defined by ER 5-1-11, is to act as a plan for timely and quality project delivery and to serve as the Work Plan referenced in the Designations Rule. It will be used to define the scope of the study, to identify the resources necessary to accomplish the tasks, to identify the responsible team members to accomplish tasks, and to identify the tools necessary to ensure project implementation success. To better define the purpose and tasks of the LIS DMMP, several resource agency meetings have been held to discuss the development of the LIS DMMP and a conceptual scope of work. In addition, public information meetings will be held to obtain input on the scope. This PMP addresses agency issues identified as a result of various meetings and may be amended to incorporate the concerns and issues identified at public information meetings. In addition, this PMP summarizes the purpose and need of the plan, the detailed steps, tasks, and resources involved in developing the plan, and the schedule for developing the plan. It also establishes the process for preparing the LIS DMMP and for meeting the requirements set out in the NEPA of 1969, as amended and CZMA of 1972 as amended.

The PMP has been developed by the Corps of Engineers in consultation with a multiagency project delivery team in accordance with:

- Engineer Regulation (ER) 5-1-11, U.S. Army Corps of Engineers Business Process;
- ER 1105-2-100, Guidance for Conducting Civil Works Planning Studies (22 April 2000),
- ER 1165-2-501, Water Resource Policies and Authorities, Environmental Policies, Objectives, and Guidelines for the Civil Works Program (30 September 1999),
- Engineer Pamphlet (EP) 1165-2-1 Digest of Water Resources Policies and Authorities
- EP 1165-2-502 Ecosystem Restoration – Supporting Policy Information
- North Atlantic Division Regulation 1110-1-8,
- 33 Code of Federal Regulation (CFR) Part 230 Environmental Quality: Procedures for Implementing the National Environmental Policy Act (4 March 1988)
- 33 CFR Part 335 Operation and maintenance of civil works projects involving discharge of dredged or fill material into U.S. or ocean waters,
- 33 CFR Part 336 Dredging projects involving discharge of dredged material into U.S. and ocean waters, factors considered in evaluation,
- 33 CFR Part 337 Practice and procedure,
- 33 CFR Part 338 Corps Activities involving discharge of dredged material or fill into U.S. waters
- 40 CFR 228.15(b)(4) Designation Rule for Central and Western Long Island Sound Dredged Material Disposal Sites
- ER 1130-2-520 Project Operations - Navigation and Dredging Operations and Maintenance Policies
- ER 1165-2-132 HTRW Guidance for Civil Works Projects
- EC 1105-2-404 Planning Civil Works Projects Under the Environmental Operating Principles
- EM 1110-2-5025 Dredging and Dredged Material Disposal
- EM 1110-2-5026 Beneficial Use of Dredged Material

- EM 1110-2-5027 Confined Disposal of Dredged Material
- EP 1130-2-520 Project Operations - Navigation and Dredging Operations and Maintenance Guidance and Procedures,
- 15 CFR, part 930 Consistency of Federal Activities with Coastal Management Program.

1.3 DMMP Policy and Authority

Corps policy (ER 1105-2-100) requires each Corps District to prepare a DMMP for maintaining Federal navigation channels when it is demonstrated in a PA that there is insufficient dredged material placement capacity to accommodate 20 years of maintenance and new work dredging. ER 1105-2-100 further directs the Districts to conduct a management plan study that results in a management plan report that recommends implementable solutions to identified management problems. The plan should identify how much material has to be dredged to maintain the Federal channel(s) and how that dredged material will be managed in an economically sound and environmentally acceptable manner. A DMMP is intended to ensure that Federal navigation projects can be maintained in an environmentally acceptable, cost-effective manner, thereby justifying continued investment of Federal funds. The plan should consider permitted non-Federal, dredging within the related geographic area, as placement of material from such sources will affect the size and capacity of placement areas required for the Federal project.

It is the policy of the Corps of Engineers (ER 1105-2-100) that all dredged material management studies include an assessment of potential beneficial uses for environmental purposes that may include but are not limited to fish and wildlife habitat creation and restoration, and storm damage reduction through the placement of material that would reduce flooding potential from waves or tidal influences.

1.4 LIS DMMP Goals and Objectives

The overall goal of the LIS DMMP is to develop a comprehensive plan for dredged material management in Long Island Sound. The DMMP should lead to a continued reduction of the use of the sites over time using a broad based public process that protects the environment based on best scientific data and analysis, while meeting society's need for safe and economically viable navigation for water based commerce, transportation, national security, and other public purposes.

The preamble to the EPA site designation rule addresses the issue of procedures and standards for evaluating disposal alternatives for MPRSA projects as follows:

> “Consistent with the two states' requests, today's rule contemplates that the DMMP for Long Island Sound will include the identification of alternatives to open-water disposal and the development of procedures and standards for the use of practicable alternatives to open-water disposal, so as to reduce wherever practicable the open-water disposal of dredged material. The DMMP also may contain recommendations regarding the use of the sites themselves.”

The DMMP also will assess and make recommendations regarding procedures to be utilized for review of dredging projects proposed after the completion of the DMMP, to help ensure that practicable alternatives have been thoroughly evaluated and are used, whenever practicable.

The DMMP also will assess whether a reduction goal (regarding disposal in Long Island Sound) should be part of the DMMP recommendations, after the various alternatives are identified and evaluated. This will include an assessment of what additional State programs might need to be adopted in order to make any reduction goal meaningful.

If this dredged material plan recommends a reduction goal it will include procedures for limiting or reducing sediment sources and contaminant loading, and identifying feasible beneficial uses for dredged material consistent with the goal of reducing or eliminating the need for open water disposal of dredged material in Long Island Sound.

Most Corps of Engineers DMMPs are focused on a specific project. In a project-specific DMMP, anticipated dredging needs are clearly known based on the project's maintenance dredging history. A project specific DMMP looks at various dredged material management options and identifies both a base plan and any other recommended plans to specifically address the needs of that one harbor or project. Because the next dredging cycle can be anticipated and the dredged material volumes and characteristics (physical and chemical) can be projected with greater certainty, the identification of a specific management option(s) can be made.

To address the Designation Rule provision with respect to "standards", the LIS DMMP will attempt to identify all the dredging needs, both Federal and non-Federal for all of the harbors in Long Island Sound and vicinity. The LIS DMMP will also identify potential environmentally acceptable, practicable management plans that can be utilized by various dredging proponents in their analysis of options to manage dredging projects. Although it is not the intention of the LIS DMMP to identify an alternative for every potential project in the study area the DMMP will provide users with an array of suitable/feasible options that they could use in their alternative analysis that will meet or exceed their needs. Also the States may use the DMMP findings to take whatever actions are necessary to establish or expand State programs to assist in implementing reductions in open water placement.

The actual selection of a particular alternative to be recommended for a specific project will be determined (for both Corps and other projects) at the time of permitting or authorization of the particular project Various alternatives or management options will be identified and evaluated for potential dredged material use to cover a multitude of potential needs, volumes, schedules and locations. Any restrictions or unique site constraints will also have to be identified.

To meet the overall goal of the LIS DMMP, the objectives are to:

1. Involve concerned citizens through an open and inclusive process, in the development of the plan.

2. Identify and characterize (assess) the major sources and quantities of dredged material that will require management over a 20 year planning horizon.

3. Identify techniques/best management practices to further reduce sediment and contaminant loading of dredged areas.

4. Identify and assess all technically feasible management options, including but not limited to, dredged sediment treatment technologies, beneficial uses for dredged material, and in-water sediment disposal methodologies.

5. Identify a comprehensive and coordinated regional practicable strategy for technically feasible and environmentally sound management of material dredged from Long Island Sound such as an assessment of a public processing facility.

6. Develop alternative management strategies for treating or re-using dredged materials, including the use of decontamination and sediment processing technologies.

7. Assess and recommend alternative locations for the treatment and beneficial reuse of dredged material.

8. Undertake an economic analysis of the sediment management options proposed for future dredging of federal and non-federal projects in LIS harbors and navigation channels.

9. Define dredging and disposal evaluation, management, and monitoring protocols and review criteria and identify constraints to implementation of changes.

10. Clarify and articulate the specific statutory, policy, and management responsibilities of all federal, state, and local agencies and other public and private stakeholders for the implementation of dredged material management in LIS.

11. Develop a protocol for determining the need for DMMP modification or revision, and a process for implementing required modifications or revisions.

12. Indicate where sediment testing for specific characterization purposes will be needed in the future to validate assumptions (risk).

SECTION 2 – LIS DMMP AND PEIS SCOPE AND PROCESS

2.1 Project Area

The project area for dredged material being managed under this plan encompasses the channels and harbors in the Long Island Sound vicinity (see Figure 2).

2.2 DMMP Scope

The scope of the LIS DMMP is comprehensive in nature and will identify primary and contingency options needed to meet the dredging requirements of the Long Island Sound region giving consideration to beneficial uses of the dredged material. The LIS DMMP will consider dredging needs based upon potential new projects and existing Federal navigation projects, and will factor State, local, and private dredged material placement needs into the formulation of alternatives, where appropriate.

In preparing the LIS DMMP, the Corps will use all available information meaningful and appropriate to this plan including engineering data and designs and agency input to avoid duplicating previous Federal, State and local efforts. The DMMP will thoroughly identify the problems, needs, and objectives, evaluate current conditions, develop and evaluate options and alternatives, and recommend a plan to meet study goals while incorporating public comment and agency input into all aspects of the plan.

2.3 PEIS Scope

The LIS DMMP will meet NEPA requirements through the preparation of a PEIS that dredging project proponents can use in their management alternative analysis. The PEIS will evaluate the overall impacts of alternatives identified in the DMMP with respect to the environment of LIS and its tributaries. A programmatic approach will allow decision makers a means to evaluate different dredged material disposal options with full knowledge of potential environmental consequences. The PEIS will be an umbrella document that considers generic impacts of options. In the future, as specific alternatives are put in place to implement a given management option, more detailed NEPA documents may be prepared to evaluate specific impacts resulting from implementation of a given option at a specific location.

Public Scoping Meetings

Public scoping meetings will be held in the initial phase of the LIS DMMP in Connecticut and New York to solicit public input into the DMMP and scope of the PEIS. An initial plan for the LIS DMMP is to incorporate an analysis of the dredged material needs for the Long Island Sound region, and to solicit public input into the development of a base and recommended plans for dredged material management. See Appendix A - public involvement plan.

2.4 LIS DMMP and PEIS Process

The LIS DMMP will identify, evaluate, screen, and, where possible, prioritize and optimize such alternatives so that proponents of dredging actions will have an array of alternatives available to be included in their analysis of their proposed project to determine if there are practicable alternatives to open-water placement of dredged materials over the next 20 years. This prioritization will range from alternatives currently available, those designed but awaiting permits for implementation, alternatives under design and proposals for new facilities or methods to expand capacity at existing facilities. The DMMP will also consider non-Federal, permitted dredging within the related geographic area, because placement of material from these sources will affect the size and capacity of placement areas required for Federal projects.

The LIS DMMP will follow the Corps planning processes, and be performed in the following sequential phases:

- Phase I - Evaluate and Quantify Placement Needs and Existing Management Options;
- Phase II - Identify Alternative Placement Options with Special Emphasis on Beneficial Uses;
- Phase III - Evaluate, Analyze, Compare, and Screen Alternatives;
- Phase IV - Recommend Management Plans;
- Phase V - When necessary periodically update the LIS DMMP.

The preparation of the PEIS will be done concurrently with the preparation of the DMMP. The PEIS will be prepared in accordance with Council on Environmental Quality (CEQ) Regulations for Implementing NEPA (40 CFR Parts 1500-1508) and the Corps of Engineers regulations for implementing NEPA (33 CFR Part 230).

SECTION 3 – PLAN REQUIREMENTS

This section defines the general tasks necessary for project success. It defines the process and effort by which the plan will be developed and prepared. In all phases of the LIS DMMP effort periodic meetings and other coordination will be necessary among the project team and other involved entities as outlined below:

Meetings and Team/Agency Coordination

It is important to note that from the initiation of the study and continuing throughout the process, numerous formal and informal meetings will be held involving the EPA, CTDEP, NYDOS NYDEC, RICMRC and other local and regional officials, resource agencies, environmental organizations, watermen, local dredging operators, interested parties, and the public. These meetings will be necessary and vital in focusing the LIS DMMP, obtaining valuable data, developing the range of alternative options to be considered, and ultimately meeting the goals of the study.

Other project efforts can be broken in to different phases depending on whether they involve data collection, formulation of alternatives or evaluation and analysis of the various plans. These phases and efforts are discussed below:

3.1 Phase I: Evaluation of Existing Placement Needs and Existing Management Options

Determine Dredged Material Placement Needs

In order to formulate alternatives for the placement of dredged material from the stated project draw area it is critical to not only estimate future dredging needs and potential volumes of material but also determine the most likely location from which future dredged material will be generated (i.e dredging centers see Figure 2).

As part of the 2005 designation EIS, a dredging needs survey was conducted to estimate the volume of material that needed to be managed over a twenty year period. The LIS DMMP team will update and expand on this dredging needs assessment. Appropriate databases of historical dredging, including permits and placement records from the Corps, Connecticut, New York and other Federal, State and local governments will be obtained and reviewed. Relevant historical dredging information related to management and regulation within the LIS DMMP area, in terms of dredged material placement by location, quantity, and timing will be obtained. All relevant physical and chemical characterization data relating to dredged materials within the study area, on a project basis will be considered.

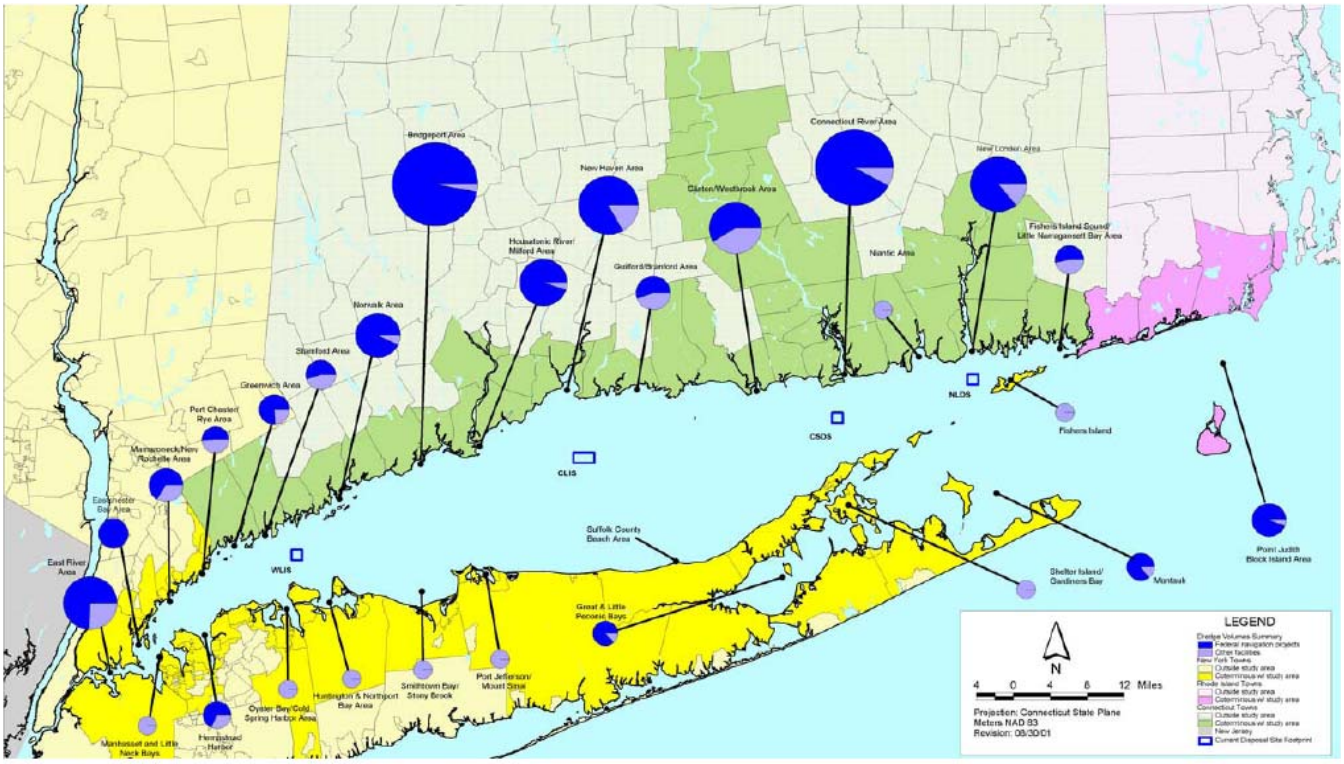


Figure 2 – Long Island Sound Dredging Centers – From 2001 Survey for EIS

Questionnaires and surveys will be utilized to identify potential future dredging volumes and locations from Federal, State, municipal and private interests. The PDT will involve the maritime or harbor commissions, and officials in the municipalities, department of public works and various marina associations to increase responses to various surveys.

The updated and expanded dataset will be used to determine major dredging centers based on the projected dredging volumes of the various ports. Consideration will be given to the geographic location of project groups, the projected dredging needs over various time periods, as well as currently used dredged material placement methods. This analysis will allow for the identification of projects that currently use dredged material in a beneficial manner along with an assessment of current beneficial use opportunities.

Economic Analysis - Needs

Investigation of Port Development Needs (port expansion): Analyze potential economic constraints because of ambient depth, existing transportation infrastructure, opportunities for the development of new navigation projects or features, realignment of channels and docks, reduction of the need to dredge these areas or the volume of dredged material in these projects. Recommend options for efficient port development and redevelopment plans with an emphasis on beneficial use of dredged materials. It is critical in this analysis that State and local officials and Regulatory agencies participate in the identification of existing constraints and potential harbor development or improvement opportunities.

Generic Working Cost Estimates: Identify and establish cost estimates for dredging projects. Costs associated with dredging, dewatering, barge and pipe transport, handling, staging, trucking and processing will be identified for a range of volumes, sediment types, and locations throughout the region. These generic costs need to be developed for various sizes/scales of projects and should result in various cost curves or cost matrices.

Identification of Economic Value of Water Dependent Uses to Regions: Although an economic analysis was conducted for the site designation EIS, this needs to be updated and expanded to include the entire LIS region. The analysis should determine the value of the water dependent uses to the region, in order to estimate the potential adverse economic effects that could result from restricted or lost navigation when channels aren't maintained or when vessels are forced to operate at limited capacities.

Placement Options

An analysis of the existing and potential placement options, conditions, regulatory requirements, potential impediments and available capacity will be undertaken. It is anticipated that the preliminary information for alternative placement opportunities will be identified by the individual states since they are more likely to have the information on the various placement opportunities. Once these are identified an analysis to determine specific site characteristics such as capacity, development costs, restrictions (barriers to development and use of the sites), etc. will be undertaken.

As part of this analysis the states will be asked to provide information on opportunities or actions needed to remove identified barriers to site development or use. This information will be made available to LIS RDT on a periodic basis. An inventory of existing and potential options would include, but not be limited to:

- *Open and closed landfills*
- *Dredged material placement sites*.
- *Current or proposed transportation improvement projects*
- *Dredged material transfer facility*: .
- *Asphalt, cement and other aggregate processors*
- *Large scale development sites*
- *Brownfield/other redevelopment sites*
- *Closed mines and quarries*
- *Beach and dune nourishment*
- *Agricultural uses*:
- *Habitat restoration, creation or enhancement*
- *Confined Disposal Facilities*

Data Collection

The DMMP will inventory existing studies to avoid duplication of effort and develop a strategy for the management of the data collected as part of the development of the plan. This should consist

of a digital database for dredging management in the form of a Geographic Information System-based clearinghouse for dredged material management.

The database system will be developed to provide a shared interactive graphical query tool containing information on current or proposed dredging projects. The resulting database will feature relevant details which could include data on sediment chemistry and characteristics, expected volumes, location, project schedule, and data on identified upland alternatives including information on available capacity, constraints, schedules, existing permits, and specific site requirements. When made publicly available, the database will enable regional public and private users to quickly identify and access alternative locations available for upland placement within the region.

The LIS DMMP will include a GIS-mapped inventory of all potential sites and locations for placement of dredged material in New York, Rhode Island and Connecticut. The mapping shall include, but not be limited to, closed mines and quarries, landfills (opened, abandoned or needing remediation/closure), current and proposed Brownfield sites, large scale development projects, cement or concrete plans, and transportation (highway) infrastructure improvement projects.

Revise/Validate Study Goals and Objectives

Once the dredging needs and placement options are quantified, the preliminary study goals and objectives shown in Section 1.4 will be refined and approved by project delivery team members. The team will seek input and participation from other interested Federal and non-Federal parties on revising or validating the goals and objectives. These goals and objectives will be used to measure plan implementation success.

Study Initiation Meeting

A study initiation meeting is planned with the Project Delivery Team members to review the study plan and process, and for the Corps North Atlantic Division team to provide the PDT with technical, managerial, and/or policy assistance related to the conduct of the investigation.

3.2 Phase II: Formulate Placement Alternatives with Special Emphasis on Beneficial Uses

Phase II involves formulation and identification of viable dredged material management options, and includes conducting technical studies and investigations of those options and conditions that may be necessary to support the options. Appropriate, alternative plans include those that the Corps could implement and plans that could be implemented under the authorities of other Federal agencies, state and local entities and others.

Present specific plans or options to attain the LIS DMMP goal

The LIS DMMP will investigate alternatives including but not limited to regional and site specific identification of potential locations for de-watering, upland stockpile, dredged material

processing and transfer facilities, and confined aquatic disposal. The LIS DMMP will include geographic mapping of Brownfield sites, known and proposed large-scale development sites, transportation routes, areas requiring regular or periodic dredging, current and projected transportation infrastructure improvement projects, and other potential upland placement and beneficial reuse opportunities.

Other alternatives to be investigated for inclusion in the array of placement options could include wetland restoration, habitat restoration (bird/shellfish/oyster/SAV), channel placement, use of upland areas, bathymetric re-contouring, use of a confined placement sites and potential innovative uses.

Critical to the LIS DMMP process will be the integration and consideration of a full range of measures required to manage dredged material, including various placement methods, management considerations, placement locations, periods of use, and an assessment of potential beneficial uses. Part of the process will also include consideration of potential use of new technologies to place dredged material.

In determining all possible options for placement, consideration will be given to the use of new and innovative techniques, and other non-traditional options to maximize the beneficial use of dredged sediments. Investigate and review new or existing technologies, including pilot projects undertaken by others to assist in determining the feasibility of placement options.

The non-federal dredging within the LIS DMMP study area will also be considered in formulating alternatives, to the extent that placement of material from these sources affects the size and capacity of placement areas required for the Federal project. Placement is to be consistent with sound engineering practice and must meet all Federal and state regulatory requirements.

The LIS DMMP shall also contain a thorough analysis of the current opportunities and constraints in the States' regulatory requirements related to dredging and dredged material disposal. Current environmental regulations for land, water, and air protection will be reviewed and analyzed to determine whether they limit or prevent use of promising management alternatives. The analysis should provide recommendations for proposed revisions to regulations or statutes or State and federal legislative actions to provide consistency between the states and allow favorable alternatives to be implemented, especially beneficial ones.

Placement options to be evaluated, including those highlighted above, will include, but not necessarily be limited to:

- *Active and planned ecosystem restoration projects*: Review all applicable programs and initiatives underway, identified or planned for habitat restoration activities in the region. Identify and inventory current mud flats, shallows, wetlands, reefs, etc. that could utilize dredged material for habitat restoration, creation or enhancement. Upon completion of these inventories matrices will be developed to include site capacities, type of acceptable material , time or regulatory restrictions on site use, other regulations or regulatory concerns, cost of development of sites, etc. . Include a discussion of the steps that might

be taken to enable the use of either raw or treated/processed dredged material in restoration and remediation projects in the region. Also list all individual habitat restoration and remediation projects currently underway or planned in the region (to include NY/NJ Harbor). This should include watershed and estuary studies that have or plan to identify restoration opportunities at a local or regional level (such as Long Island Sound and Hudson-Raritan Estuaries studies). Subject these lists of habitat restoration initiatives to further evaluations to determine their respective potential to use dredged material to meet some or all of their restoration goals. Develop a cost analysis that provides thresholds for cost effective opportunities for reusing large quantities of dredged material for habitat restoration. Identify and discuss requirements for soil and fill material characteristics for the full range of habitat restoration projects in the region

- *Processing and Transfer Facility Investigations*: The LIS DMMP will evaluate the need, logistics, environmental and regulatory issues and potential siting of a regional dredged material processing facility or facilities to treat (stabilize) and/or decontaminate dredged material, as well as a transfer facility or facilities and temporary or permanent storage facilities to stockpile material while it awaits treatment and placement. This evaluation will be used to determine if such a facility could implement the goals of the LIS DMMP. It will include recommendations and lessons learned from studies in NY/NJ harbor, including the NJ Dig program, the LIS Innovative Technology Demonstration Project, EPA's bench and pilot studies to decontaminate and stabilize dredged material and investigations initiated by New York District into developing and implementing public processing/storage facilities.

- *Open and closed landfills*: Identify locations, capacities, needs and constraints for sediment quality and type, processing requirements, type and cost per cubic yard of transport, tipping fee, timing constraints, contact information, and permits or beneficial use determinations (BUDs). Also to be considered would be landfills in need of remediation, closure or interim cover.

- *Dredged Material Placement Sites*: Inventory all existing, open or closed or "at capacity" upland and aquatic dredged material placement sites (Confined Disposal Facilities, containment islands. Confined Aquatic Disposal Cells, etc.) in the region. Seek opportunities to increase the sites capacities or to mine these sites for cap or other marketable material to render such sites able to accommodate additional dredged material. Identify and determine whether additional placement sites are needed and could be located in the LIS region.

- *Current or proposed transportation improvement projects*: Locations, capacities, geotechnical requirements for use in constructing upland transportation projects will be identified along with cost to transport, available routes to transport, contracting requirements, and overall cost per cubic yard. In addition, surveys will be conducted to determine whether there is a need for cap or fill material for remediation, landscaping or other transportation uses.

- *Dredged material transfer facility*: An investigation of potential dredged material transfer locations will be used to identify and map sites throughout the region. Preliminary feasibility analyses will look at those areas best suited for immediate use and areas with potential for future use. These sites would be permanent facilities for the temporary storage of dredged material pending final placement.

- *Asphalt, cement and other aggregate processors* : Inventory all asphalt, cement, concrete and aggregate processing plants in the region and investigate all opportunities for those locations to receive dredged material for feedstock. Characterize those parameters that would be needed to spur investments to retrofit and/or expand plant operations to enable the receipt and use of dredged materials in the manufacture of existing or new product.

- *Large scale development sites*: Inventory all proposed and current large scale development projects in the region and provide an estimate of current or expected fill needs. Develop a cost analysis that provides thresholds for cost effective opportunities for reusing large quantities of dredged material for site development. Identify and discuss the range of structural engineering requirements for soil and fill material characteristics and transportation requirements/costs.

- *Brownfield/other redevelopment sites*: To identify sites for potential placement of dredged material, it will be necessary for states to provide information on each site, to include: required fill amounts and material quality needed, time lines for redevelopment, any activities currently underway at the sites, and any planning initiatives funded and/or underway for redevelopment of the sites. Develop an analysis that provides thresholds for cost effective opportunities for utilizing large quantities of dredged material for site development. Identify and discuss requirements for soil and fill material characteristics for the full range of sites in the region.

- *Closed mines and quarries*: Inventory all closed and active mines in the region surrounding LIS. Provide a detailed assessment of capacity for reclamation. Characterize each site to include estimated fill capacity. Identify those locations best suited to receive dredged material based on transportation cost, capacity, and any potential environmental constraints. Identify any related reclamation activities currently underway or planned at the sites. Identify cost effective opportunities for reusing large quantities of dredged material for mine reclamation. Identify and discuss structural engineering requirements for soil and fill material characteristics for the full range of mine reclamation sites in the region.

- *Beach and dune nourishment*: In cooperation with the States, inventory beaches around Long Island Sound to determine beneficial use opportunities. Determine time of year restrictions for placement of material, distances from likely sand sources, grain size requirements of the various sites, etc.

- *Agricultural uses*: Inventory landscaping firms, processors of earthen products, etc. to determine if capacity exists for commercial use of material. Considerations need to be made for potential desalinization costs, storage and processing capacities. Based on state regulations, this may only be an option for unrestricted or suitable material

- *Habitat restoration, creation or enhancement*: Identify and inventory current mud flats, shallows, wetlands, reefs, etc. that could utilize dredged material for habitat restoration, creation or enhancement. Upon completion of these inventories matrices will be developed to include site capacities, type of acceptable material , time or regulatory restrictions on site use, other regulations or regulatory concerns, cost of development of sites, etc.

Investigations will include an analysis of the value and need for the facility(ies) to achieve regional dredging goals and a list of factors that might affect its efficient operation, such as minimum production levels, feedstock scheduling, and potential storage areas needed to ensure processing facilities have a steady "raw material" supply. Tasks necessary to evaluate this alternative include the development of site selection criteria, environmental equity and justice review, an inventory of available sites, a ranking and prioritization of mapped sites, and an initial feasibility study for the facility(ies) design and operation. The studies will also identify additional steps necessary to establish the facility(ies), prepare initial concept designs, estimated budget and costs, and recommend at least one potential location for further study. A projection for the impact of potential new or existing processing and transfer facilities on the price per cubic yard of dredging shall be included.

The analysis should include a range of alternative scenarios that include smaller, functionally limited processing facilities, portable facilities and a large multi-functional facility that would process material, de-water clean material, and stockpile clean and processed material for transfer. Any technologies that may utilize material or benefit from a packaging or further "end product" processing facility near or at a processing facility will be examined.

Economic Analysis – Assessment of Plan Benefits

An economic assessment of the expected benefits and costs of each of the dredged material placement alternatives or combinations of them will be conducted.

- *Strategy for increasing upland capacity:* Clarify and undertake needed economic analyses of current cost structure for the upland placement of dredged material including the economic pinch points, thresholds and estimate of cost ranges. The impact on the increment to price per cubic yard of various processing methods, transportation distances, and methods of processing will be included in the analysis.

- *Goal of reducing incremental cost per year*: Identify and prioritize strategies and actions needed to reduce the incremental cost of treatment and upland disposal, especially for those cases where there might be an initial cost increase over traditional placement, but opportunities for subsequent reductions in cost over time.

- *Cost analysis of using existing or proposed processors*: A cost analysis comparing the establishment and operation of a new regional processing facility(ies) and the opportunities and constraints to using existing processing operations or partnering or subsidizing private sector operators will be undertaken to evaluate costs in the near and long term. Specific considerations will include the potential USACE Public Processing Facility currently being analyzed, any existing private processing operations in New York Harbor, and the cost of transportation from regional dredging centers to the processing facilities

The LIS DMMP will examine financial constraints on current and proposed alternatives to open water disposal to highlight economic opportunities, including state, federal and private funding initiatives and mechanisms that could be implemented to help overcome them. The LIS DMMP should explore financial incentives for dredging projects throughout the region and for investments in appropriate transportation and navigational infrastructure improvements to highlight opportunities for the improved management of dredged material.

3.3 Phase III: Analyze and Compare Alternatives

In Phase III, evaluation consists of three tasks:

1) Alternative screening for feasibility/acceptability including no action
2) Formulate remaining alternatives into base and recommended plans.
3) Identify actions that must be performed to implement the base or recommended plan.

Alternatives will be evaluated to determine the degree to which each would:

1) present potential environmental impacts or risks, as well as offer environmental benefits;
2) improve agency coordination/predictability for dredging project sponsors, and environmental protection; and
3) affect the dredging-related economic conditions.

Use of screening process to evaluate alternatives

After identifying potential viable solutions to meet the projected volumes of dredged material, potential screening criteria as developed during the LIS DMMP process will be utilized to evaluate, screen, prioritize and recommend alternatives for further consideration. Factors to be considered in screening criteria relate to technical feasibility, emphasis on need, beneficial use, cost effectiveness, environmental acceptability, capacity, and ease of implementation. The criteria and factors used to screen the alternatives are required to consider the physical composition of the dredged material, and to take into account all Federal and state regulatory constraints upon the placement of such materials, as well as the environmental acceptability of such alternatives to the relevant committees, workgroups and stakeholders. Included in the screening will be the input of the general public and interested local, State, and Federal agencies gathered, in part, from public meetings that lay out the results of the alternative screening process . Estimates of the potential volumes of dredged material and the associated

characterization of such material for potential placement options will be part of the LIS DMMP process.

Once the range of potential projects has been established by location and timeframe, the next step in the LIS DMMP process will be to set harbor priorities in terms of their need and/or importance to the region, to determine the appropriate values and weights to be given to the screening criteria. This information will be used in determining options for the placement of material. The appropriate criteria and factors for judging placement options will be based upon results of the public scoping meetings and a consensus process and interaction using information obtained from other sources.

Additional Data Collection/Review

During the analysis phase, it may be necessary to collect additional data on placement alternatives, especially related to new alternatives or concern identified during the public review process. Information will be used to screen options for plan recommendations. An assessment will be made as to the applicability of a regional sediment model to future study efforts. Such a model could help to analyze the effectiveness of dredged material placement sites and assist in predicting shoaling patterns.

Qualitatively compare alternatives plans

The LIS DMMP will evaluate the viability of implementing alternatives for the placement of dredged materials. Alternatives qualifying for further consideration will be compared to each other in order to identify the plan to be recommended for implementation. A comparison of the effects of alternatives must be made and tradeoffs considered and documented to support the final recommendation. The effects include a measure of how well the plans do with respect to planning objectives, including the outputs and costs. The LIS DMMP will consider the effect upon the system of existing and future Federal, State and local navigation projects and their respective projected dredging requirements. Effects required by law or policy and those important to resource agencies and the public will be considered.

3.4 Phase IV: Recommend Management Plan

The LIS DMMP will provide a complete presentation of study results and findings; indicate how compliance with applicable statutes, executive orders and policies is achieved; recommend a list of viable Federal and non-Federal actions; and include implementation measures for long-term options including a schedule for implementation.. In essence, the LIS DMMP will function as an umbrella plan under which its various component parts would be implemented, and possibly studied, subsequently and separately from this report.

Establishment of the Base Plan

The purpose of the base plan evaluation is to identify the alternative or suite of alternatives meeting the least cost/environmentally acceptable dredged material placement needs for the Long Island Sound region for the 20-year period of analysis. The base plan for Federal

navigation purposes is defined as the plan that accomplishes the placement of dredged material associated with the construction or maintenance dredging of Federal navigation projects in the least costly manner, consistent with sound engineering practices and, in compliance with all applicable Federal environmental standards.

Current Corps practice is that when the placement option chosen is not the least costly, environmentally acceptable method for placement, the incremental cost of the recommended plan over the base plan will be cost shared with a non-Federal sponsor. Federal funding may continue to be limited in the future. Therefore, as part of the DMMP process, it will be important for the participating States to develop mechanisms to fund or help fund the payment of "reasonable incremental costs."

Establishment of the Recommended Plan

The LIS DMMP will investigate and may recommend practicable options that are not part of the base plan if they could be made available at a reasonable incremental cost. When such Recommended Plan(s) are identified, they will include measures that may require actions by others, under a specific timeframe, for implementation.

While the Base and Recommended Plans will cover Corps projects, the DMMP investigations resulting in the development of the Base and Recommended Plans also will identify potential environmentally acceptable, practicable management alternatives that can be utilized by private project proponents in their analyses of options to manage private dredging projects.

DMMP Documentation

The Corps of Engineers in consultation with the Project Delivery Team will develop a LIS DMMP to document the efforts and results of various investigations. The LIS DMMP will identify applicable Federal and non-Federal mechanisms for project implementation, and identify specific measures necessary to manage the volume of material likely to be dredged over the 20-year time frame. Specifically, the LIS DMMP and the PEIS Record of Decision (ROD) will constitute the complete decision documents which will be used for dredged material management of future Corps navigation projects in and around Long Island Sound. These will include:

- A sound and documented basis for decision-makers at all levels to judge the plan components, singly and collectively in the recommended LIS DMMP. The report will identify all necessary agreements (Federal, sponsor, real estate, etc.) and procedural requirements (appropriate NEPA documentation, long-term permits, certifications, etc.) to cover a minimum 20 year period.

- All plan requirements as defined by ER 1105-2-100, Table E-14.

- The full range of measures for dredged material management, including management of existing placement sites to extend their life, and various combinations of new placement sites involving different placement methods, placement area locations, and

periods of use, including identifying those that have been or are ready for implementation, and steps needed to get others to that point.

- Any technical and informational reports regarding dredging and dredged material placement options.

- A PEIS will evaluate the analyses and recommendations of the DMMP The PEIS will also function as supporting documentation for detailed implementation studies of specific placement options and identified locations required for their implementation

- Recommend a sub-set of placement options or option categories to be studied subsequently and independently of this LIS DMMP to determine if and how they would be incorporated into the overall DMMP.

- Developing technologies (for placement and decontamination) will be integrated, as appropriate, into the LIS DMMP as such technology may impact dredged material placement options.

Report Reviews: QA/QC

An independent technical review will be done by a Corps Center of Expertise (PCX) for navigation that will be involved during the study and will review the findings, plan formulation and documentation of the DMMP and PEIS. The technical reviewers will also review the environmental, economic, engineering and public involvement issues.

The technical review of the reports will focus on compliance with established policy, principles, and procedures using clearly justified and valid assumptions. The technical review team is comprised of experts from all Corps offices and the organizations of other project team members not involved in the day-to-day activities of the project. The technical review will include verification of the following:

- Assumptions;
- Methods, procedures, and material used in analysis;
- Alternatives evaluated;
- The appropriateness of data used and level of data obtained; and
- The reasonableness of the results, including whether the product is consistent with the law and existing public policy.

It is expected that all in-progress review actions, study and review team meetings, and other significant review-related actions will be documented in the form of a written memorandum. A quality control review report consisting of a summary of major issues and resolutions will be provided.

Submittal of Draft DMMP and PEIS to North Atlantic Division

The Project Delivery Team will provide to the Corps' North Atlantic Division the technically reviewed and Draft DMMP and PEIS. During the review, the Corps North Atlantic Division office may request a briefing regarding the Draft DMMP and PEIS.

Outline of the overall Review Process:

The overall review for the LIS DMMP and the PEIS will include:

Review of the Draft DMMP and PEIS

- PDT Review
- PCX review
- NAD
- Public

Review of the Final DMMP and PEIS

- PDT Review
- PCX review
- NAD
- Public

Quality Assurance

The Corps' North Atlantic Division will be responsible for overseeing the Corps' quality control process relating to the development of decision and implementation documents. In its quality assurance role Corps North Atlantic Division will assure that the Project Team has the mechanisms and procedures in place to produce quality products complying with established criteria, methods, policies, laws, and procedures, and to apply competent technical resources in execution and review. NAD's quality assurance responsibility will include the following:

- Assess and provide feedback to the New England/New York Districts' quality control process;
- Evaluate the quality control plan for the study;
- Assure compliance with the quality control plan;
- Attend jointly selected District meetings in accordance with NAD guidance (NAD-ET-P memorandum dated 28 March 96, subject: Planning Program Management);
- Conduct spot checks of work products and technical review documents; and
- Facilitate and/or assist in the resolution of policy and technical issues.

Report Revisions

The Project Manager will coordinate all technical and policy comments and determine which team members should provide responses. A revised report will be provided to the Corps North Atlantic Division prior to public review distribution.

Draft DMMP/PEIS

A Notice of Availability must be filed by the Corps with the EPA and subsequently published in the Federal Register, which initiates the forty-five day (minimum) review period. At least two public meetings will be scheduled to solicit public input during the 45-day public review period.

Final DMMP/PEIS

Following the public comment and review period on the Draft DMMP and Draft PEIS, the documents will be revised as appropriate. After all comments are compiled and reviewed, responses are prepared to all relevant issues that were raised. These responses to comments and any new pertinent information is incorporated into the documents to constitute the Final DMMP and Final PEIS. EPA announces the publication of the Final PEIS in the Notice of Weekly receipts of EISs, published in the Federal Register. Not less than 30 days after publication of the Notice of Weekly Receipts of EISs by EPA, a Record of Decision will be signed by the Corps.

Record of Decision

As defined by ER 1105-2-100 and CEQ regulations, not less than 30 days after publication of the Notice of Weekly Receipts by EPA, the Corps will sign a Record of Decision (ROD). A Notice of Availability for the ROD will be published by the Corps in the Federal Register.

Team/Agency Coordination and Management

It is imperative for study implementation success that internal and external team meetings be conducted regularly to attain team cohesion and a free exchange of information and ideas. Project Management Division of the New England District will coordinate and lead formal study team meetings. Other technical meetings with team members and agencies will also occur as necessary to exchange and discuss technical information and issues.

Coordination of study efforts, oversight and guidance of technical work performed, oversight of the preparation of reporting information, response to study inquiries, and oversight of schedule and budget will be performed throughout the study phase.

3.5 Phase V: Periodic Plan Review and Update

Phase V of the LIS DMMP will include recommendations for periodic re-evaluation of dredged material placement based on changing regulations, economic and environmental conditions, and technological advances as they occur. The intent of this section of the LIS DMMP will be to ensure that decision-makers maintain a viable implementation strategy, reflecting changing

project conditions and technology. This process will allow the dredging manager to anticipate and accommodate changes in dredged material management needs and to document the validity of the technical, economic, and environmental long-term management decisions.

If updates to the DMMP are required, additional documents may be necessary, including supplemental NEPA documents addressing any substantial changes in the DMMP.

SECTION 4 – TEAM ESTABLISHMENT AND MANAGEMENT

To ensure successful execution of the LIS DMMP and PEIS, the PDT is comprised of multi-disciplinary team members from Corps Districts of the North Atlantic Division (New England and New York District offices) as well as members from other agencies, including but not limited to EPA, NMFS, CT DEP, RICRMC, NYDOS and NYDEC. Team members will work together cohesively and collaboratively to produce a plan that will recommend implementation solutions to the dredged material placement needs. The team establishment and management organizations are:

Steering Committee

The project will be overseen by the LIS DMMP Steering Committee, which will consist of representatives from NAD, New England and New York Districts, EPA Regions 1 and 2, NOAA, NYDEC, NYDOS, RICRMC and the CTDEP. The Steering Committee shall prepare the bylaws and procedures under which all proceedings, reviews and decisions will be governed and will resolve any disputes that are not resolved by the study team. The Steering Committee shall be responsible for ensuring that progress on the development of the LIS DMMP is adequate and on schedule. The Steering Committee shall review draft LIS DMMP documents.

Project Delivery Team

The LIS DMMP will be managed by the Corps of Engineers New England District. The PDT team is comprised of representatives from the following organizations:

Corps of Engineers, New England and New York Districts

- Programs and Project Management Division
- Planning Division
- Engineering Division
- Operations Division (NY District)
- Office of Counsel
- Contracting Division
- Public Affairs Office
- Real Estate Division.
- Regulatory Division

US Environmental Protection Agency, Region 1
US Environmental Protection Agency, Region 2
NOAA-NMFS
New York Department of State
New York Department of Environmental Conservation
Connecticut Department of Environmental Protection
Rhode Island Coastal Management Resources Council

The team will consult and partner with other relevant Federal, state, local citizen and interest groups. The PDT will report directly to the Steering Committee on any issues that cannot be resolved at the working level.

Independent Technical Review Team (ITR)

The Independent Technical Review Team (ITR) for the study will, at a minimum, include representatives from one or more of the Corps' District programs and Project Management, Engineering, Counsel, Operations, Real Estate, and Planning Divisions. They will be responsible for ensuring that all technical products of the study team meet Corps regulations, standards, and current guidance. The ITR will provide in-progress review and technical guidance throughout the planning process to facilitate compliance and participate in essential team meetings and product development. The ITR will be responsible for documentation and certification of the review process, and coordinating and signing of the quality control review report by the technical division chiefs. An External ITR Team will be assembled by a Corps Center of Expertise for this action.

SECTION 5 – RESOURCE ESTIMATE DEVELOPMENT

The LIS DMMP budget will be developed in coordination with all members of the PDT, with costs broken down to the study task level. A summary of the LIS DMMP budget is presented in Appendix B. As is the case in complex investigations of this type, immediate needs are more clearly defined while out year's efforts, which in many cases depend of the results of preliminary efforts, are more general in nature and more subject to change.

SECTION 6 - SCHEDULE

A detailed schedule for the initial activities of the LIS DMMP and PEIS is presented in Appendix C. In addition, an expected time line for all project activities in more general terms is contained in Appendix C (TBD). All schedules will be monitored and updated periodically as the LIS DMMP and PEIS progresses.

SECTION 7 – OTHER PLANS

7.1 Communication Strategy

Throughout the LIS DMMP study and PEIS preparation, the PDT will meet regularly (bi-monthly to monthly on a formal and informal basis) to ensure the team is operating together and that there is a free exchange of information and ideas. The Project Manager is responsible for the overall management and is the primary point-of-contact with Congressional interests and Corps higher authority. Documentation of major study team meeting findings and conclusions will be the responsibility of the Project Manager.

7.2 Acquisition Strategy

At this time it is anticipated that a portion of the LIS DMMP and PEIS process will rely on private firms and academics that are contracted through existing IDIQ contracts. As the LIS DMMP and PEIS proceed, the acquisition plan will be formalized in greater detail to document how the studies will be executed and what and how many contracts will be required. This will be coordinated between the two Districts as well as NAE Contracting Division as appropriate. This acquisition strategy will allow the PDT to maintain the project schedule and to document contracting and workload decisions made throughout the life of the project.

7.3 Public Involvement Plan

The Public Involvement Plan will describe the means by which the PDT will involve stakeholders and the general public during the preparation of the LIS DMMP and PEIS. Stakeholders for this project include Federal, State, County and municipal agencies, tribes, universities, interested non-governmental groups, including environmental organizations and marine trade groups, citizens groups and individuals with an interest in Long Island Sound. The Public Involvement Plan that has been developed for the LIS DMMP and PEIS is attached as Appendix A.

7.4 Risk and Uncertainty

The purpose of this LIS DMMP is to develop a programmatic plan that establishes general guidance for future lower tier, project specific studies. With few exceptions, there is sufficient information, once compiled and analyzed, to reach sound and reasonable recommendations.

7.5 Commitments to Customers

The States of Connecticut and New York are the eventual customers of the LIS DMMP product. The regulated community; those individuals, businesses, organizations and public agencies conducting dredging and disposal activities; and environmental public interest groups in the LIS region, will be among those most impacted by this study, and will likely take a keen interest in the study progress and ultimate recommendations. This plan will be completed to respond to the needs of these customers, in a timely fashion, to provide environmentally sound placement capacity for the ongoing function of the harbors and channels in the Long Island Sound vicinity. The product must be implementable by the Corps and the potential non-Federal sponsors as well as being responsive to the environmental community, the interested agencies, the States of Connecticut and New York, the Federal Government, the regulated community, and the general public.

7.6 Change Management

This Project Management Plan is a living document, and will be revised to accommodate changes in project implementation as needed. Requests for significant changes must be submitted in writing. The PM, through consultation with technical staff, will respond to change requests by identifying technical comments, funding, and schedule impacts, which will result from the change. If the change is warranted, the PM will adjust the schedule and will seek additional funding, as necessary.

Revisions to the PMP will be coordinated with the New England and New York District, NAD, CT DEP, EPA, NOAA-NMFS, NYDEC, and NYDOS. Concurrence from the LIS DMMP Steering Committee will be obtained prior to implementation of significant changes.

7.7 Quality Management Plan

A quality management plan will be developed to formally document the necessary Quality Assurance/Quality Control, and other technical activities that will be implemented to ensure that the results of the work performed satisfy the stated performance criteria.

SECTION 8 – APPROVALS

The parties to this PMP after completing their review hereby endorse this PMP, which will become effective upon the date that it is approved by the LIS DMMP Project Delivery Team.

LONG ISLAND SOUND
DREDGED MATERIAL MANAGEMENT PLAN AND
PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

PROJECT MANAGEMENT PLAN

Appendix A

PUBLIC INVOLVEMENT PLAN

LONG ISLAND SOUND
DREDGED MATERIAL MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

PUBLIC INVOLVEMENT PLAN

Introduction

The Long Island Sound Dredged Material Management Plan (DMMP) will be a comprehensive investigation into the dredging needs of the various Long Island Sound region's navigational projects, both Federal and non-Federal, and alternatives for placement or beneficial use of the dredged material from both maintenance and proposed improvement dredging efforts over the next twenty years. The DMMP will identify a base plan for the management of the Corps dredged material as well as alternatives that could be utilized by non-Federal interests in the management of the dredged material they are expected to generate. The DMMP also will investigate and may recommend practicable options that are not part of the base plan if they could be made available at reasonable incremental cost In addition to a DMMP, a Programmatic Environmental Impact Statement (PEIS) will be prepared as part of this study effort.

The study to develop the DMMP and PEIS will be a cooperative effort between the Federal government and the States of Connecticut, Rhode Island and New York. A Project Delivery Team (PDT), representing the Federal and State participants, will coordinate and conduct the day-to-day activities of the study, scoping, preparation and review of technical products, and ensuring that other stakeholders are involved in the study process.

Preparation of the DMMP is estimated to take approximately 5-6 years, depending on the funding stream. This public involvement plan will describe in general the means by which the PDT will involve stakeholders and the general public in the DMMP and PEIS process. Stakeholders include Federal, state, county and municipal agencies, tribes, universities, interested non-governmental groups including environmental organizations and marine trades groups, citizens groups and individuals with an interest in Long Island Sound.

Public Involvement

The goal of the PDT is to involve the interested public in the scoping of this project and to provide regular updates on the progress and direction of the DMMP and PEIS. There are several mechanisms that will be used to provide information and outreach. They include formal meetings/hearings, workshops, periodic newsletters or mailings, information posted on a web page, etc.

To ensure the effective use of Federal and non-Federal funds for this project, electronic means will be preferred for the dissemination of DMMP and PEIS information. Fact sheets, progress updates, public notices, press releases and final work products provided for review will all be transmitted electronically and also be available on the project web site. Hard copies of documents will be available only on request, except where required by regulation.

Public Scoping Meetings

At the outset of the project the PDT will schedule and hold Public Scoping Meetings as part of the DMMP and PEIS effort. The scoping meetings will be scheduled in both New York and Connecticut and will be scheduled for both afternoon and evening sessions to maximize the public's opportunity to attend the meetings. The purpose of the scoping meetings is to inform, involve and educate the public in the purpose and need for the DMMP and PEIS, and to receive input from the public on the scope of those efforts. In addition mailing list dissemination, the PDT will issue press releases announcing the scoping meetings.

Mailing List

An extensive public mailing list was created as part of the LIS site designation EIS completed in 2005. This mailing list was kept up to date and will be used as the initial project mailing list, and will be updated as the project progresses to ensure that all members of the public interested in the project are kept informed of the project status, results of interim investigations, etc. At all public meetings the public will be encouraged to add their name to the mailing list for the distribution of news and announcements. The PDT will actively work on developing and maintaining the project mailing list.

Workshops

Public information sessions and workshops will be used for soliciting wider public understanding of the study need and progress and wider public involvement in the findings and direction of the study. Multiple sessions will be held on both sides of the Sound for each effort in the outreach process to ensure wide public involvement. In general, these sessions will not be recorded. However, the PDT will make notes on comments and recommendations, and a summary document will be prepared at the conclusion of each outreach effort. These summary documents will be made available to the public.

Public information sessions or workshops will be held at critical junctions in the DMMP process or to cover specific topical areas of interest to the public. Outreach efforts may also include advance dissemination of progress or topic fact sheets, and agendas to the public through the mailing list and media contacts, and handouts at the sessions.

Whether an outreach effort is an information session or a workshop will depend on the level of public input solicited. Soliciting feedback on work products or general topics will involve presentations on the individual topics or findings by PDT members, followed by opportunity for public comment and discussion. Where limited to this format public information sessions are appropriate.

Where a more in depth level of public participation is desired a workshop format is more appropriate. For example, soliciting public participation in developing screening criteria for alternative disposal methodologies or sites, or fostering a dialogue between competing public interests on a particular topic such a disposal cost practicability, are better handled

through a workshop format that relies more on discussion than on comment. In these cases presentations by the PDT to the public will be limited to the information necessary to begin public discussion on specific topics. Some workshops will require division into break-out groups to discuss individual topics in detail. The PDT will keep notes on the topics and course of discussion and any conclusions reached. Summary documents outlining the discussions and input received at the workshops will be produced.

Public Mailings, Libraries & Information Distribution

In order to keep the public aware of project progress, issues, interim decisions, etc. periodic newsletters or fact sheets will be developed and mailed out. Information developed for the project will also be made available to the general public through area municipal, state and university libraries that agree to hold these documents. Public notices and press releases will also be disseminated through area media. Letters of availability will be sent to the mailing list whenever critical work products are made available electronically for public information or when public sessions are planned to ensure interested parties have adequate notice of upcoming activities.

Public Hearings

As appropriate, public hearings will be held at multiple locations on both sides of the Sound. Under regulations implementing NEPA, public hearings or meetings are required when a Draft EIS is released to the public for review and comment. At hearings presentations would be made by PDT members followed by public comments. The hearing presentations and public comments will be recorded by a stenographer. Written and verbal comments will be accepted. The PDT will take the public's comments and concerns into account when preparing the final DMMP and PEIS documents. The public comments and the PDT's responses will be summarized in a Response to Comments document that will then be made available to the public as part of the final DMMP/PEIS.

Media Involvement

Regional and local media outlets will be used to involve and inform the public of the DMMP and PEIS. Public Notices and press releases will be issued through these outlets in advance of any public scoping or information sessions, hearings, workshops, or release of critical work products. Print, radio and television outlets and contacts will be maintained on a media contact/mailing list for dissemination of these notices. Corps and EPA public affairs offices will maintain relations with interested representatives of the media and with public relations officials from both states. Media representatives will be encouraged to cover public outreach sessions.

LONG ISLAND SOUND
DREDGED MATERIAL MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Appendix B

Study Tasks and Budget

Study Tasks

Introduction

The study tasks for the Long Island Sound Dredged Material Management Plan (DMMP) are more clearly defined in the short term than over the entire project effort. Results of initial project investigation efforts will likely change or redirect future or later year efforts or may identify project efforts that weren't originally anticipated. The interagency Project Delivery Team (PDT) will update the PMP to better define study tasks and their scope as they become clearer.

Initial Study Efforts (1-24 months)

- **Publication of Notice of Intent:** In conjunction with the development of the DMMP, a Programmatic Environmental Impact Statement (PEIS) will be prepared that dredging project proponents can use in their management alternative analysis. The PEIS will evaluate the overall impacts of alternatives identified in the DMMP with respect to the environment of LIS and its tributaries. This programmatic approach will allow decision makers a means to evaluate different dredged material disposal options with full knowledge of potential environmental consequences. A Notice of Intent to prepare a PEIS was developed and published in the Federal Register on 31 August 2007.

- **Public Scoping Meetings:** A Notice of Intent must be published in the Federal Register a minimum of thirty days prior to holding Public Scoping Meetings. The PDT intends to hold a minimum of six public scoping meetings. The meetings will be scheduled in both New York and Connecticut, and will be scheduled for both afternoon and evening sessions to maximize the public's opportunity to attend the meetings. The purpose of the meetings is to inform, involve and educate the public in the purpose and need for the DMMP and PEIS, and to receive input from the public on the scope of those efforts. In addition to a sending out a public notice announcing the meetings to the mailing list generate as part of the LIS Designation project completed in 2005, the PDT will issue press releases announcing the meetings.

- **Initiation of the Project Public Involvement Plan:** The public will be involved in the scoping of the project and be informed of the progress and preparation of the LIS DMMP and PEIS. The goal of the PDT is to involve the interested public in this project and provide regular updates on the progress and direction of the DMMP and PEIS. There are several mechanisms that will be used to provide information and outreach. They include formal meetings/hearings, workshops, periodic newsletters or mailings, information posted on a web page, etc. More specific information can be found in Appendix A - Public Involvement Plan.

- **Determine Future Dredge Material Management Needs:** In order to formulate alternatives for management of dredged material, the PDT needs to understand how much dredged material will be generated for both Federal and non-Federal

activities. In addition to potential volume of material to managed, the team needs to identify the location and timeframe in which this material will be generated. There are several mechanisms that will be used to assist in developing the future dredged material management needs. Information generated as part of the LIS Site Designation EIS will be updated. Members of the PDT will review the permit records of the Corps of Engineers in both New York and New England and the permits issued by NYDEC and CTDEP to identify the frequency and volume of non-Federal dredging efforts. Corps dredging records will be reviewed to determine past dredging activities as well as projecting future dredging needs. A questionnaire will be developed and sent out to the universe of navigation dependent facilities to assist in determining potential non-Federal dredging maintenance and improvement activities over a 20-25 year timeframe. The dredging needs information will be compiled by 5 year time periods and dredging centers to use in formulation of alternatives that could meet the management needs.

- **Conduct Upland Placement Site Inventory** – An inventory of the potential upland placement sites for dredged material will be conducted by the PDT. This will include sites for potential beach nourishment, marsh creation, transportation improvement projects, brownfields redevelopment, etc.

- **Dewatering and Transfer Site Inventory -** An inventory of potential sites that could be used for dewatering and transfer of dredged material from scows to allow for alternative methods of placement will be conducted by the PDT.

- **Inventory of Innovative Treatment of Dredged Material Applications** – The PDT will research, review and determine the applicability of various innovative treatment techniques for modifying dredged material into a beneficial use product. Current applications that will be evaluated include thermal, soil washing, manufacturing of soils, solidification/stabilization, etc.

Additional Study Efforts

- **Formulation of Alternatives -** Once the future dredging needs are identified by timeframe and region, alternatives will be formulated for the management of dredged material from the Corps projects. The alternatives formulated for a particular dredging center must be sufficient to handle all of the dredging needs from that region for both Federal and non-Federal volumes.

- **Environmental Studies –** The PDT will compile and review existing data on water quality, sediments, physical oceanography, near bottom modeling, etc. to determine what data gaps might exist that need to be addressed in the project to adequately evaluate the alternatives for dredged material management. As those data gaps are identified, the team will develop methodologies to meet the data needs.

- **Economic Studies -** The PDT will compile and review existing data on economic factors needed to assist in the evaluation of the various management alternatives. They will include economic analyses of current cost structure for the upland placement of dredged material, including the economic pinch points, thresholds and estimate of cost ranges. The impact on the increment to price per cubic yard of various processing methods, transportation distances, and methods of processing will be included in the analysis. Additional analysis will include the identification of strategies and actions needed to reduce the incremental cost of treatment and upland disposal; an analysis comparing the establishment and operation of a new regional processing facility(ies); and, financial constraints on current and proposed alternatives to open water disposal to highlight economic opportunities, including state, federal and private funding initiatives and mechanisms that could be implemented to help overcome them, etc.

- **Cultural Resource Studies -** The PDT will compile and review existing data on cultural resources to determine what data gaps might exist that need to be addressed in the project to adequately evaluate the alternatives for dredged material management. As those data gaps are identified, the team will develop methodologies to meet the data needs.

- **Real Estate -** The PDT will compile and review existing data on real estate values to determine what data gaps might exist that need to be addressed in the project to adequately evaluate the alternatives for dredged material management. As those data gaps are identified, the team will develop methodologies to meet the data needs.

- **Design and Cost Estimates –** The PDT will perform feasibility level design efforts on the various alternatives that will allow for the development of various cost estimates to be used in alternative screening and analysis.

- **Miscellaneous Other Investigations –**The PDT will compile and review existing data on other factors needed to assist in the evaluation of the various management alternatives. These likely will include transportation analysis to determine haul routes and any restrictions or prohibitions identified with them, funding opportunities for non-Federal entities to participate in alternative methods of dredged material management, political constraints, etc.

Identification of Base Plan – The PDT will determine a base plan(s) and conduct an evaluation of that plan to identify the alternative or suite of alternatives meeting the least cost/environmentally acceptable dredged material placement needs for Corps of Engineers projects in the Long Island Sound region for the 20-25 year period of analysis. The base plan for Federal navigation purposes is defined as the plan that accomplishes the placement of dredged material associated with the construction or maintenance dredging of Federal navigation projects in the least costly manner, consistent with sound

engineering practices and, in compliance with all applicable Federal environmental standards.

Development of Recommended Plan - The LIS DMMP will investigate and may recommend practicable options that are not part of the base plan if they could be made available at a reasonable incremental cost. When such Recommended Plan(s) are identified, they will include measures that may require actions by others, under a specific timeframe, for implementation.

DMMP and PEIS Development and Documentation - The PDT will develop a LIS DMMP and PEIS to document the efforts, evaluation and results of various investigations. The DMMP will identify applicable Federal and non-Federal mechanisms for project implementation, and identify specific measures necessary to manage the volume of material likely to be dredged over the 20-25 year time frame. This will provide a sound and documented basis for decision-makers at all levels to judge the plan components, singly and collectively. It will identify all necessary agreements (Federal, sponsor, real estate, etc.) and procedural requirements (appropriate NEPA documentation, long-term permits, certifications, etc.) to cover a minimum 20 year period. The DMMP will also identify a full range of measures for dredged material management. These include management of existing placement sites to extend their life, and various combinations of new placement sites involving different placement methods; placement area locations, periods of use, including identifying those that have been or are ready for implementation, and steps needed to get others to that point. The PEIS will evaluate the analyses and recommendations of the DMMP and will function as supporting documentation for detailed implementation studies of specific placement options and identified locations required for their implementation.

Budget

It is anticipated that funds will be provided in the Federal FY 2008 budget to initiate the DMMP and PEIS effort. Although the actual funds required for the project will adjusted based on the results of initial study efforts that will allow for a better identification of investigation needs, the project is currently estimated to require $12 million in Federal funding. The funding stream is currently projected to be:

LIS DMMP/PEIS Funding Needs
(in $million)

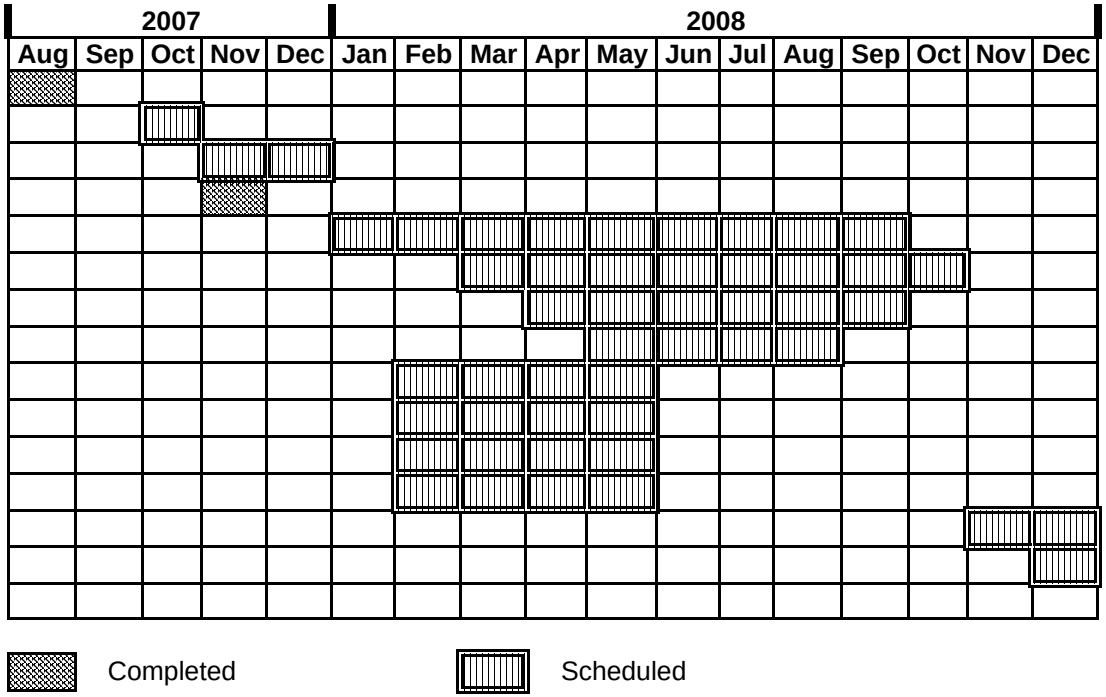
FY 08	FY 09	FY 10	FY 11	FY 012	FY 13	Total
$2.8	$2.0	$2.0	$2.0	$2.0	$1.2	$12.0

LONG ISLAND SOUND
DREDGED MATERIAL MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Appendix C

Study Schedule

LIS DMMP Study Schedule - Initial Activities



* Includes 30 day period for written comments to the record

LONG ISLAND SOUND

FINAL
DREDGED MATERIAL MANAGEMENT PLAN
AND FINAL PROGRAMMATIC
ENVIRONMENTAL IMPACT STATEMENT

APPENDIX J

US EPA ANNUAL REPORTS
ON DREDGED MATERIAL MANAGEMENT
IN THE LONG ISLAND SOUND REGION

APPENDIX J

US EPA ANNUAL REPORTS ON DREDGED MATERIAL MANAGEMENT IN THE LONG ISLAND SOUND REGION

This appendix contains the nine issues of the U.S. Environmental Protection Agency, Region 1's Annual Report Regarding Progress in Developing a Dredged Material Management Plan for the Long Island Sound Region.

The final rule designating the Central and Western Long Island Sound sites required formation of an interagency/interstate Regional Dredging Team (RDT) for Long Island Sound which would engage agencies and private parties looking to secure approvals for dredging projects in the LIS region that were subject to MPRSA requirements. Agencies and proponents of such projects present the findings of their placement alternatives analysis and seek input from the RDT to be considered in their final applications and requests for approvals from Federal and state regulatory agencies. The RDT tasked the U.S. EPA with producing an Annual Report on the progress of the DMMP, including dredging and placement activities in the Long Island region, to track the progress in finding and implementing alternatives to open water placement. EPA Region I has prepared nine annual reports, as listed below, since 2006.

U.S. EPA Annual Reports Regarding Progress in Developing a Dredged Material Management Plan for the Long Island Sound Region		
Annual Report	Date	Period Covered
Ninth	May 2015	July 6, 2013 to July 5, 2014
Eighth	February 2014	July 6, 2012 to July 5, 2013
Seventh	January 2013	July 6, 2011 to July 5, 2012
Sixth	December 2011	July 6, 2010 to July 5, 2011
Fifth	December 2010	July 6, 2009 to July 5, 2010
Fourth	October 2009	July 6, 2008 to July 5, 2009
Third	October 2008	July 6, 2007 to July 5, 2008
Second	December 2007	July 6, 2006 to July 5, 2007
First	September 1, 2006	July 5, 2005 to July 5, 2006

Ninth Annual Report Regarding Progress in Developing a Dredged Material Management Plan for the Long Island Sound Region

For the Period July 6, 2013 - July 5, 2014

U.S. Environmental Protection Agency, Region 1

May 2015

INTRODUCTION

This is the ninth annual report by the U.S. Environmental Protection Agency (EPA) on progress toward completion of a dredged material management plan (DMMP) for the Long Island Sound region, and related efforts to "reduce or eliminate" the need for open-water disposal of dredged material in Long Island Sound.

BACKGROUND

EPA Regulatory Requirements

On June 3, 2005, EPA issued a final rule to designate two open-water dredged material disposal sites, Central Long Island Sound and Western Long Island Sound, for the placement of dredged material from harbors and navigation channels in the Long Island Sound vicinity in the states of Connecticut and New York [40 CFR Part 228.15(b)(4) and (b)(5)].

The use of these two sites is subject to restrictions that are described in the site designation rule, which are intended to reduce or eliminate the disposal of dredged material in Long Island Sound. Use of the sites pursuant to these designations may be suspended or terminated in accordance with these restrictions.

One of these restrictions links continued use of the sites to the completion of a regional dredged material management plan (DMMP) for Long Island Sound. A DMMP is a comprehensive planning process and decision-making tool to address the management of dredged material for a specific harbor or navigation project, group of related projects, or geographic area. Additional detail on the DMMP is provided in the next section.

A related restriction requires EPA to conduct an annual review of progress toward completion of the DMMP. EPA is complying with this requirement by producing an annual report on or about the anniversary of the effective date of the site designations (July 5, 2005), and making the report available to the general public.

Another restriction is intended to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP by requiring the formation of an interagency Long Island Sound Regional Dredging Team (RDT). The RDT reviews dredging projects subject to Designation Restrictions to ensure that a thorough effort has been conducted to identify practicable alternatives to open-water disposal and ensure the use of those alternatives to the maximum extent practicable. In addition to information on the status of the DMMP, this EPA annual report includes information on RDT deliberations conducted in the preceding year, and on the quantity of dredged material and its final placement or disposal location. Additional detail on the form and function of the RDT is provided in a later section.

In the designation rule an eight year time period was established between the publishing of the rule and when a DMMP should be completed. Failure to complete the DMMP in this time period would trigger the shutdown of the CLDS and WLIS disposal sites until the DMMP was completed.

However, since three years passed between the designation rule and funding was provided for DMMP efforts, the LIS DMMP Steering Committee, the Federal and State agencies involved in the project, determined that an extension of the timeline was warranted. The CLDS and WLDS site closure dates were extended to April 30, 2015. A letter of agreement was signed in June 2013 by the US Environmental Protection Agency, the US Army Corps of Engineers, the NY Department of State, and the CT Department of Energy and Environmental Protection.

Dredged Material Management Plans

The U.S. Army Corps of Engineers (USACE) regulations require each of its district offices to develop a DMMP for all Federal Navigation Projects for which there is an indication of insufficient placement or disposal capacity to accommodate maintenance dredging over a 20-year period. A DMMP addresses a wide range of environmentally acceptable, cost-effective, and practicable alternatives for the management of dredged material, culminating with the selection of a base plan and a recommended plan that ensures that sufficient capacity for dredged material placement exists for a project or group of projects a minimum 20-year planning period. The range of alternatives includes those that may provide environmental or commercial benefits through beneficial use of dredged material. The scope of a DMMP may also include private dredging projects that are geographically related to the federal project(s), which may require the sponsors of those projects to provide non-federal funds to support the additional work.

The DMMP process involves a phased approach. The first phase, a Preliminary Assessment, draws on existing information to: (1) determine the economic and engineering need for dredging according to existing and reasonably prospective navigation traffic; (2) identify the anticipated locations and volumes of dredged material to be generated within the study area; (3) examine existing dredged material disposal sites and management practices to determine if shortfalls in capacity or opportunities for better management exist; and (4) provide an estimate of the cost of completing the DMMP. The Preliminary Assessment determines whether a federal interest exists in participating in a feasibility-level DMMP study.

If the PA phase recommends the development of a DMMP after the PA is completed and approved, the DMMP is initiated upon the appropriation of necessary funding. The first step is development of a Project Management Plan (PMP) that describes: (1) the scope of the DMMP; (2) the sequence of the studies; (3) a plan for acquisition management covering the various study tasks (labor, contracts, other agency contributions); (4) a plan for public involvement and participation; and (5) an estimated budget, organized by federal fiscal year budget cycle.

Following review and acceptance of the PMP by the project delivery team which also can consist of cooperating federal and state agencies, feasibility-level study efforts would commence, subject to the availability of staff and funding. These studies generally focus on the following topics: (1) dredging needs; (2) management options; (3) capacities of placement sites; (4) environmental compliance requirements; (5) potential for beneficial use of dredged material; and (6) indicators of continued economic justification. The PMP is considered a "living document", subject to change based on new information and input from the public and other agencies.

The management structure for a typical DMMP comprises the following components:

- Project Manager: Individual responsible for day-to-day management of project.
- Project Delivery Team (PDT): The working group (in some cases involving members of other agencies) that will assist with the development of the DMMP.
- Agency Technical Review Team: An internal USACE technical review procedure required by the US ACE to review the plan for technical merit and cost-effectiveness.
- Technical working groups: These may be formed to provide assistance to the Project Delivery Team, with representation from other federal and state agencies, and sometimes non government organizations and private citizens.

For compliance with the National Environmental Policy Act (NEPA), the USACE prepares an Environmental Assessment, an Environmental Impact Statement or a Programmatic Environmental Impact Statement (PEIS), whichever is most appropriate, that evaluates the analyses and recommendations of the DMMP.

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN

Management Structure

The US ACE is the lead agency for development of the Long Island Sound Dredged Material Management Plan (LIS DMMP). The New England District and New York District, with oversight by the North Atlantic Division, are developing the DMMP in cooperation with EPA Regions 1 and 2, the National Oceanic and Atmospheric Administration (NOAA), the New York State Department of State (NYS DOS), the New York State Department of Environmental Conservation (NYS DEC), the Connecticut Department of Energy and Environmental Protection (CTDEEP) (formerly the Connecticut Department of Environmental Protection, or CT DEP), the Connecticut Department of Transportation (CT DOT) and the Rhode Island Coastal Resources Management Council (RI CRMC).

Management of the LIS DMMP was assigned to the US ACE New England District, which assigned a project manager responsible for overall management of the effort. The participating agencies agreed to adopt the traditional management structure by establishing and assigning representatives to a LIS DMMP Project Delivery Team (PDT). Although not a standard component of the DMMP

management structure, due to the large scope of the project and strong public interest, the agencies also formed a Steering Committee (SC) of higher level agency officials to facilitate communication, priority-setting, and the commitment of resources for the LIS DMMP.

During this reporting period, the SC participated in one conference call on May 28, 2014. In addition, the SC held a face to face meeting on February 11, 2014 in Newington, CT at the CTDOT headquarters. The PDT members participated in seven conference calls (August 9, September 6, November 6, December 5, January 8, April 2, and May 14, 2014). Some of the PDT members also participated in the SC meeting as well as the SC conference calls. The PDT conference calls were held to discuss current and planned DMMP work efforts, project budget, and proposed schedule for future work tasks. The current rosters (as of March 2015) for the Steering Committee and PDT are attached as Appendices A and B.

Planning Process

The overarching goal of the LIS DMMP is to develop a comprehensive plan for dredged material management in Long Island Sound that ensures Corps of Engineers federal navigation project dredging needs are met, and identify alternatives that could be used by others that will lead, over time, to the reduction or elimination of open-water disposal in the Sound. The DMMP will try to meet this goal by using a broad-based, public process that protects the environment based on best scientific data and analysis, while meeting society's need for safe and economically viable navigation for water based commerce, transportation, national security, and other public purposes. Recognizing that there are numerous institutional, regulatory, social, and financial barriers to utilizing dredged material beneficially, one purpose of the DMMP is to document these barriers and recommend plans to overcome them.

For the Long Island Sound DMMP, it should be noted that the site designation restrictions apply to all federal projects, and non-federal projects generating more than 25,000 cubic yards of dredged material in the region. The LIS DMMP will identify potential environmentally acceptable, practicable management alternatives that can be utilized by various dredging proponents in their analysis of options to manage their dredging projects.

The Preliminary Assessment for the LIS DMMP was completed and approved by the USACE in June 2006. The Project Management Plan, which serves as the initial work plan for the LIS DMMP, was completed and approved by the USACE, in consultation with the PDT, in October 2007. As previously noted, the PMP is subject to change based on new information and input from the public and other agencies.

The USACE will be preparing a Programmatic Environmental Impact Statement (PEIS) in conjunction with the LIS DMMP to ensure compliance with NEPA. The USACE published the Notice of Intent to develop a PEIS for the LIS DMMP in the Federal Register on August 31, 2007 (72 FR 50332). EPA, the USACE, and state agencies conducted a series of six public information and NEPA scoping

meetings to kick off the LIS DMMP and PEIS process on November 26-29, 2007. The agencies held three meetings in each of the two states to present progress on the planning for the LIS DMMP and solicit public input on both the scope and process of the LIS DMMP and PEIS. Public comments will be considered in identifying and developing the activities and investigations to be performed in the LIS DMMP and PEIS effort. The presentations from the public meetings and other related documents are available on the USACE LIS DMMP Project website, which was established in August 2007 http://www.nae.usace.army.mil/Missions/ProjectsTopics/LongIslandSoundDMMP.aspx On March 24, 2008, the USACE initiated contractual efforts for the LIS DMMP study efforts. The USACE has been using both contracted services and in-house resources to conduct the various inventories or analyses needed for the development of the DMMP. The reports are available on the above mentioned USACE website.

The Dredging Needs Survey, which estimates the volume of dredged material that will be generated by location and by time frame for the entire region over a 30-year planning horizon, was initiated in June 2008 and completed in Oct 2009. An updated two-phase Literature Review was initiated in April 2008 and completed in June 2010. The Economic Update was initiated in January 2010 and completed in March 2010.

The initial Upland Placement Inventory, which identified and cataloged potential upland placement alternatives for the entire region over a 30-year planning horizon, as well as the inventory of possible shore-side transfer sites and beneficial use sites, was initiated in August 2008 and completed in October 2009. The sites in this report were screened based on their potential viability for use by the USACE in management of their dredged material. A second phase upland/beneficial use/near shore placement site identification effort designed to provide site-specific information such as capacity, restriction, etc. for the potential sites large enough for USACE use was completed in November 2010. An additional upland/beneficial use/near shore effort designed to provide site-specific information (e.g., capacity, restrictions, etc.) for the potential small sites was completed in January 2011.

The Federal and State Regulatory and Program Update was completed in October 2011. The Cultural update was initiated in May 2010 and completed in August 2010. An effort to inventory potential confined disposal sites and near shore placement sites was completed in November 2012. Another effort to determine air quality impacts from different sized and types of projects, and whether they would conform with Clean Air Act requirements also has been initiated and will be completed in 2015. An analysis of the estimated costs of transporting dredged material from various sizes and types of projects is also expected to be completed in 2015.

Concurrent with the technical studies, the USACE, with support from the PDT and contractors, initiated public outreach and participation efforts in 2010 and continued them in 2012. The first of several LIS DMMP newsletters was sent electronically and by mail to the public in February 2010.

A second newsletter was distributed electronically in August 2012, and 2014. Both newsletters updated the public on work that had been completed, work underway and planned future efforts. Newsletters are also posted on the project web site.

USACE also established a LIS DMMP Working Group in early 2011 comprising representatives from federal, state, regional, and local government agencies, and various stakeholder organizations that have an interest in dredged material management in the Long Island Sound region. The Working Group members' responsibility is to provide input to the LIS DMMP process in their respective areas of expertise. The PDT held several Working Group meetings in Connecticut and New York to discuss the project and develop the methodology and criteria that would be used to determine Working Group concerns. Working Group (WG) members were invited to participate in a detailed survey that was developed with their assistance. This WG meeting was on 17 January 2013 in Bridgeport, CT. The purpose of this WG meeting was to present the results of the various surveys conducted with the Working Groups from NY and CT. This survey was designed to assisting in identifying a list of criteria based on stakeholder interests and concerns. Members of the Working Group, by reviewing and disseminating the information presented and discussed at the meetings, and conveying their organization's comments and positions, serve as a communication link between the regulatory agencies and the organizations represented on the Working Group.

During the meetings, the USACE presented background on the LIS DMMP process, the requirements for determining suitability of dredged material for disposal at the Long Island Sound disposal sites, and presented the USACE Engineer Research and Development Center (ERDC) Multi-Criteria Decision Analysis (MCDA) method. This method is being used to model scenarios with varying trade-off values (esthetic, economic, environmental, etc.). This information will be used in the alternatives assessment document.

In January 2012, the Working Group representatives were furnished a “read ahead” packet to assist them in discussions with members of their organization to determine rankings of various parameters of interest to their organizations. After the representatives identified their organization’s rankings they were to be interviewed by ERDC staff so that the results of all interviews could be compiled and analyzed. Due to limit participation of the Working Group organizations, the deadline for the interviews was extended several times to give the Working Groups more tie to organize their responses.

Additional studies initiated include: Harbor Sediment Characterization, Air Quality Analysis, and Transportation Cost Analysis Matrix. The Harbor Sediment Characterization report collected information sediment testing results from Corps of Engineers maintenance projects and testing results conducted by others for their dredging projects. The data was collected from the Corps Navigation Sections and Regulatory Divisions in both the New York and New England Corps offices.

The Transportation Cost Analysis Matrix develops costs associated with dredging projects of various sizes (from 1000 CY to 4 million CY) using different types of dredging equipment (mechanical, hopper, hydraulic, etc.) with different sediment types (sand, silt, etc.)

The Air Quality Analysis uses the equipment developed in the Transportation Cost Matrix to determine the emissions from that equipment and comparing it to the State standards.

The States of New York and Connecticut have collected information that will be used to assist in identifying possible sediment and contaminant reduction into LIS. This information was provided to the USEPA and compiled into a report that should be part of the final LIS DMMP document.

The Draft Programmatic Environmental Impact Statement is expected to be completed in December 2015. Public meetings will be conducted in New York and Connecticut during the review period for the Draft PEIS.

Funding

In February 2005, the governors of the two states sent a joint letter to the USACE requesting its assistance with the development of the DMMP and, in separate letters, asked members of their respective congressional delegations to seek appropriation of federal funds to initiate the DMMP. The PDT initially estimated that it would cost up to $12 million and take 5-6 years to complete the LIS DMMP. The USACE agreed to work with the states on the DMMP and requests for funds were included in the President's budget for federal fiscal years (FY) 2007 and 2008. In FY07, $1.7 million was included in the President's proposed budget, but this was eliminated by passage of a Continuing Resolution that was based on the FY06 federal budget.

Federal funding for the LIS DMMP began in FY08 and continued through FY13 at variable levels (see table below). As of April 1, 2015, $8,417,030 in federal funds have been provided for the LIS DMMP project.

Federal Funding for LIS DMMP, 2007-2015

Fiscal Year	Appropriation
2007[1]	$100,000
2008	$3,525,000
2009	$980,000
2010	$2,761,100
2011	$490,685
2012[2]	($912,800)
2013	$1,473,045
2014	$0
2015	$0
Total	$8,417,030

1. Includes $75,000 of FY05 funds.

2. Represents a reprogramming of funds out of LIS DMMP account

LONG ISLAND SOUND REGIONAL DREDGING TEAM

Purpose

As described above, the site designation rule contemplated that a Regional Dredging Team would be established to review dredging proponents' alternative analyses to ensure that the proponents conducted a comprehensive analysis for practicable alternatives to open-water dredged material disposal and recommend their use to the maximum extent practicable, to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP.

The following excerpt from the RDT guidance describes its primary function:

> The RDT is charged with reviewing all permit applications and authorizations subject to the … site designation rule restrictions and is not precluded from voluntarily providing advice to any other dredging project to help achieve the goal of reducing or eliminating the need for open water disposal in Long Island Sound. The RDT will work to identify all practicable alternatives to open water disposal and to advise regarding their use to the maximum extent practicable. Further, those identified practicable alternative use opportunities will be advanced through the appropriate state and federal authorities. All agencies will retain their respective final regulatory decision-making authority and regulatory time frames for project review.

In July 5, 2006, EPA, USACE, NOAA, and the states agreed to form an RDT and assigned representatives. The RDT began drafting a charter to describe the procedures the RDT would use to review the alternatives analyses developed by dredging project proponents, determine the adequacy of the analyses, and make recommendations on alternative dredged material placement options that should be considered by the USACE and other regulatory agencies. The RDT charter was approved by the Steering Committee in March 2007. The charter describes how the RDT will enhance communication and discussion among the participating agencies to facilitate the timely review and presentation of recommendations on the placement of dredged material from Long Island Sound dredging projects. Through the review process, the RDT will become aware of possible alternatives to open-water disposal that it can communicate to potential applicants as well as appropriate state and federal authorities.

Current Status

During this reporting period, there were three proposed projects or alternatives to be discussed by the RDT. The RDT met to discuss the Guilford, Stamford, and USCG dredging proposals. The meetings were held on July 24, 2013, August 15, 2013, and June 19, 2014 as virtual meetings via webinar capabilities.

DREDGED MATERIAL DISPOSAL IN LONG ISLAND SOUND

It is the stated goal of the states of Connecticut and New York to reduce or eliminate the disposal of dredged material in Long Island Sound. To determine if this goal is being met will require measuring and tracking the amount of dredged material being disposed of or placed in the Sound and other locations. Currently, most open-water disposal in the Sound occurs at one of the four dredged material disposal sites in the Sound: Western Long Island Sound (WLDS), Central Long Island Sound (CLDS), Cornfield Shoals (CSDS), and New London (NLDS).

Alternatives include: upland placement or disposal; beach nourishment (depositing sand on or near an eroding beach); habitat restoration (e.g., depositing dredged material in sub-tidal areas to raise elevation and restore or create wetlands); confined aquatic disposal (CAD) cells (depositing unsuitable dredged material in a pit excavated below the floor of the harbor or navigation channel, and covering with clean material); and confined disposal facilities (using dredged material to increase the size of or create islands, e.g., to expand port facilities). Some of these alternatives, including beach nourishment, habitat creation/restoration, and capping (for both upland and aquatic habitat remediation purposes, in certain circumstances) are considered beneficial to the environment (i.e., beneficial uses). The following excerpt from the RDT guidance describes this process:

> The RDT will track and document the volume of dredged material approved for open water disposal as well as other alternative disposal methods, and submit this information for inclusion in the annual report on progress of the DMMP. This information will be part of the annual report on the progress of the DMMP to be issued by the EPA.

EPA is complying with this guidance by working with the RDT to compile dredged material disposal records on an annual basis, and reporting these data in an annual report for a one-year period ending July 5 each year. The data in the annual report will be compared with dredged material disposal data from all disposal activity in Long Island Sound averaged over the period from 1982-2004. It should be noted that the tracking of these beneficial uses of dredged material has been difficult since USACE permits are not required for placement of material outside of the waters of the United States. Although State permits are granted for this placement these permits are multi-year approvals and proponents do not always report to the state actions that have occurred in a given year. For these reasons it is believed that the volumes reported for beneficial use may be low compared to actual beneficial use projects. This is the ninth annual report.

Dredged Material Disposal in Long Island Sound, 1982-2004 (in cubic yards [c.y.])

Disposal Site	Total Dredged Material Disposal	Avg. Annual Dredged Material Disposal
NLDS	3,069,546	133,459
CSDS	1,295,998	56,348
CLIS	8,019,678	348,682
WLIS	1,870,921	81,344
Totals	14,256,143	619,833

Overall, there was a total of 1,292,194 c.y. of dredged material generated in the Long Island Sound vicinity for the period July 6, 2013- July 5, 2014, of which:

- 1,276,294 c.y. were disposed at open-water disposal sites in Long Island Sound;
- 10,400 c.y. were placed at containment sites; and
- 5.500 c.y. were used beneficially.

Recent Dredged Material Disposal in Long Island Sound Compared with Historic Averages

(in cubic yards [c.y.])

Disposal Site	Avg. Annual Dredged Material Disposal	2012	2013	2014	Change from Previous Reporting Period (2013) c.y.	Change from Historic Average (1982-2004) c.y.
NLDS	133,459	0	19,100	0	-19,100	-133,459
CSDS	56,348	31500	72,600	21,950	-50,650	-34,398
CLDS	348,682	84500	122,600	1,219,344	1,096,744	870,662
WLDS	81,344	27008	41,400	35,000	-6,400	-46,344
Totals	619,833	143008	255,700	1,276,294	1,020,594	656,461

A total of 1,292,194 c.y. of dredged material was generated in CT in 2014. In addition to the amount of the total (1,276,294 c.y. disposed in the sound, 10,400 was disposed in the CT river (Wethersfield cove) and 5,500 c.y. was disposed as beneficial use off of Hammonasett Beach, CT.

Of the 1,276,294 c.y. disposed in the Sound:

- 0 c.y. went to NLDS (vs. historical annual average of 133,459 c.y.);

- 21,950 c.y. went to CSDS (vs. a historical annual average of 56,348 c.y.).
- 1,219,344 c.y. went to CLDS (vs. historical annual average of 348,682 c.y.); and
- 35,000 c.y. went to WLDS (vs. historical annual average of 81,344 c.y.);

Of the 1,276,294 c.y. disposed in the Sound 274,436 c.y. came from private projects.

The average annual amount of dredged material disposed at the four open-water sites in the Sound from 1982-2004, was 619,833 c.y. For the period July 6, 2013 July 5, 2014, there was a total disposed of 1,276,294 c.y., which is an increase of 656,461c.y. For further details, see Appendix D.

While there is generally some variability from one year to the next in the amount of dredged material disposed of in the Sound, there are many factors influencing this variability. Regardless, it is too early to determine any kind of long-term trend. The amount of dredged material disposed in the Sound during the current reporting period of July 6, 2013 - July 5, 2014, was greater than the amount disposed during the prior reporting period of July 6, 2012 - July 5, 2013 (255,700 c.y. vs. 1,276,294 c.y. respectively); this appears to have resulted from variability in the size of projects and funding rather than from any difference in analysis of alternatives.

Since 2004, there has been an overall reduction in disposal of dredged material:

Disposal Site	Avg. Annual DM in cubic yards (1982-2004)	Avg. Annual DM in cubic yards (2006-2014)	Difference	Reduction in Use
NLDS	133,459	43,193	-90,266	-68%
CSDS	56,348	43,591	-12,757	-23%
CLDS	348,682	294,064	-54,618	-16%
WLDS	81,344	20,056	-61,288	-75%

EPA will continue to report on an annual basis about the LIS RDT deliberations as well as each dredging project that was completed in the preceding year, including the name of the applicant, the alternatives that were evaluated, the volume of dredged material, and its final placement or disposal location.

For further information, please contact:

Jean Brochi
US Environmental Protection Agency
5 Post Office Square, Suite 100, Mail Code OEP06-1
Boston, MA 02119-3912
Telephone: (617) 918-1536, Fax: (617) 918-0536, brochi.jean@epa.gov

Appendix A

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN STEERING COMMITTEE		
AGENCY	MEMBER	ALTERNATE
NOAA	Lou Chiarella Assistant Regional Administrator Habitat Conservation Division 978-281-9277 Lou.Chiarella@noaa.gov	Christopher Boelke Field Offices Supervisor Habitat Conservation Division 978-281-9131 christopher.boelke@noaa.gov
USACE North Atlantic Division (NAD)	David Leach, Director Programs Directorate 347-370-4629 david.j.Leach@usace.army.mil	Joe Vietri, Chief Planning Division 718-765-7070 joseph.r.vietri@usace.army.mil
USACE New England District (NAE)	Bill Scully, Deputy District Engineer for Programs and Project Management 978-318-8230 william.c.scully@usace.army.mil	
USACE New York District (NAN)	Joe Seebode, Deputy District Engineer for Programs and Project Management 917-790-8207 Joseph.j.seebode@usace.army.mil	
EPA Region I	Stephen Perkins, Program Manager Office of Ecosystem Protection 617-918-1501 Perkins.Stephen@epa.gov	Lynne Hamjian, Deputy Director Office of Ecosystem Protection 617-918-1601 hamjian.lynne@epa.gov
EPA Region II	Jeff Gratz, Deputy Director Clean Water Division 212-637-3873 gratz.jeff@epa.gov	Kate Anderson, Chief Clean Water Regulatory Branch Clean Water Division 212-637-3754 Anderson.kate@epa.gov
New York State Dept. of State	Jeff Herter, Division of Community Resilience and Regional Programs Office of Planning & Development 518-486-7942 Jeff.Herter@dos.ny.gov	Gregory Capobianco, Director Division of Community Resilience and Regional Programs,Office of Planning & Development 518-474 - 6000 Gregory.capobianco@dos.ny.gov
New York State Dept. of Environmental Conservation	James Gilmore, Chief Bureau of Marine Resources 631-444-0430 jgilmor@gw.dec.state.ny.us	Dawn McReynolds, Section Head Marine Habitat, Bureau of Marine Resources 631-444-0452 dxmcreyn@gw.dec.state.ny.us
Connecticut Dept. of Energy and Environmental Protection	Betsey Wingfield, Chief Bureau of Water Management 860-424-3704 betsey.wingfield@po.state.ct.us	Brian Thompson, Director Office of Long Island Sound Programs 860-424-3034 brian.thompson@po.state.ct.us
Rhode Island Coastal Management Resource Council	Jeff Willis 401-783-3370 jwillis@crmc.ri.gov	Dan Goulet 401-783-3370 dgoulet@crmc..ri.gov

x B

Appendix A

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN PROJECT DELIVERY TEAM		
AGENCY	MEMBER	MEMBER
USACE New England District (NAE)	Mike Keegan, Chief Civil/IIS Project Management Br. 978-318-8087 michael.f.keegan@usace.army.mil	Mark Habel 978-318-8871 mark.l.habel@usace.army.mil
USACE New York District (NAN)	Nancy Brighton 917-790-8703 Nancy.j.brighton@usace.army.mil	
EPA Region I	Mel Cote 617-918-1553 cote.mel@epa.gov	Jean Brochi 617-918-1536 brochi.jean@epa.gov
EPA Region II	Doug Pabst 212-637-3797 pabst.douglas@epa.gov	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov
NOAA - National Marine Fisheries Service	Christopher Boelke Field Offices Supervisor Habitat Conservation Division, NOAA 978-281-9131 christopher.boelke@noaa.gov	
New York State Dept. of State	Jennifer Street 518-474-1737 Jennifer.Street@dos.state.ny.us	Jeff Herter, Assistant Chief Bureau of Natural Resource Management 518- 486-7942 Jeff.Herter@dos.ny.gov
New York State Dept. of Environmental Conservation	John Ferguson 518-402-8829 jjfergus@gw.dec.state.ny.us	
Connecticut Dept. of Energy and Environmental Protection	George Wisker 860-424-3034 george.wisker@po.state.ct.us	William Sigmund Bureau of Materials Management and Compliance Assurance 860-418-5924 William.Sigmund@ct.gov
Connecticut Dept. of Transportation	Joe Salvatore 860-594-2539 joseph.salvatore@po.state.ct.us	
Rhode Island Coastal Resources Management Council	Dan Goulet 401-783-3370 dgoulet@crmc..ri.gov	

Appendix C

LONG ISLAND SOUND REGIONAL DREDGING TEAM		
AGENCY	MEMBER	MEMBER
USACE North Atlantic Division (NAD)	James Haggerty 347-370-4650 james.w.haggerty@usace.army.mil	Only one member on RDT According to RDT Charter
USACE New England District (NAE)	Robert Desista (Current RDT Chair) 978-318-8879 robert.j.desista@usace.army.mil	Jay Mackay 978-318-8142 joseph.b.mackay@usace.army.mil
USACE New York District (NAN)	Stephen Ryba 917-790-8411 Stephen.Ryba@usace.army. mil	Alexander Gregory 917-790-8411 Alexander.Gregory@usace.army.mil
EPA Region I	Jean Brochi 617-918-1536 brochi.jean@epa.gov	Mel Cote 617-918-1553 cote.mel@epa.gov
EPA Region II	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov	Doug Pabst 212-637-3797 pabst.douglas@epa.gov
NOAA National Marine Fisheries Service	Christopher Boelke Field Offices Supervisor Habitat Conservation Division, NOAA 978-281-9131 christopher.boelke@noaa.gov	Only one member on RDT According to RDT Charter
New York Dept. of State	Jennifer Street 518-474-1737 Jennifer.Street@dos.state.ny.us	Only one member on RDT According to RDT Charter
New York State Dept. of Environmental Conservation	Charles de Quillfeldt 631-444-0439 cxdequil@gw.dec.state.ny.us	Only one member on RDT According to RDT Charter
Connecticut Dept. of Energy and Environmental Protection	George Wisker Office of Long Island Sound Programs 860-424-3034 george.wisker@po.state.ct.us	William Sigmund Bureau of Materials Management and Compliance Assurance 860-418-5924 William.Sigmund@ct.gov

Appendix D

Long Island Sound Annual Dredging Report - for the Dredging Year Ending July 5, 2014

July 6, 2013-July 5, 2014

Disposal Sites and Methods		CONNECTICUT			NEW YORK			Total All Projects and States
		Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities	Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities	
Open Water Disposal								
	CLDS	1,001,858	0	217,486	0	0	0	1,219,344
	WLDS	0	0	35,000	0	0	0	35,000
	NLDS	0	0	0	0	0	0	0
	CSDS	0	0	21,950	0	0	0	21,950
Confined Disposal								
	CAD Cells	10,400	0	0	0	0	0	10,400
	Upland Containment	0	0	0	0	0	0	0
	Landfill	0	0	0	0	0	0	0
Beneficial Use								
	CAD Cap	0	0	0	0	0	0	0
	Beach/Bar Nourishment	0	0	5,500	0	0	0	5,500
	Habitat Creation/Enhance	0	0	0	0	0	0	0
	Brownfield Remediation	0	0	0	0	0	0	0
Treated Dredged Material								
	Upland Disposal	0	0	0	0	0	0	0
	Commercial Use	0	0	0	0	0	0	0
TOTAL ALL DISPOSAL		1,012,258	0	279,936	0	0	0	1,292,194

Site	Project Name	Fed	Permit/ Contract #	Start Date	End Date	# of Placement Events	Estimated Total Volume (cy)
NLDS							
						site total	0
CSDS	Brewers Pilots Point Marina (Westbrook)	NF	NAE-20C1-2437	2/1/2014	2/13/2014	12	4,350
	Harbor One Marina (Old Saybrook)	NF	NAE-2004-4113	2/25/2014	4/26/2014	19	10,000
	Saybrook Point Marina	NF	NAE-2006-3529	2/28/2014	3/30/2014	24	7,600
						site total	21,950
CLDS	Branford Yacht Club	NF	NAE-2013-926	12/14/2013	12/17/2013	3	1,200
	Brewer Stratford Marina	NF	NAE-2004-52	10/16/2013	12/8/2013	39	20,400
	Browns Boatyard (Guilford)	NF	NAE-2005-4096	2/20/2014	2/25/2014	4	2,100
	Cos Cob Marina (Greenwich)	NF	NAE-2010-2420	11/22/2013	1/11/2014	35	22,300
	Gateway Terminal (New Haven)	NF	NAE-2007-1916	11/24/2013	12/8/2013	11	13,500
	General Dynamics (Groton)	NF	NAE-2006-1203	10/17/2013	10/30/2013	17	18,000
	Guilford Yacht Club	NF	NAE-2007-1989	1/24/2014	2/23/2014	29	24,950
	Gulf Oil (New Haven)	NF	NAE-2007-1486	11/19/2013	11/24/2013	9	24,500
	Gwenmor Marina (Mystic)	NF	NAE-2008-425	10/1/2013	10/2/2013	1	250
	Indiantown Harbor (Old Saybrook)	NF	NAE-2006-3529	2/28/2014	3/30/2014	24	19,000
	Magellan Terminal (East St - New Haven)	NF	NAE-2006-2341	12/5/2013	12/7/2013	4	7,700
	Magellan Terminal (Waterfront St. New Haven)	NF	NAE-2006-2340	12/7/2013	12/7/2013	2	5,600
	Milford Lisman Landing Marina (Mystic)	NF	NAE-2011-230	11/5/2013	11/11/2013	10	6,000
	Motiva Enterprises (New Haven)	NF	NAE-2009-287	1/20/2014	1/21/2014	2	1,500
Site	**Project Name**	**Fed**	**Permit/ Contract #**	**Start Date**	**End Date**	**# of Placement Events**	**Estimated Total Volume (cy)**
CLDS	Pequonnock YC (Mystic)	NF	NAE-2010-368	10/14/2013	1/29/2014	42	13,350

	Norman Bloom (Norwalk)	NF	NAE-2001-2523	1/31/2014	1/31/2014	1	600
	Norwalk, City of (Veterans Park)	NF	NAE-1990-1092	1/11/2014	1/19/2014	11	7,500
	O&G Industries (Bridgeport)	NF	NAE-2006-1072	1/5/2014	1/16/2014	10	10,000
	St. Ann Boat Club (Norwalk)	NF	NAE-2012-904	12/16/2013	12/31/2013	7	2,400
	Stony Pt. Assoc. (Westport)	NF	NAE-2010-58	1/4/2014	1/9/2014	5	1,500
	Thames Shipyard (New London)	NF	NAE-2007-491)	12/4/2013	1/29/2014	25	15,136
	New Haven FNP	F	W912WJ-13-C-0014	12/28/2013	4/27/2014	336	830,980
	Norwalk FNP	F	W912WJ-13-C-0014	10/23/2013	1/9/2014	110	150,878
	USCG - New London	F	NAE-1994-340	11/12/2013	12/5/2013	17	20,000
						site total	1,219,344
WLDS	Black Rock YC (Bridgeport)	NF	NAE-2004-4225	11/12/2013	11/20/2013	10	5,000
	South Norwalk Boat Club	NF	NAE-2007-1762	12/20/2013	1/18/2014	24	20,000
	Wilson Cove Marina (Norwak)	NF	NAE-2006-2342	1/29/2014	2/12/2014	19	10,000
						site total	35,000
CT River	Wethersfield Cove (in-river placement at Gildersleeve Island)	F	W912WJ-14-B-0002	3/8/2014	4/9/2014	41	10,400
						site total	10,400
Direct on Beach							
	Hammonasset Beach	NF	NAE-2006-3529	2/28/2014	3/30/2014		5,500
	Indiantown Harbor (Old Saybrook)					*on-beach total*	5,500
			total open water site placement				1,292,194
			total open water LIS disposal site placement				1,276,294

F - Federal Project; NF - Non-Federal; F* performed by Corps with partial or all state funding

Eighth Annual Report Regarding Progress in Developing a Dredged Material Management Plan for the Long Island Sound Region

For the Period July 6, 2012 - July 5, 2013

U.S. Environmental Protection Agency, Region 1
February 2014

INTRODUCTION

This is the eighth annual report by the U.S. Environmental Protection Agency (EPA) on progress toward completion of a dredged material management plan (DMMP) for the Long Island Sound region, and related efforts to "reduce or eliminate" the need for open-water disposal of dredged material in Long Island Sound.

BACKGROUND

EPA Regulatory Requirements

On June 3, 2005, EPA issued a final rule to designate two open-water dredged material disposal sites,

Central Long Island Sound and Western Long Island Sound, for the placement of dredged material from harbors and navigation channels in the Long Island Sound vicinity in the states of Connecticut and New York [40 CFR Part 228.15(b)(4) and (b)(5)].

The use of these two sites is subject to restrictions that are described in the site designation rule, which are intended to reduce or eliminate the disposal of dredged material in Long Island Sound. Use of the sites pursuant to these designations may be suspended or terminated in accordance with these restrictions.

One of these restrictions links continued use of the sites to the completion of a regional dredged material management plan (DMMP) for Long Island Sound. A DMMP is a comprehensive planning process and decision-making tool to address the management of dredged material for a specific harbor or navigation project, group of related projects, or geographic area. Additional detail on the DMMP is provided in the next section.

A related restriction requires EPA to conduct an annual review of progress toward completion of the DMMP. EPA is complying with this requirement by producing an annual report on or about the anniversary of the effective date of the site designations (July 5, 2005), and making the report available to the general public.

Another restriction is intended to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP by requiring the formation of an interagency Long Island Sound Regional Dredging Team (RDT). The RDT reviews dredging projects subject to Designation Restrictions to ensure that a thorough effort has been conducted to identify practicable alternatives to open-water disposal and ensure the use of those alternatives to the maximum extent practicable. In addition to information on the status of the DMMP, this EPA annual report includes information on RDT deliberations conducted in the preceding year, and on the quantity of dredged material and its final placement or disposal location. Additional detail on the form and function of the RDT is provided in a later section.

In the designation rule an eight year time period was established between the publishing of the rule and when a DMMP should be completed. Failure to complete the DMMP in this time period would trigger the shutdown of the CLDS and WLIS disposal sites until the DMMP was completed. However, since three years passed between the designation rule and funding was provided for DMMP efforts, the LIS DMMP Steering Committee, the Federal and State agencies involved in the project, determined that an extension of the timeline was warranted. The CLDS and WLDS site closure dates were extended to April 30, 2015. A letter of agreement was signed in June 2013 by the US Environmental Protection Agency, the US Army Corps of Engineers, the NY Department of State, and the CT Department of Energy and Environmental Protection.

Dredged Material Management Plans

The U.S. Army Corps of Engineers (USACE) regulations require each of its district offices to develop a DMMP for all Federal Navigation Projects for which there is an indication of insufficient placement or disposal capacity to accommodate maintenance dredging over a 20-year period. A DMMP addresses a wide range of environmentally acceptable, cost-effective, and practicable alternatives for the management of dredged material, culminating with the selection of a base plan and a recommended plan that ensures that sufficient capacity for dredged material placement exists for a project or group of provide environmental or commercial benefits through beneficial use of dredged material. The scope of projects is for a minimum 20-year planning period. The range of alternatives

for the DMMP may also include private dredging projects that are geographically related to the federal project(s), which may require the sponsors of those projects to provide non-federal funds to support the additional work.

The DMMP process involves a phased approach. The first phase, a Preliminary Assessment, draws on existing information to: (1) determine the economic and engineering need for dredging according to existing and reasonably prospective navigation traffic; (2) identify the anticipated locations and volumes of dredged material to be generated within the study area; (3) examine existing dredged material disposal sites and management practices to determine if shortfalls in capacity or opportunities for better management exist; and (4) provide an estimate of the cost of completing the DMMP. The Preliminary Assessment determines whether a federal interest exists in participating in a feasibility-level DMMP study.

If the PA phase recommends the development of a DMMP after the PA is completed and approved, the DMMP is initiated upon the appropriation of necessary funding. The first step is development of a Project Management Plan (PMP) that describes: (1) the scope of the DMMP; (2) the sequence of the studies; (3) a plan for acquisition management covering the various study tasks (labor, contracts, other agency contributions); (4) a plan for public involvement and participation; and (5) an estimated budget, organized by federal fiscal year budget cycle.

Following review and acceptance of the PMP by the project delivery team which also can consist of cooperating federal and state agencies, feasibility-level study efforts would commence, subject to the availability of staff and funding. These studies generally focus on the following topics: (1) dredging needs; (2) management options; (3) capacities of placement sites; (4) environmental compliance requirements; (5) potential for beneficial use of dredged material; and (6) indicators of continued economic justification. The PMP is considered a "living document", subject to change based on new information and input from the public and other agencies.

The management structure for a typical DMMP comprises the following components:

- Project Manager: Individual responsible for day-to-day management of project.
- Project Delivery Team (PDT): The working group (in some cases involving members of other agencies) that will assist with the development of the DMMP.
- Agency Technical Review Team: An internal USACE technical review procedure required by the US ACE to review the plan for technical merit and cost-effectiveness.
- Technical working groups: These may be formed to provide assistance to the Project Delivery Team, with representation from other federal and state agencies, and sometimes non government organizations and private citizens.

For compliance with the National Environmental Policy Act (NEPA), the USACE prepares an Environmental Assessment, an Environmental Impact Statement or a Programmatic Environmental Impact Statement (PEIS), whichever is most appropriate, that evaluates the analyses and recommendations of the DMMP.

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN

Management Structure

The US ACE is the lead agency for development of the Long Island Sound Dredged Material Management Plan (LIS DMMP). The New England District and New York District, with oversight by the North Atlantic Division, are developing the DMMP in cooperation with EPA Regions 1 and 2, the National Oceanic and Atmospheric Administration (NOAA), the New York State Department of State (NYS DOS), the New York State Department of Environmental Conservation (NYS DEC), the Connecticut Department of Energy and Environmental Protection (CTDEEP) (formerly the Connecticut Department of Environmental Protection, or CT DEP), the Connecticut Department of Transportation (CT DOT) and the Rhode Island Coastal Resources Management Council (RI CRMC).

Management of the LIS DMMP was assigned to the US ACE New England District, which assigned a project manager responsible for overall management of the effort. The participating agencies agreed to adopt the traditional management structure by establishing and assigning representatives to a LIS DMMP Project Delivery Team (PDT). Although not a standard component of the DMMP management structure, due to the large scope of the project and strong public interest, the agencies also formed a Steering Committee (SC) of higher level agency officials to facilitate communication, priority-setting, and the commitment of resources for the LIS DMMP.

During this reporting period, the SC participated in two conference calls (August 9, 2012 and May 28, 2013). In addition, the SC met on February 19, 2013 in Newington, CT at the CTDOT headquarters. The PDT members participated in three conference calls (March 7, April 4, and May 8, 2013). The PDT call in October was cancelled due to the government shutdown. Some of the PDT members also participated in the SC meeting as well as the SC conference calls. The PDT conference calls were held to discuss current and planned DMMP work efforts, project budget, and proposed schedule for future work tasks. The current rosters (as of November 2013) for the Steering Committee and PDT are attached as Appendices A and B.

Planning Process

The overarching goal of the LIS DMMP is to develop a comprehensive plan for dredged material management in Long Island Sound that ensures Corps of Engineers federal navigation project dredging needs are met, and identify alternatives that could be used by others that will lead, over time, to the reduction or elimination of open-water disposal in the Sound. The DMMP will try to meet this goal by using a broad-based, public process that protects the environment based on best scientific data and analysis, while meeting society's need for safe and economically viable navigation for water based commerce, transportation, national security, and other public purposes. Recognizing that there are numerous institutional, regulatory, social, and financial barriers to utilizing dredged material beneficially, one purpose of the DMMP is to document these barriers and recommend plans to overcome them.

For the Long Island Sound DMMP, it should be noted that the site designation restrictions apply to all federal projects, and non-federal projects generating more than 25,000 cubic yards of dredged material in the region. The LIS DMMP will identify potential environmentally acceptable, practicable management alternatives that can be utilized by various dredging proponents in their analysis of options to manage their dredging projects.

The Preliminary Assessment for the LIS DMMP was completed and approved by the USACE in June 2006. The Project Management Plan, which serves as the initial work plan for the LIS DMMP, was completed and approved by the USACE, in consultation with the PDT, in October 2007. As previously noted, the PMP is subject to change based on new information and input from the public and other agencies.

The USACE will be preparing a Programmatic Environmental Impact Statement (PEIS) in conjunction with the LIS DMMP to ensure compliance with NEPA. The USACE published the Notice of Intent to develop a PEIS for the LIS DMMP in the Federal Register on August 31, 2007 (72 FR 50332). EPA, the USACE, and state agencies conducted a series of six public information and NEPA scoping meetings to kick off the LIS DMMP and PEIS process on November 26-29, 2007. The agencies held three meetings in each of the two states to present progress on the planning for the LIS DMMP and solicit public input on both the scope and process of the LIS DMMP and PEIS. Public comments will be considered in identifying and developing the activities and investigations to be performed in the LIS DMMP and PEIS effort. The presentations from the public meetings and other related documents are available on the USACE LIS DMMP Project website, which was established in August 2007 http://www.nae.usace.army.mil/Missions/ProjectsTopics/LongIslandSoundDMMP.aspx On March 24, 2008, the USACE initiated contractual efforts for the LIS DMMP study efforts. The USACE has been using both contracted services and in-house resources to conduct the various inventories or analyses needed for the development of the DMMP. The reports are available on the above mentioned USACE website.

The Dredging Needs Survey, which estimates the volume of dredged material that will be generated by location and by time frame for the entire region over a 30-year planning horizon, was initiated in June 2008 and completed in Oct 2009. An updated two-phase Literature Review was initiated in April 2008 and completed in June 2010. The Economic Update was initiated in January 2010 and completed in March 2010.

The initial Upland Placement Inventory, which identified and cataloged potential upland placement alternatives for the entire region over a 30-year planning horizon, as well as the inventory of possible shore-side transfer sites and beneficial use sites, was initiated in August 2008 and completed in October 2009. The sites in this report were screened based on their potential viability for use by the USACE in management of their dredged material. A second phase upland/beneficial use/near shore placement site identification effort designed to provide site-specific information such as capacity, restriction, etc. for the potential sites large enough for USACE use was completed in November 2010. An additional upland/beneficial use/near shore effort designed to provide site-specific information (e.g., capacity, restrictions, etc.) for the potential small sites was completed in January 2011.

The Federal and State Regulatory and Program Update was completed in October 2011. The Cultural Update was initiated in May 2010 and completed in August 2010. An effort to inventory potential confined disposal sites and near shore placement sites was completed in November 2012. Another effort to determine air quality impacts from different sized and types of projects, and whether they would conform with Clean Air Act requirements also has been initiated and will be completed in 2014.

An analysis of the estimated costs of transporting dredged material from various sizes and types of projects is also expected to be completed in 2014.

Concurrent with the technical studies, the USACE, with support from the PDT and contractors, initiated public outreach and participation efforts in 2010 and continued them in 2012. The first of several LIS DMMP newsletters was sent electronically and by mail to the public in February 2010. A second newsletter was distributed electronically in August 2012 and another will be sent in early 2014. Both newsletters updated the public on work that had been completed, work underway and planned future efforts. Newsletters are also posted on the project web site.

USACE also established a LIS DMMP Working Group in early 2011 comprising representatives from federal, state, regional, and local government agencies, and various stakeholder organizations that have an interest in dredged material management in the Long Island Sound region. The Working Group members' responsibility is to provide input to the LIS DMMP process in their respective areas of expertise. The PDT held a Working Group meeting on 17 January 2013 in Bridgeport, CT. The purpose of this WG meeting was to present the results of the various surveys conducted with the Working Groups from NY and CT. This survey was designed to assisting in identifying a list of criteria based on stakeholder interests and concerns. Members of the Working Group, by reviewing and disseminating the information presented and discussed at the meetings, and conveying their organization's comments and positions, serve as a communication link between the regulatory agencies and the organizations represented on the Working Group.

During the meetings, the USACE presented background on the LIS DMMP process, the requirements for determining suitability of dredged material for disposal at the Long Island Sound disposal sites, and presented the USACE Engineer Research and Development Center (ERDC) Multi-Criteria Decision Analysis (MCDA) method. This method is being used to model scenarios with varying trade-off values (esthetic, economic, environmental, etc.). This information will be used in the alternatives assessment document.

In January 2012, the Working Group representatives were furnished a “read ahead” packet to assist them in discussions with members of their organization to determine rankings of various parameters of interest to their organizations. After the representatives identified their organization’s rankings they were to be interviewed by ERDC staff so that the results of all interviews could be compiled and analyzed. Due to limit participation of the Working Group organizations, the deadline for the interviews was extended several times to give the Working Groups more tie to organize their responses.

Additional studies initiated include: Harbor Sediment Characterization, Air Quality Analysis, and Transportation Cost Analysis Matrix. The Harbor Sediment Characterization report collected information sediment testing results from Corps of Engineers maintenance projects and testing results conducted by others for their dredging projects. The data was collected from the Corps Navigation Sections and Regulatory Divisions in both the New York and New England Corps offices.

The Transportation Cost Analysis Matrix develops costs associated with dredging projects of various sizes (from 1000 CY to 4 million CY) using different types of dredging equipment (mechanical, hopper, hydraulic, etc.) with different sediment types (sand, silt, etc.)

The Air Quality Analysis uses the equipment developed in the Transportation Cost Matrix to determine the emissions from that equipment and comparing it to the State standards.

The States of New York and Connecticut have collected information that will be used to assist in identifying possible sediment and contaminant reduction into LIS. This information was provided to the USEPA who will compile the data into a report that should be available in 2014.

The Draft Programmatic Environmental Impact Statement is expected to be completed in January 2015. Public meetings will be conducted in New York and Connecticut during the review period for the Draft PEIS.

Funding

In February 2005, the governors of the two states sent a joint letter to the USACE requesting its assistance with the development of the DMMP and, in separate letters, asked members of their respective congressional delegations to seek appropriation of federal funds to initiate the DMMP. The PDT initially estimated that it would cost up to $12 million and take 5-6 years to complete the LIS DMMP. The USACE agreed to work with the states on the DMMP and requests for funds were included in the President's budget for federal fiscal years (FY) 2007 and 2008. In FY07, $1.7 million was included in the President's proposed budget, but this was eliminated by passage of a Continuing Resolution that was based on the FY06 federal budget.

Federal funding for the LIS DMMP began in FY08 and continued through FY10 at variable levels (see table below).

As of September 25, 2013, $6,943,985 in federal funds have been provided for the LIS DMMP project. Federal Funding for LIS DMMP, 2007-2013

Fiscal Year	Appropriation
2007[1]	$100,000
2008	$3,525,000
2009	$980,000
2010	$2,761,100
2011	$490,685
2012[2]	($912,800)
2013	$1,473,045
Total	$8,417,030

1. Includes $75,000 of FY05 funds.
2. Represents a reprogramming of funds out of LIS DMMP account.

LONG ISLAND SOUND REGIONAL DREDGING TEAM

Purpose

As described above, the site designation rule contemplated that a Regional Dredging Team would be established to review dredging proponents' alternative analyses to ensure that the proponents conducted a comprehensive analysis for practicable alternatives to open-water dredged material disposal and recommend their use to the maximum extent practicable, to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP. The following excerpt from the RDT guidance describes its primary function:

> The RDT is charged with reviewing all permit applications and authorizations subject to the … site designation rule restrictions and is not precluded from voluntarily providing advice to any other dredging project to help achieve the goal of reducing or eliminating the need for open water disposal in Long Island Sound. The RDT will work to identify all practicable alternatives to open water disposal and to advise regarding their use to the maximum extent practicable. Further, those identified practicable alternative use opportunities will be advanced through the appropriate state and federal authorities. All agencies will retain their respective final regulatory decision-making authority and regulatory time frames for project review.

In July 5, 2006, EPA, USACE, NOAA, and the states agreed to form an RDT and assigned representatives. The RDT began drafting a charter to describe the procedures the RDT would use to review the alternatives analyses developed by dredging project proponents, determine the adequacy of the analyses, and make recommendations on alternative dredged material placement options that should be considered by the USACE and other regulatory agencies. The RDT charter was approved by the Steering Committee in March 2007. The charter describes how the RDT will enhance communication and discussion among the participating agencies to facilitate the timely review and presentation of recommendations on the placement of dredged material from Long Island Sound dredging projects. Through the review process, the RDT will become aware of possible alternatives to open-water disposal that it can communicate to potential applicants as well as appropriate state and federal authorities.

Current Status

During this reporting period one meeting was held on February 21, 2013 to discuss the New Haven FNP project.

DREDGED MATERIAL DISPOSAL IN LONG ISLAND SOUND

It is the stated goal of the states of Connecticut and New York to reduce or eliminate the disposal of dredged material in Long Island Sound. To determine if this goal is being met will require measuring and tracking the amount of dredged material being disposed of or placed in the Sound and other locations. Currently, most open-water disposal in the Sound occurs at one of the four dredged material disposal sites in the Sound: Western Long Island Sound (WLDS), Central Long Island Sound (CLDS), Cornfield Shoals (CSDS), and New London (NLDS).

Alternatives include: upland placement or disposal; beach nourishment (depositing sand on or near an eroding beach); habitat restoration (e.g., depositing dredged material in sub-tidal areas to raise elevation and restore or create wetlands); confined aquatic disposal (CAD) cells (depositing unsuitable dredged material in a pit excavated below the floor of the harbor or navigation channel, and covering with clean material); and confined disposal facilities (using dredged material to increase the size of or create islands, e.g., to expand port facilities). Some of these alternatives, including beach nourishment, habitat creation/restoration, and capping (for both upland and aquatic habitat remediation purposes, in certain circumstances) are considered beneficial to the environment (i.e., beneficial uses). The following excerpt from the RDT guidance describes this process:

> The RDT will track and document the volume of dredged material approved for open water disposal as well as other alternative disposal methods, and submit this information for inclusion in the annual report on progress of the DMMP. This information will be part of the annual report on the progress of the DMMP to be issued by the EPA.

EPA is complying with this guidance by working with the RDT to compile dredged material disposal records on an annual basis, and reporting these data in an annual report for a one-year period ending July 5 each year. The data in the annual report will be compared with dredged material disposal data from all disposal activity in Long Island Sound averaged over the period from 1982-2004. It should be noted that the tracking of these beneficial uses of dredged material has been difficult since USACE permits are not required for placement of material outside of the eaters of the United States. Although State permits are granted for this placement these permits are multi-year approvals and proponents do not always report to the state actions that have occurred in a given year. For these reasons it is believed that the volumes reported for beneficial use may be low compared to actual beneficial use projects. This is the eighth annual report.

Dredged Material Disposal in Long Island Sound, 1982-2004 (in cubic yards [c.y.])

Disposal Site	Total Dredged Material Disposal	Avg. Annual Dredged Material Disposal
NLDS	3,069,546	133,459
CSDS	1,295,998	56,348
CLIS	8,019,678	348,682
WLIS	1,870,921	81,344
Totals	14,256,143	619,833

Overall, there was a total of 355,100 c.y. of dredged material generated in the Long Island Sound vicinity for the period July 6, 2012- July 5, 2013, of which:

- 255,700 c.y. were disposed at open-water disposal sites in Long Island Sound;
- 0 c.y. were placed at containment sites; and
- 99,400 c.y. were used beneficially.

Recent Dredged Material Disposal in Long Island Sound Compared with Historic Averages
(in cubic yards [c.y.])

Disposal Site	Avg. Annual Dredged Material Disposal	2011	2012	2013	Change from Previous Reporting Period (2012) c.y.	Change from Historic Average (1982-2004) c.y.
NLDS	133,459	0	0	19,100	19,100	-114,359
CSDS	56,348	41,460	31,500	72,600	41,100	16,252
CLDS	348,682	84,940	84,500	122,600	38,100	-226,082
WLDS	81,344	28,910	27,008	41,400	14,392	-39,944
Totals	619,833	155,310	143,008	255,700	112,692	-364,133

Of the 255,700. c.y. disposed in the Sound:

- 122,600 c.y. went to CLDS (vs. historical annual average of 348,682 c.y.);
- 41,400 c.y. went to WLDS (vs. historical annual average of 81,344 c.y.);
- 19,100 c.y. went to NLDS (vs. historical annual average of 133,459 c.y.); and
- 72,600 c.y. went to CSDS (vs. a historical annual average of 56,348 c.y.).

Of the 255,700 c.y. disposed in the Sound 220,200 c.y. came from private projects.

The average annual amount of dredged material disposed at the four open-water sites in the Sound from 1982-2004, was 619,833 c.y. For the period July 6, 2012 - July 5, 2013, there was a total disposed of 255,700 c.y., which is a decrease of 364,133 c.y. For further details, see Appendix D.

While there is generally some variability from one year to the next in the amount of dredged material disposed of in the Sound, there are many factors influencing this variability. Regardless, it is too early to determine any kind of long-term trend. The amount of dredged material disposed in the Sound during the current reporting period of July 6, 2012 - July 5, 2013, was more than the amount disposed during the prior reporting period of July 6, 2011 - July 5, 2012 (255,700 c.y. vs. 143,008 c.y. respectively); this appears to have resulted from variability in the size of projects and funding rather than from any difference in analysis of alternatives.

EPA will continue to report on an annual basis about the LIS RDT deliberations as well as each dredging project that was completed in the preceding year, including the name of the applicant, the

alternatives that were evaluated, the volume of dredged material, and its final placement or disposal location.

For further information, please contact:

Jean Brochi
US Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-1
Boston, MA 02119-3912
Telephone: (617) 918-1536
Fax: (617) 918-0536
brochi.jean@epa.gov

Appendix A

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN STEERING COMMITTEE		
AGENCY	MEMBER	ALTERNATE
NOAA	Lou Chiarella Assistant Regional Administrator Habitat Conservation Division 978-281-9277 Lou.Chiarella@noaa.gov	Christopher Boelke Field Offices Supervisor Habitat Conservation Division 978-281-9131 christopher.boelke@noaa.gov
USACE North Atlantic Division (NAD)	David Leach, Director Programs Directorate 347-370-4629 david.j.Leach@usace.army.mil	Joe Vietri, Chief Planning Division 718-765-7070 joseph.r.vietri@usace.army.mil
USACE New England District (NAE)	Bill Scully, Deputy District Engineer for Programs and Project Management 978-318-8230 william.c.scully@usace.army.mil	TBD
USACE New York District (NAN)	Joe Seebode, Deputy District Engineer for Programs and Project Management 917-790-8207 Joseph.j.seebode@usace.army.mil	TBD
EPA Region II	Jeff Gratz, Deputy Director Clean Water Division 212-637-3873 gratz.jeff@epa.gov	Kate Anderson, Chief Clean Water Regulatory Branch Clean Water Division 212-637-3754 Anderson.kate@epa.gov
New York State Dept. of State	Jeff Herter, Assistant Chief Bureau of Natural Resource Management 518 486-7942 Jeff.Herter@dos.ny.gov	George Stafford Deputy Secretary of State for Coastal Resources 518-473-2459 gstaffor@dos.state.ny.us
New York State Dept. of Environmental Conservation	James Gilmore, Chief Bureau of Marine Resources 631-444-0430 jgilmor@gw.dec.state.ny.us	Dawn McReynolds, Section Head Marine Habitat Bureau of Marine Resources 631-444-0452 dxmcreyn@gw.dec.state.ny.us
Connecticut Dept. of Energy and Environmental Protection	Betsey Wingfield, Chief Bureau of Water Management 860-424-3704 betsey.wingfield@po.state.ct.us	Brian Thompson, Director Office of Long Island Sound Programs (860) 424-3034 brian.thompson@po.state.ct.us
Rhode Island Coastal Management Resource Council	Jeff Willis 401-783-3370 jwillis@crmc.ri.gov	Dan Goulet 401-783-3370 dgoulet@crmc.state.ri.gov

x B

Appendix B

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN PROJECT DELIVERY TEAM		
AGENCY	MEMBER	MEMBER
USACE New England District (NAE)	Mike Keegan 978-318-8087 michael.f.keegan@usace.army.mil	Mark Habel 978-318-8871 mark.l.habel@usace.army.mil
USACE New York District (NAN)	Nancy Brighton 917-790-8703 Nancy.j.brighton@usace.army.mil	TBD
EPA Region I	Mel Cote 617-918-1553 cote.mel@epa.gov	Jean Brochi 617-918-1536 brochi.jean@epa.gov
EPA Region II	Doug Pabst 212-637-3797 pabst.douglas@epa.gov	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov
NOAA - National Marine Fisheries Service	Christopher Boelke 978-281-9131 christopher.boelke@noaa.gov	TBD
New York State Dept. of State	Jennifer Street 518-474-1737 Jennifer.Street@dos.state.ny.us	Jeff Herter 518- 486-7942 Jeff.Herter@dos.ny.gov
New York State Dept. of Environmental Conservation	John Ferguson 518-402-8829 jjfergus@gw.dec.state.ny.us	TBD
Connecticut Dept. of Energy and Environmental Protection	George Wisker 860-424-3034 george.wisker@po.state.ct.us	William Sigmund 860-418-5924 William.Sigmund@ct.gov
Connecticut Dept. of Transportation	Joe Salvatore 860-594-2539 joseph.salvatore@po.state.ct.us	TBD
Rhode Island Coastal Resources Management Council	Dan Goulet 401-783-3370 dgoulet@crmc.state.ri.gov	TBD

Appendix C

LONG ISLAND SOUND REGIONAL DREDGING TEAM		
AGENCY	MEMBER	MEMBER
USACE North Atlantic Division (NAD)	James Haggerty 347-370-4650 james.w.haggerty@usace.army.mil	Only one member on RDT According to RDT Charter
USACE New England District (NAE)	Robert Desista (Current RDT Chair) 978-318-8879 robert.j.desista@usace.army.mil	Jay Mackay 978-318-8142 joseph.b.mackay@usace.army.mil
USACE New York District (NAN)	Stephen Ryba 917-790-8411 Stephen.Ryba@usace.army. mil	Alexander Gregory 917-790-8411 Alexander.Gregory@usace.army.mil
EPA Region I	Jean Brochi 617-918-1536 brochi.jean@epa.gov	Mel Cote 617-918-1553 cote.mel@epa.gov
EPA Region II	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov	Doug Pabst 212-637-3797 pabst.douglas@epa.gov
NOAA National Marine Fisheries Service	Christopher Boelke 978-281-9131 christopher.boelke@noaa.gov	Only one member on RDT According to RDT Charter
New York Dept. of State	Jennifer Street 518-474-1737 Jennifer.Street@dos.state.ny.us	Only one member on RDT According to RDT Charter
New York State Dept. of Environmental Conservation	Charles de Quillfeldt 631-444-0439 cxdequil@gw.dec.state.ny.us	Only one member on RDT According to RDT Charter

Connecticut Dept. of Energy and Environmental Protection	George Wisker 860-424-3034 george.wisker@po.state.ct.us	William Sigmund 860-418-5924 William.Sigmund@ct.gov

Disposal Sites and Methods		CONNECTICUT Federal (Corps) Navigation Projects	CONNECTICUT Other Federal Projects	CONNECTICUT Private Permit Activities	NEW YORK Federal (Corps) Navigation Projects	NEW YORK Other Federal Projects	NEW YORK Private Permit Activities	Total All Projects and States
Open Water Disposal								
	CLDS	0	0	122,600	0	0	0	122,600
	WLDS	0	0	41,400	0	0	0	41,400
	NLDS	0	0	19,100	0	0	0	19,100
	CSDS	35,500	0	37,100	0	0	0	72,600
Confined Disposal								
	CAD Cells	0	0	0	0	0	0	0
	Upland Containment	0	0	0	0	0	0	0
	Landfill	0	0	0	0	0	0	0
Beneficial Use								
	CAD Cap	0	0	0	0	0	0	0
	Beach/Bar Nourishment	99,400	0	0	0	0	0	99,400
	Habitat Creation/Enhance	0	0	0	0	0	0	0
	Brownfield Remediation	0	0	0	0	0	0	0
Treated Dredged Material								
	Upland Disposal	0	0	0	0	0	0	0
	Commercial Use	0	0	0	0	0	0	0
TOTAL ALL DISPOSAL		134,900	0	220,200	0	0	0	355,100

Seventh Annual Report Regarding Progress in Developing a Dredged Material Management Plan for the Long Island Sound Region

For the Period July 6, 2011 - July 5, 2012

U.S. Environmental Protection Agency, Region 1
January 2013

INTRODUCTION

This is the seventh annual report by the U.S. Environmental Protection Agency (EPA) on progress toward completion of a dredged material management plan (DMMP) for the Long Island Sound region, and related efforts to "reduce or eliminate" the need for open-water disposal of dredged material in Long Island Sound.

BACKGROUND

EPA Regulatory Requirements

On June 3, 2005, EPA issued a final rule to designate two open-water dredged material disposal sites, Central Long Island Sound and Western Long Island Sound, for the placement of dredged material from harbors and navigation channels in the Long Island Sound vicinity in the states of Connecticut and New York [40 CFR Part 228.15(b)(4) and (b)(5)].

The use of these two sites is subject to restrictions that are described in the site designation rule, which are intended to reduce or eliminate the disposal of dredged material in Long Island Sound. Use of the sites pursuant to these designations may be suspended or terminated in accordance with these restrictions.

One of these restrictions links continued use of the sites to the completion of a regional dredged material management plan (DMMP) for Long Island Sound. A DMMP is a comprehensive planning process and decision-making tool to address the management of dredged material for a specific harbor or navigation project, group of related projects, or geographic area. Additional detail on the DMMP is provided in the next section.

A related restriction requires EPA to conduct an annual review of progress toward completion of the DMMP. EPA is complying with this requirement by producing an annual report on or about the anniversary of the effective date of the site designations (July 5, 2005), and making the report available to the general public.

Another restriction is intended to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP by requiring the formation of an interagency Long Island Sound Regional Dredging Team (RDT). The RDT reviews dredging projects to ensure that a thorough effort has been conducted to identify practicable alternatives to open-water disposal and ensure the use of those alternatives to the maximum extent practicable. In addition to information on the status of the DMMP, this EPA annual report includes information on RDT deliberations conducted in the preceding year, and on the quantity of dredged material and its final placement or disposal location. Additional detail on the form and function of the RDT is provided in a later section.

Dredged Material Management Plans

The U.S. Army Corps of Engineers (USACE) regulations require each of its district offices to develop a DMMP for all Federal Navigation Projects for which there is an indication of insufficient placement or disposal capacity to accommodate maintenance dredging over a 30-year planning period. A DMMP addresses a wide range of environmentally acceptable, cost-effective, and practicable alternatives for the management of dredged material, culminating with the selection of a base plan and a recommended plan that ensures that sufficient capacity for dredged material placement exists for a project or group of projects over a 30-year planning period. The range of alternatives includes those that may provide

environmental or commercial benefits through beneficial use of dredged material. The scope of a DMMP may also include private dredging projects that are geographically related to the federal project(s), which may require the sponsors of those projects to provide non-federal funds to support the additional work.

The DMMP process involves a phased approach. The first phase, a Preliminary Assessment, draws on existing information to: (1) determine the economic and engineering need for dredging according to existing and reasonably prospective navigation traffic; (2) identify the anticipated locations and volumes of dredged material to be generated within the study area; (3) examine existing dredged material disposal sites and management practices to determine if shortfalls in capacity or opportunities for better management exist; and (4) provide an estimate of the cost of completing the DMMP. The Preliminary Assessment determines whether a federal interest exists in participating in a feasibility-level DMMP study.

If the PA phase recommends the development of a DMMP after the PA is completed and approved, the DMMP is initiated upon the appropriation of necessary funding. The first step is development of a Project Management Plan (PMP) that describes: (1) the scope of the DMMP; (2) the sequence of the studies; (3) a plan for acquisition management covering the various study tasks (labor, contracts, other agency contributions); (4) a plan for public involvement and participation; and (5) an estimated budget, organized by federal fiscal year budget cycle.

Following review and acceptance of the PMP by the project delivery team which also can consist of cooperating federal and state agencies, feasibility-level study efforts would commence, subject to the availability of staff and funding. These studies generally focus on the following topics: (1) dredging needs; (2) management options; (3) capacities of placement sites; (4) environmental compliance requirements; (5) potential for beneficial use of dredged material; and (6) indicators of continued economic justification. The PMP is considered a "living document," subject to change based on new information and input from the public and other agencies.

The management structure for a typical DMMP comprises the following components:

- Project Manager: Individual responsible for day-to-day management of project.
- Project Delivery Team (PDT): The working group (in some cases involving members of other agencies) that will assist with the development of the DMMP.
- Agency Technical Review Team: An internal USACE technical review procedure required by the US ACE to review the plan for technical
  merit and cost-effectiveness.
- Technical working groups: These may be formed to provide assistance to the Project Delivery Team, with representation from other federal and state agencies, and sometimes non government organizations and private citizens.

For compliance with the National Environmental Policy Act (NEPA), the USACE prepares an Environmental Assessment, Environmental Impact Statement or a Programmatic Environmental

Impact Statement (PEIS), whichever is most appropriate, that evaluates the analyses and recommendations of the DMMP.

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN

Management Structure

The US ACE is the lead agency for development of the Long Island Sound Dredged Material Management Plan (LIS DMMP). The New England District and New York District, with oversight by the North Atlantic Division, are developing the DMMP in cooperation with EPA Regions 1 and 2, the National Oceanic and Atmospheric Administration (NOAA), the New York State Department of State (NYS DOS), the New York State Department of Environmental Conservation (NYS DEC), the Connecticut Department of Energy and Environmental Protection (CTDEEP) (formerly the Connecticut Department of Environmental Protection, or CT DEP), the Connecticut Department of Transportation (CT DOT) and the Rhode Island Coastal Resources Management Council (RI CRMC).

Management of the LIS DMMP was assigned to the US ACE New England District, which assigned a project manager responsible for overall management of the effort. The participating agencies agreed to adopt the traditional management structure by establishing and assigning representatives to a LIS DMMP Project Delivery Team (PDT). Although not a standard component of the DMMP management structure, due to the large scope of the project and strong public interest, the agencies also formed a Steering Committee (SC) of higher level agency officials to facilitate communication, priority-setting, and the commitment of resources for the LIS DMMP.

During this reporting period, the SC met once, on February 8, 2012 in Newington, CT. In addition, the SC also participated in two conference calls on May 10, 2012 and August 9, 2012. The PDT members participated in ten conference calls (August 4, September 1, October 6, November 3, and December 1, 2011; and January 5, February 2, March 8, May 3 and June 7, 2012). The October 6, 2011 PDT meeting was held in conjunction with a Working Group meeting in Port Jefferson, NY. Some of the PDT members also participated in the SC meeting as well as the SC conference calls. The PDT conference calls were held to discuss current and planned DMMP work efforts, project budget, and proposed schedule for future work tasks. The current rosters (as of December 2012) for the Steering Committee and PDT are attached as Appendices A and B.

Planning Process

The overarching goal of the LIS DMMP is to develop a comprehensive plan for dredged material management in Long Island Sound that ensures Corps of Engineers federal navigation project dredging needs are met, and identify alternatives that can be used by others that will lead, over time, to the reduction or elimination of open-water disposal in the Sound. The DMMP will try to meet this goal by using a broad-based, public process that protects the environment based on best scientific data and analysis, while meeting society's need for safe and economically viable navigation for water based commerce, transportation, national security, and other public purposes. Recognizing that there are numerous institutional, regulatory, social, and financial barriers to utilizing dredged material beneficially, one purpose of the DMMP is to document these barriers and recommend plans to overcome them.

For the Long Island Sound DMMP, it should be noted that the site designation restrictions apply to all federal projects, and non-federal projects generating more than 25,000 cubic yards of dredged

material in the region. The LIS DMMP will identify potential environmentally acceptable, practicable management alternatives that can be utilized by various dredging proponents in their analysis of options to manage their dredging projects.

The Preliminary Assessment for the LIS DMMP was completed and approved by the USACE in June 2006. The Project Management Plan, which serves as the initial work plan for the LIS DMMP, was completed and approved by the USACE, in consultation with the PDT, in October 2007. As previously noted, the PMP is subject to change based on new information and input from the public and other agencies.

The USACE will be preparing a Programmatic Environmental Impact Statement (PEIS) in conjunction with the LIS DMMP to ensure compliance with NEPA. The USACE published the Notice of Intent to develop a PEIS for the LIS DMMP in the Federal Register on August 31, 2007 (72 FR 50332). EPA, the USACE, and state agencies conducted a series of six public information and NEPA scoping meetings to kick off the LIS DMMP and PEIS process on November 26-29, 2007. The agencies held three meetings in each of the two states to present progress on the planning for the LIS DMMP and solicit public input on both the scope and process of the LIS DMMP and PEIS. Public comments will be considered in identifying and developing the activities and investigations to be performed in the LIS DMMP and PEIS effort. The presentations from the public meetings and other related documents are available on the USACE LIS DMMP Project website, which was established in August 2007 (http://www.nae.usace.army.mil/projects/lisdmmp.htm).

On March 24, 2008, the USACE initiated contractual efforts for the LIS DMMP study efforts. The USACE has been using both contracted services and in-house resources to conduct the various inventories or analyses needed for the development of the DMMP. The reports are available on the above mentioned USACE website.

The Dredging Needs Survey, which estimates the volume of dredged material that will be generated by location and by time frame for the entire region over a 30-year planning horizon, was initiated in June 2008 and completed in Oct 2009. An updated two-phase Literature Review was initiated in April 2008 and completed in June 2010. The Economic Update was initiated in January 2010 and completed in March 2010.

The initial Upland Placement Inventory, which identified and cataloged potential upland placement alternatives for the entire region over a 30-year planning horizon, as well as the inventory of possible shore-side transfer sites and beneficial use sites, was initiated in August 2008 and completed in October 2009. The sites in this report were screened based on their potential viability for use by the USACE in management of their dredged material. A second phase upland/beneficial use/near shore placement site identification effort designed to provide site-specific information such as capacity, restriction, etc. for the potential sites large enough for USACE use was completed in November 2010. An additional upland/beneficial use/near shore effort designed to provide site-specific information (e.g., capacity, restrictions, etc.) for the potential small sites was completed in January 2011.

The Federal and State Regulatory and Program Update was completed in October 2011. The Cultural Update was initiated in May 2010 and completed in August 2010. An effort to inventory potential confined disposal sites and near shore placement sites has been initiated and will be completed in 2012.

Another effort to determine air quality impacts from different sized and types of projects, and whether they would conform with Clean Air Act requirements also has been initiated and will be completed in 2012. An analysis of the estimated costs of transporting dredged material from various sizes and types of projects is also expected to be completed in 2012.

Concurrent with the technical studies, the USACE, with support from the PDT and contractors, initiated public outreach and participation efforts in 2010 and continued them in 2011. The first of several LIS DMMP newsletters was sent electronically and by mail to the public in February 2010. A second newsletter was distributed electronically in August 2012. Both newsletter updated the public on work that had been completed, work underway and planned future efforts. Newsletters are also posted on the project web site.

USACE also established a LIS DMMP Working Group in early 2011 comprising representatives from federal, state, regional, and local government agencies, and various stakeholder organizations that have an interest in dredged material management in the Long Island Sound region. The Working Group members' responsibility is to provide input to the LIS DMMP process in their respective areas of expertise. The PDT hosted three Working Group meetings during the previous reporting period, on March 29 and June 7 in Bridgeport, CT and April 26 and in Port Jefferson, NY, which focused on a process to evaluate dredged material management alternatives in the study area. This evaluation process will be aimed at establishing a list of criteria based on stakeholder interests and concerns. Members of the Working Group, by reviewing and disseminating the information presented and discussed at the meetings, and conveying their organization's comments and positions, serve as a communication link between the regulatory agencies and the organizations represented on the Working Group. An additional Working Group meeting was held in Port Jefferson, NY on October 6, 2011.

During the meetings, the USACE presented background on the LIS DMMP process, the requirements for determining suitability of dredged material for disposal at the Long Island Sound disposal sites, and presented the USACE Engineer Research and Development Center (ERDC) Multi-Criteria Decision Analysis (MCDA) method. This method is being used to model scenarios with varying tradeoff values (esthetic, economic, environmental, etc.). This information will be used in the alternatives assessment document.

In January 2012, the Working Group representatives were furnished a “read ahead” packet to assist them in discussions with members of their organization to determine rankings of various parameters of interest to their organizations. After the representatives identified their organization’s rankings they were to be interviewed by ERDC staff so that the results of all interviews could be compiled and analyzed. Due to limited participation of the Working Group representatives, the deadline for the interviews was extended several times.

Funding

In February 2005, the governors of the two states sent a joint letter to the USACE requesting its assistance with the development of the DMMP and, in separate letters, asked members of their respective congressional delegations to seek appropriation of federal funds to initiate the DMMP. The PDT initially estimated that it would cost up to $12 million and take 5-6 years to complete the LIS DMMP. The USACE agreed to work with the states on the DMMP and requests for funds were included in the President's budget for federal fiscal years (FY) 2007 and 2008. In FY07, $1.7 million was included in the President's proposed budget, but this was eliminated by passage of a Continuing Resolution that was based on the FY06 federal budget.

Federal funding for the LIS DMMP began in FY08 and continued through FY10 at variable levels (see table below).

As of September 25, 2012, $6,943,985 in federal funds have been provided for the LIS DMMP project.

Federal Funding for LIS DMMP, 2007-2012

Fiscal Year	Appropriation
2007[1]	$100,000
2008	$3,525,000
2009	$980,000
2010	$2,761,100
2011	$490,685
2012[2]	($912,800)
Total	$6,943,985

1. Includes $75,000 of FY05 funds.
2. Represents a reprogramming of funds out of LIS DMMP account.

LONG ISLAND SOUND REGIONAL DREDGING TEAM

Purpose

As described above, the site designation rule contemplated that a Regional Dredging Team would be established to review dredging proponents' alternative's analyses to ensure that they conducted a comprehensive analysis for practicable alternatives to open-water disposal and recommend their use to the maximum extent practicable, to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP. The following excerpt from the RDT guidance describes its primary function:

> The RDT is charged with reviewing all permit applications and authorizations subject to the … site designation rule restrictions and is not precluded from voluntarily providing advice to any other dredging project to help achieve the goal of reducing or eliminating the need for open water disposal in Long Island Sound. The RDT will work to identify all practicable alternatives to open water disposal and to advise regarding their use to the maximum extent practicable. Further, those identified practicable alternative use opportunities will be advanced through the appropriate state and federal authorities. All agencies will retain their respective final regulatory decision-making authority and regulatory time frames for project review.

In July 5, 2006, EPA, USACE, NOAA, and the states agreed to form an RDT and assigned representatives. The RDT began drafting a charter to describe the procedures the RDT would use to review the alternatives analyses developed by dredging project proponents, determine the adequacy of the analyses, and make recommendations on alternative dredged material placement options that should be considered by the USACE and other regulatory agencies. The RDT charter was approved by the Steering Committee in March 2007. The charter describes how the RDT will enhance communication and discussion among the participating agencies to facilitate the timely review and presentation of recommendations on the placement of dredged material from Long Island Sound dredging projects. Through the review process, the RDT will become aware of possible alternatives

to open-water disposal that it can communicate to potential applicants as well as appropriate state and federal authorities.

Current Status

During this reporting period, there were no proposed projects or alternatives to be discussed by the RDT. Therefore, the RDT did not meet during this period.

DREDGED MATERIAL DISPOSAL IN LONG ISLAND SOUND

It is the stated goal of the states of Connecticut and New York to reduce or eliminate the disposal of dredged material in Long Island Sound. To determine if this goal is being met will require measuring and tracking the amount of dredged material being disposed of or placed in the Sound and other locations. Currently, most open-water disposal in the Sound occurs at one of the four dredged material disposal sites in the Sound: Western Long Island Sound (WLDS), Central Long Island Sound (CLDS), Cornfield Shoals (CSDS), and New London (NLDS).

Alternatives include: upland placement or disposal; beach nourishment (depositing sand on or near an eroding beach); habitat restoration (e.g., depositing dredged material in sub-tidal areas to raise elevation and restore or create wetlands); confined aquatic disposal (CAD) cells (depositing unsuitable dredged material in a pit excavated below the floor of the harbor or navigation channel, and covering with clean material); and confined disposal facilities (using dredged material to increase the size of or create islands, e.g., to expand port facilities). Some of these alternatives, including beach nourishment, habitat creation/restoration, and capping (for both upland and aquatic habitat remediation purposes, in certain circumstances) are considered beneficial to the environment (i.e., beneficial uses). The following excerpt from the RDT guidance describes this process:

> The RDT will track and document the volume of dredged material approved for open water disposal as well as other alternative disposal methods, and submit this information for inclusion in the annual report on progress of the DMMP. This information will be part of the annual report on the progress of the DMMP to be issued by the EPA.

EPA is complying with this guidance by working with the RDT to compile dredged material disposal records on an annual basis, and reporting these data in an annual report for a one-year period ending July 5 each year. However, the report is compiled using the best available data. For this reporting period, data was provided by the USACE (New England and New York District's) and CT DEEP.. The data in the annual report will be compared with dredged material disposal data from all disposal activity in Long Island Sound averaged over the period from 1982-2004. This is the seventh annual report.

Dredged Material Disposal in Long Island Sound, 1982-2004 (in cubic yards [c.y.])

Disposal Site	Total Dredged Material Disposal	Avg. Annual Dredged Material Disposal
NLDS	3,069,546	133,459
CSDS	1,295,998	56,348
CLDS	8,019,678	348,682
WLDS	1,870,921	81,344
Totals	14,256,143	619,833

Overall, there was a total of 143,008 c.y. of dredged material generated in the Long Island Sound vicinity for the period July 6, 2011 - July 5, 2012, of which:

- 143,008 c.y. were disposed at open-water disposal sites in Long Island Sound;
- 0 c.y. were placed at containment sites; and
- 0 c.y. were used beneficially.

Recent Dredged Material Disposal in Long Island Sound Compared with Historic Averages
(in cubic yards [c.y.])

Disposal Site	Avg. Annual Dredged Material Disposal	2010	2011	2012	Change from Previous Reporting Period (2011) c.y.	Change from Historic Average (1982-2004) c.y.
NLDS	133,459	0	0	0	0	-133,459
CSDS	56,348	7,000	41,460	31,500	-9,960	-24,848
CLDS	348,682	277,474	84,940	84,500	-440	-264,182
WLDS	81,344	11,950	28,910	27,008	-1,902	-54,336
Totals	619,833	296,424	155,310	143,008	-12,302	-476,825

The USACE has changed the acronym for disposal sites as follows:
CLIS is CLDS and WLIS is WLDS, however, NLDS and CSDS remain the same.

Of the 143,008 c.y. disposed in the Sound:

- 84,500 c.y. went to CLDS (vs. historical annual average of 348,682 c.y.);
- 27,008 c.y. went to WLDS (vs. historical annual average of 81,344 c.y.);
- 0 c.y. went to NLDS (vs. historical annual average of 133,459 c.y.); and
- 31,500 c.y. went to CSDS (vs. a historical annual average of 56,348 c.y.).

All of the 143,008 c.y. disposed in the Sound came from private projects.

On December 23, 2011, the use of the NLDS and CSDS disposal sites was extended by Congress until December 23, 2016.

The average annual amount of dredged material disposed at the four open-water sites in the Sound from 1982-2004, was 619,833 c.y. For the period July 6, 2011 - July 5, 2012, there was a total disposed of 143,008 c.y., which is a decrease of 483,333 c.y. For further details, see Appendix D.

While there is generally some variability from one year to the next in the amount of dredged material disposed of in the Sound, there are many factors influencing this variability. However, since the first reporting period (July 5, 2005 – July 5, 2006), the long-term trend shows a reduction in open water disposal in Long Island Sound. The amount of dredged material disposed in the Sound during the current reporting period of July 6, 2011 - July 5, 2012, was less than the amount disposed during the prior reporting period of July 6, 2010 - July 5, 2011 (143,008 c.y. vs. 155,310 c.y. respectively); this appears to have resulted from variability in the size of projects and funding rather than from any difference in analysis of alternatives.

EPA will continue to report on an annual basis about the LIS RDT deliberations as well as each dredging project that was completed in the preceding year, including the name of the applicant, the alternatives that were evaluated, the volume of dredged material, and its final placement or disposal location.

For further information, please contact:

Jean Brochi
US Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-1
Boston, MA 02119-3912
Telephone: (617) 918-1536
Fax: (617) 918-0536
brochi.jean@epa.gov

Appendix A

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN STEERING COMMITTEE		
AGENCY	MEMBER	ALTERNATE
NOAA	David Kaiser, Senior Policy Analyst Office of Ocean and Coastal Resource Management 603-862-2719 david.kaiser@noaa.gov	TBD
USACE North Atlantic Division (NAD)	David Leach, Director Programs Directorate 347-370-4629 david. j. Leach@usace. army. mil	Joe Vietri, Chief Planning Division 718-765-7070 joseph.r.vietri@usace.army.mil
USACE New England District (NAE)	Bill Scully, Deputy District Engineer for Programs and Project Management 978-318-8230 william.c. scully@usace. army .mil	TBD
USACE New York District (NAN)	Joe Seebode Programs and Project Management 917-790-8207 Joseph.j .seebode@usace.army.mil	
EPA Region I	Stephen Perkins, Director Office of Ecosystem Protection 617-918-1501 perkins. stephen@epa.gov	Lynne Hamjian, Chief Office of Ecosystem Protection Surface Water Branch 617-918-1601 hamjian.lynne@epa. go v
EPA Region II	Doug Pabst,Team Leader Dredging Sediments and Oceans Team 212-637-3797 pabst.douglas@epa.gov	Michelle Josilo Clean Water Regulatory Branch 212-637-3866 Josillo.michelle@epa.gov
New York State Dept. of State	George Stafford, Deputy Secretary of State for Coastal Resources 518-473-2459 gstaffor@dos.ny.gov	Fred Anders, Chief Natural Resource Management Bureau Division of Coastal Resources 518-473-2477 fanders@dos.ny.gov
New York State Dept. of Environmental Conservation	James Gilmore, Chief, Bureau of Marine Resources 518-402-8924 jgilmor@gw.dec.state.ny.us	Dawn McReynolds Section Head, Marine Habitat, Bureau of Marine Resources (631) 444-0452 dxmcreyn@gw.dec. state.ny .us
Connecticut Dept. of Energy and Environmental Protection	Betsey Wingfield, Chief Bureau of Water Management 860-424-3704 betsey. wingfield@ct.gov	Brian Thompson, Director Office of Long Island Sound Programs (860) 424-3034 brian.thompson@ct.gov

Appendix B

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN PROJECT DELIVERY TEAM		
AGENCY	MEMBER	MEMBER
USACE New England District (NAE)	Mike Keegan, Project Manager 978-318-8087 michael.f.keegan@usace.army.mil	Mark Habel 978-318-8871 mark. l. habel@usace. army. mil
USACE New York District (NAN)	Nancy Brighton 917-790-8703 nancy j .brighton@usace. army .mil	
EPA Region I	Mel Cote 617-918-1553 cote.mel@epa.gov	Jean Brochi 617-918-1536 brochi. jean@epa. gov
EPA Region II	Doug Pabst 212-637-3797 pabst.douglas@epa.gov	Patricia Pechko 212-637-3796 pechko .patricia@epa. gov
National Marine Fisheries Service	Diane Rusanowsky 203-882-2671 Diane.Rusanowsky@Noaa.gov	
New York State Dept. of State	Jennifer Street 518-474-1737 Jennifer. Street@dos..ny.gov	Fred Anders 518-473-2477 fanders@dos.ny.gov
New York State Dept. of Environmental Conservation	John Ferguson 518-402-8829 jj fergus@gw.dec.state.ny.us	
Connecticut Dept. of Energy and Environmental Protection	George Wisker 860-424-3034 george. wisker@ct.govs	Diane Duva 860-424-3271 diane.duva@ct.gov
Connecticut Dept. of Transportation	Joe Salvatore 860-594-2539 joseph. salvatore@ct.gov	
Rhode Island Coastal Resources Management Council	Jeff Willis 401-783-3370 jwillis@crmc.ri.gov	Dan Goulet 401-783-3370 dgoulet@crmc.ri.gov

Appendix C

LONG ISLAND SOUND REGIONAL DREDGING TEAM		
AGENCY	MEMBER	ALTERNATE
USACE North Atlantic Division (NAD)	James Haggerty 347-370-4650 james.w.haggerty@usace.army.mil	
USACE New England District (NAE)	Robert DeSista 978-318-8879 robert.j. desista@usace. army .mil	Jay Mackay 978-318-8142 joseph.b.mackay@usace.army.mil
USACE New York District (NAN)	Stephen Ryba 917-790-8411 Stephen.Ryba@usace. army. mil	Alexander Gregory 917-790-8411 Alexander. Gregory @usace. army .mil
EPA Region I	Jean Brochi 617-918-1536 brochi.jean@epa.gov	Mel Cote 617-918-1553 cote.mel@epa.gov
EPA Region II	Patricia Pechko 212-637-3796 pechko .patricia@epa. go v	Doug Pabst 212-637-3797 pabst. douglas@epa. go v
NOAA National Marine Fisheries Service	Diane Rusanowsky 203-882-2671 Diane.Rusanowsky@Noaa.gov	
New York Dept. of State	Jennifer Street 518-474-1737 Jennifer. Street@dos. ny. gov	
New York State Dept. of Environmental Conservation	Charles de Quillfeldt 631- 444-0468 cxdequil@gw.dec.state.ny.us	
Connecticut Dept. of Energy and Environmental Protection	George Wisker Office of Long Island Sound Programs 860-424-3034 george. wisker@ct.gov	Diane Duva Bureau of Waste Management 860-424-3271 diane. duva@ct.gov
Rhode Island Coastal Resources Management Council	Jeff Willis 401-783-3370 jwillis@crmc.ri.gov	Dan Goulet 401-783-3370 dgoulet@crmc.ri.gov

Appendix D

Long Island Sound Annual Dredging Report - for the Dredging Year Ending July 5, 2012
Summary of All Dredging and Disposal Activities

		CONNECTICUT			NEW YORK			
		Federal (USACE) Navigation Projects	Other Federal Projects	Private Permit Activities	Federal (USACE) Navigation Projects	Other Federal Projects	Private Permit Activities	Total All Projects and States
Open *Water Disposal								143,008
	CLDS	0	0	84,500	0	0	0	84,500
	WLDS	0	0	20,000	0	0	7,008	27,008
	NLDS	0	0	0	0	0	0	0
	CSDS	0	0	31,500	0	0	0	31,500
Confined Disposal								0
	CAD Cells	0	0	0	0	0	0	0
	Upland Containment	0	0	0	0	0	0	0
	Landfill	0	0	0	0	0	0	0
Beneficial Use								0
	CAD Cap	0	0	0	0	0	0	0
	Beach/Bar Nourishment	0	0	0	0	0	0	0
	Habitat Creation/ Enhance	0	0	0	0	0	0	0
	Brownfield Remediation	0	0	0	0	0	0	0
Treated Dredged Material								0
	Upland Disposal	0	0	0	0	0	0	0
	Commercial Use	0	0	0	0	0	0	0
TOTAL ALL DISPOSAL		0	0	136,000	0	0	7,008	143,008

Sixth Annual Report Regarding Progress in Developing a Dredged Material Management Plan for the Long Island Sound Region

For the Period July 6, 2010 – July 5, 2011

U.S. Environmental Protection Agency, Region 1
December 2011

INTRODUCTION

This is the sixth annual report by the U.S. Environmental Protection Agency (EPA) on progress toward completion of a dredged material management plan (DMMP) for the Long Island Sound region, and related efforts to "reduce or eliminate" the need for open-water disposal of dredged material in Long Island Sound.

BACKGROUND

EPA Regulatory Requirements

On June 3, 2005, EPA issued a final rule to designate two open-water dredged material disposal sites, Central Long Island Sound and Western Long Island Sound, for the placement of dredged material from harbors and navigation channels in the Long Island Sound vicinity in the states of Connecticut and New York [40 CFR Part 228.15(b)(4) and (b)(5)].

The use of these two sites is subject to restrictions that are described in the site designation rule, which are intended to reduce or eliminate the disposal of dredged material in Long Island Sound. Use of the sites pursuant to these designations may be suspended or terminated in accordance with these restrictions.

One of these restrictions links continued use of the sites to the completion of a regional dredged material management plan (DMMP) for Long Island Sound. A DMMP is a comprehensive planning process and decision-making tool to address the management of dredged material for a specific harbor or navigation project, group of related projects, or geographic area. Additional detail on the DMMP is provided in the next section.

A related restriction requires EPA to conduct an annual review of progress toward completion of the DMMP. EPA is complying with this requirement by producing an annual report on or about the anniversary of the effective date of the site designations (July 5, 2005), and making the report available to the general public.

Another restriction is intended to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP by requiring the formation of an interagency Long Island Sound Regional Dredging Team (RDT). The RDT reviews dredging projects to ensure that a thorough effort has been conducted to identify practicable alternatives to open-water disposal and ensure the use of those alternatives to the maximum extent practicable. In addition to information on the status of the DMMP, this EPA annual report includes information on RDT deliberations conducted in the preceding year, and on the quantity of dredged material and its final placement or disposal location. Additional detail on the form and function of the RDT is provided in a later section.

Dredged Material Management Plans

The U.S. Army Corps of Engineers (USACE) regulations require each of its district offices to develop a DMMP for all Federal Navigation Projects for which there is an indication of insufficient placement or disposal capacity to accommodate maintenance dredging over a 30-year planning period. A DMMP

addresses a wide range of environmentally acceptable, cost-effective, and practicable alternatives for the management of dredged material, culminating with the selection of a base plan and a recommended plan that ensures that sufficient capacity for dredged material placement exists for a project or group of projects for the required 30-year planning period. The range of alternatives includes those that may provide environmental or commercial benefits through beneficial use of dredged material. The scope of a DMMP may also include private dredging projects that are geographically related to the federal project(s), which may require the sponsors of those projects to provide non-federal funds to support the additional work.

The DMMP process involves a phased approach. The first phase, a Preliminary Assessment, draws on existing information to: (1) determine the economic and engineering need for dredging according to existing and reasonably prospective navigation traffic; (2) identify the anticipated locations and volumes of dredged material to be generated within the study area; (3) examine existing dredged material disposal sites and management practices to determine if shortfalls in capacity or opportunities for better management exist; and (4) provide an estimate of the cost of completing the DMMP. The Preliminary Assessment determines whether a federal interest exists in participating in a feasibility-level DMMP study.

If the PA phase recommends the development of a DMMP after the PA is completed and approved, the DMMP is initiated upon the appropriation of necessary funding. The first step is development of a Project Management Plan (PMP) that describes: (1) the scope of the DMMP; (2) the sequence of the studies; (3) a plan for acquisition management covering the various study tasks (labor, contracts, other agency contributions); (4) a plan for public involvement and participation; and (5) an estimated budget, organized by federal fiscal year budget cycle.

Following review and acceptance of the PMP by the project team which also can consist of cooperating federal and state agencies, feasibility-level study efforts would commence, subject to the availability of staff and funding. These studies generally focus on the following topics: (1) dredging needs; (2) management options; (3) capacities of placement sites; (4) environmental compliance requirements; (5) potential for beneficial use of dredged material; and (6) indicators of continued economic justification. The PMP is considered a “living document,” subject to change based on new information and input from the public and other agencies.

The management structure for a typical DMMP comprises the following components:

- Project Manager: Individual responsible for day-to-day management of project.
- Project Delivery Team (PDT): The working group (in some cases involving members of other agencies) that will assist with the development of the DMMP.
- Agency Technical Review Team: Required by the USACE to review the plan for technical merit and cost-effectiveness.
- Technical working groups: These may be formed to provide assistance to the Project Delivery Team, with representation from other federal and state agencies, and sometimes non-government organizations and private citizens.

For compliance with the National Environmental Policy Act (NEPA), the USACE prepares an Environmental Assessment, Environmental Impact Statement or a Programmatic Environmental

Impact Statement (PEIS), whichever is most appropriate, that evaluates the analyses and recommendations of the DMMP.

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN

Management Structure

The USACE is the lead agency for development of the Long Island Sound Dredged Material Management Plan (LIS DMMP). The New England District and New York District, with oversight by the North Atlantic Division, are developing the DMMP in cooperation with EPA Regions 1 and 2, the National Oceanic and Atmospheric Administration (NOAA), the New York State Department of State (NYS DOS), the New York State Department of Environmental Conservation (NYS DEC), the Connecticut Department of Energy and Environmental Protection (CTDEEP) (formerly the Connecticut Department of Environmental Protection, or CT DEP), the Connecticut Department of Transportation (CT DOT) and the Rhode Island Coastal Resources Management Council (RI CRMC).

Management of the LIS DMMP was assigned to the USACE New England District, which assigned a project manager responsible for overall management of the effort. The participating agencies agreed to adopt the traditional management structure by establishing and assigning representatives to a LIS DMMP Project Delivery Team (PDT). Although not a standard component of the DMMP management structure, due to the large scope of the project and strong public interest, the agencies also formed a Steering Committee (SC) of higher level agency officials to facilitate communication, priority-setting, and the commitment of resources for the LIS DMMP.

During this reporting period, the SC met twice, on August 10-11, 2010 at Poplar Island, MD (in conjunction with a beneficial use site visit) and on February 10, 2011 in Newington, CT. In addition, the SC also participated in one conference call on November 18, 2010. The PDT members participated in eight conference calls (July 1, September 2, October 7, November 4, and December 2, 2010; and January 6, February 3, and April 7, 2011). Some of the PDT members also participated in the two SC meetings. These conference calls were held to discuss DMMP work efforts, including the Dredging Needs Survey, Upland Placement, Beneficial Use and dewatering site inventory, project budget, and proposed schedule for future work tasks. The current rosters (as of December 2011) for the Steering Committee and PDT are attached as Appendices A and B.

Planning Process

The overarching goal of the LIS DMMP is to develop a comprehensive plan for dredged material management in Long Island Sound that ensures federal dredging needs are met, and identify alternatives that can be used by others that will lead, over time, to the reduction or elimination of open-water disposal in the Sound. The DMMP will try to meet this goal by using a broad–based, public process that protects the environment based on best scientific data and analysis, while meeting society's need for safe and economically viable navigation for water based commerce, transportation, national security, and other public purposes. Recognizing that there are numerous institutional, regulatory, social, and financial barriers to utilizing dredged material beneficially, one purpose of the DMMP is to document these barriers and recommend plans to overcome them.

For the Long Island Sound DMMP, it should be noted that the site designation restrictions apply to all federal projects, and non–federal projects generating more than 25,000 cubic yards of dredged material in the region. The LIS DMMP will identify potential environmentally acceptable, practicable management alternatives that can be utilized by various dredging proponents in their analysis of options to manage their dredging projects.

The Preliminary Assessment for the LIS DMMP was completed and approved by the USACE in June 2006. The Project Management Plan, which serves as the initial work plan for the LIS DMMP, was completed and approved by the USACE, in consultation with the PDT, in October 2007. As previously noted, the PMP is subject to change based on new information and input from the public and other agencies.

The USACE will be preparing a Programmatic Environmental Impact Statement (PEIS) in conjunction with the LIS DMMP to ensure compliance with NEPA. The USACE published the Notice of Intent to develop a PEIS for the LIS DMMP in the Federal Register on August 31, 2007 (72 FR 50332). EPA, the USACE, and state agencies conducted a series of six public information and NEPA scoping meetings to kick off the LIS DMMP and PEIS process on November 26-29, 2007. The agencies held three meetings in each of the two states to present progress on the planning for the LIS DMMP and solicit public input on both the scope and process of the LIS DMMP and PEIS. Public comments will be considered in identifying and developing the activities and investigations to be performed in the LIS DMMP and PEIS effort. The presentations from the public meetings and other related documents are available on the USACE LIS DMMP Project website, which was established in August 2007 (http://www.nae.usace.army.mil/projects/ri/LISDMMP/LISDMMP.htm)

On March 24, 2008, the USACE initiated contractual efforts for the LIS DMMP study efforts. The USACE has been using both contracted services and in-house resources to conduct the various inventories or analyses needed for the development of the DMMP. The reports are available on the above mentioned USACE website.

The Dredging Needs Survey, which estimates the volume of dredged material that will be generated by location and by time frame for the entire region over a 30-year planning horizon, was initiated in June 2008 and completed in Oct 2009. An updated two-phase Literature Review was initiated in April 2008 and completed in June 2010. The Economic Update was initiated in January 2010 and completed in March 2010.

The initial Upland Placement Inventory, which identified and cataloged potential upland placement alternatives for the entire region over a 30-year planning horizon, as well as the inventory of possible shore-side transfer sites and beneficial use sites, was initiated in August 2008 and completed in October 2009. The sites in this report were screened based on their potential viability for use by the USACE in management of their dredged material. A second phase upland/beneficial use/near shore placement site identification effort designed to provide site-specific information such as capacity, restriction, etc. for the potential sites large enough for USACE use was completed in November 2010. An additional upland/beneficial use/near shore effort designed to provide site-specific information (e.g., capacity, restrictions, etc.) for the potential small sites was completed in January 2011.

The Federal and State Regulatory and Program Update was completed in October 2011. The Cultural

Update was initiated in May 2010 and completed in August 2010. An effort to inventory potential confined disposal sites and near shore placement sites has been initiated and will be completed in 2012. Another effort to determine air quality impacts from different sized and types of projects, and whether they would conform with Clean Air Act requirements also has been initiated and will be completed in 2012. An analysis of the estimated costs of transporting dredged material from various sizes and types of projects is also expected to be completed in 2012.

Concurrent with the technical studies, the USACE, with support from the PDT and contractors, initiated public outreach and participation efforts in 2010 and continued them in 2011. The first of several LIS DMMP newsletters was sent electronically and by mail to the public in February 2010.

USACE also established a LIS DMMP Working Group in early 2011 comprising representatives from federal, state, regional, and local government agencies, and various stakeholder organizations that have an interest in dredged material management in the Long Island Sound region. The Working Group members' responsibility is to provide input to the LIS DMMP process in their respective areas of expertise. The PDT hosted three Working Group meetings during the reporting period, on March 29 and June 7 in Bridgeport, CT and April 26 and in Port Jefferson, NY, which focused on a process to evaluate dredged material management alternatives in the study area. This evaluation process will be aimed at establishing a list of criteria based on stakeholder interests and concerns. Members of the Working Group, by reviewing and disseminating the information presented and discussed at the meetings, and conveying their organization's comments and positions, serve as a communication link between the regulatory agencies and the organizations represented on the Working Group.

During the meetings, the USACE presented background on the LIS DMMP process, the requirements for determining suitability of dredged material for disposal at the Long Island Sound disposal sites, and presented the USACE Engineer Research and Development Center (ERDC) Multi-Criteria Decision Analysis (MCDA) method. This method is being used to model scenarios with varying trade-off values (esthetic, economic, environmental, etc.). This information will be used in the alternatives assessment document.

Funding

In February 2005, the governors of the two states sent a joint letter to the USACE requesting its assistance with the development of the DMMP and, in separate letters, asked members of their respective congressional delegations to seek appropriation of federal funds to initiate the DMMP. The PDT initially estimated that it would cost up to $12 million and take 5-6 years to complete the LIS DMMP. The USACE agreed to work with the states on the DMMP and requests for funds were included in the President's budget for federal fiscal years (FY) 2007 and 2008. In FY07, $1.7 million was included in the President's proposed budget, but this was eliminated by passage of a Continuing Resolution that was based on the FY06 federal budget.

Federal funding for the LIS DMMP began in FY08 and continued through FY10 at variable levels (see table below).

As of November10, 2011, $6,943,785 in federal funds have been provided for the LIS DMMP project The President's Budget for FY12 contained a request for $1 million for the LIS DMMP Project.

However, since Congress has not passed a FY12 appropriations bill as of December 8, 2011, no additional funds have been provided.

Federal Funding for LIS DMMP, 2007-2012

Fiscal Year	Appropriation
2007[1]	$100,000
2008	$3,525,000
2009	$980,000
2010	$2,761,100
2011	$490,685
2012[2]	($913,000)
Total	$6,943,785

1. Includes $75,000 of FY05 funds.
2. Represents a reprogramming of funds out of LIS DMMP account.

LONG ISLAND SOUND REGIONAL DREDGING TEAM

Purpose

As described above, the site designation rule contemplated that a Regional Dredging Team would be established to review dredging proponents' alternative's analyses to ensure that they conducted a comprehensive analysis for practicable alternatives to open-water disposal and recommend their use to the maximum extent practicable, to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP. The following excerpt from the RDT guidance describes its primary function:

> The RDT is charged with reviewing all permit applications and authorizations subject to the … site designation rule restrictions and is not precluded from voluntarily providing advice to any other dredging project to help achieve the goal of reducing or eliminating the need for open water disposal in Long Island Sound. The RDT will work to identify all practicable alternatives to open water disposal and to advise regarding their use to the maximum extent practicable. Further, those identified practicable alternative use opportunities will be advanced through the appropriate state and federal authorities. All agencies will retain their respective final regulatory decision-making authority and regulatory time frames for project review.

In July 5, 2006, EPA, USACE, NOAA, and the states agreed to form an RDT and assigned representatives. The RDT began drafting a charter to describe the procedures the RDT would use to review the alternatives analyses developed by dredging project proponents, determine the adequacy of the analyses, and make recommendations on alternative dredged material placement options that should be considered by the USACE and other regulatory agencies. The RDT charter was approved by the Steering Committee in March 2007. The charter describes how the RDT will enhance communication and discussion among the participating agencies to facilitate the timely review and presentation of recommendations on the placement of dredged material from Long Island Sound dredging projects. Through the review process,

the RDT will become aware of possible alternatives to open-water disposal that it can communicate to potential applicants as well as appropriate state and federal authorities.

Current Status

During this reporting period, there were no proposed projects or alternatives to be discussed by the RDT. Therefore, the RDT did not meet during this period.

DREDGED MATERIAL DISPOSAL IN LONG ISLAND SOUND

It is the stated goal of the states of Connecticut and New York to reduce or eliminate the disposal of dredged material in Long Island Sound. To determine if this goal is being met will require measuring and tracking the amount of dredged material being disposed of or placed in the Sound and other locations. Currently, most open-water disposal in the Sound occurs at one of the four dredged material disposal sites in the Sound: Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals (CSDS), and New London (NLDS).

Alternatives include: upland placement or disposal; beach nourishment (depositing sand on or near an eroding beach); habitat restoration (e.g., depositing dredged material in sub-tidal areas to raise elevation and restore or create wetlands); confined aquatic disposal (CAD) cells (depositing unsuitable dredged material in a pit excavated below the floor of the harbor or navigation channel, and covering with clean material); and confined disposal facilities (using dredged material to increase the size of or create islands, e.g., to expand port facilities). Some of these alternatives, including beach nourishment, habitat creation/restoration, and capping (for both upland and aquatic habitat remediation purposes, in certain circumstances) are considered beneficial to the environment (i.e., beneficial uses). The following excerpt from the RDT guidance describes this process:

> The RDT will track and document the volume of dredged material approved for open water disposal as well as other alternative disposal methods, and submit this information for inclusion in the annual report on progress of the DMMP. This information will be part of the annual report on the progress of the DMMP to be issued by the EPA.

EPA is complying with this guidance by working with the RDT to compile dredged material disposal records on an annual basis, and reporting these data in an annual report for a one-year period ending July 5 each year. The data in the annual report will be compared with dredged material disposal data from all disposal activity in Long Island Sound averaged over the period from 1982-2004. This is the sixth annual report.

Dredged Material Disposal in Long Island Sound, 1982-2004 (in cubic yards [c.y.])

Disposal Site	Total Dredged Material Disposal	Avg. Annual Dredged Material Disposal
NLDS	3,069,546	133,459
CSDS	1,295,998	56,348
CLIS	8,019,678	348,682
WLIS	1,870,921	81,344
Totals	14,256,143	619,833

Overall, there was a total of 179,310 c.y. of dredged material generated in the Long Island Sound vicinity for the period July 6, 2010 – July 5, 2011, of which:

- 155,310 c.y. were disposed at open-water disposal sites in Long Island Sound;
- 0 c.y. were placed at containment sites; and
- 24.000 c.y. were used beneficially.

Recent Dredged Material Disposal in Long Island Sound Compared with Historic Averages
(in cubic yards [c.y.])

Disposal Site	Avg. Annual Dredged Material Disposal	2009	2010	2011	Change from Previous Reporting Period (2010) c.y.	Change from Historic Average (1982-2004) c.y.
NLDS	133,459	0	0	0	0	-133,459
CSDS	56,348	197,035	7,000	41,460	34,460	-14,888
CLIS	348,682	559,760	277,474	84,940	-192,534	-263,742
WLIS	81,344	6,950	11,950	28,910	16,960	-52,434
Totals	619,833	763,745	296,424	155,310	-141,114	-464,523

Of the 155,310 c.y. disposed in the Sound:

- 84,940 c.y. went to CLIS (vs. historical annual average of 348,682 c.y.);
- 28,910 c.y. went to WLIS (vs. historical annual average of 81,344 c.y.);
- 0 c.y. went to NLDS (vs. historical annual average of 133,459 c.y.); and
- 41,460 c.y. went to CSDS (vs. a historical annual average of 56,348 c.y.).

All of the 155,310 c.y. disposed in the Sound came from private projects.

Although not part of the reporting period covered in this report, the NLDS disposal site closed on October 5, 2011 and is no longer available for Federal projects or private projects greater than 25,000 c.y.

The average annual amount of dredged material disposed at the four open-water sites in the Sound from 1982-2004, was 619,833 c.y. For the period July 6, 2010 – July 5, 2011, there was a total disposed of 155,310 c.y., which is a decrease of 464,523 c.y. For further details, see Appendix D.

While there is generally some variability from one year to the next in the amount of dredged material disposed of in the Sound, there are many factors influencing this variability. Regardless, it is too early to determine any kind of long-term trend. The amount of dredged material disposed in the Sound during the current reporting period of July 6, 2010 – July 5, 2011, was less than the amount disposed during the prior reporting period of July 6, 2009 - July 5, 2010 (155,310 c.y. vs. 296,424 c.y. respectively); this appears to have resulted from variability in the size of projects and funding rather than from any difference in analysis of alternatives.

EPA will continue to report on an annual basis about the LIS RDT deliberations as well as each dredging project that was completed in the preceding year, including the name of the applicant, the

alternatives that were evaluated, the volume of dredged material, and its final placement or disposal location.

For further information, please contact:

Jean Brochi
US Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-1
Boston, MA 02119-3912
Telephone: (617) 918-1536
Fax: (617) 918-0536
brochi.jean@epa.gov

Appendix A

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN STEERING COMMITTEE		
AGENCY	**MEMBER**	**ALTERNATE**
NOAA	David Kaiser, Senior Policy Analyst Office of Ocean and Coastal Resource Management 603-862-2719 Fax: 603-862-3957 david.kaiser@noaa.gov	
USACE North Atlantic Division (NAD)	David Leach, Chief Interagency, International and Environmental Services 347-370-4629 david.j.Leach@usace.army.mil	Joe Vietri, Chief Planning Division 718-765-7070 joseph.r.vietri@usace.army.mil
USACE New England District (NAE)	Bill Scully, Deputy District Engineer Programs and Project Management 978-318-8230 william.c.scully@usace.army.mil	Robert (Bobby) Byrne, Chief Programs & Project Management Division 978-318-8509 robert.h.byrne@usace.army.mil
USACE New York District (NAN)	Joe Seebode Programs and Project Management 917-790-8207 Joseph.j.seebode@usace.army.mil	
EPA Region I	Stephen Perkins, Director Office of Ecosystem Protection 617-918-1501 perkins.stephen@epa.gov	Lynne Hamjian, Chief Office of Ecosystem Protection Surface Water Branch 617-918-1601 hamjian.lynne@epa.gov
EPA Region II	Jeff Gratz, Chief Division of Environmental Planning and Protection 212-637-3873 gratz.jeff@epa.gov	Doug Pabst, Team Leader Clean Water Regulatory Branch Dredging Sediments and Oceans Team 212-637-3797 pabst.douglas@epa.gov
New York State Dept. of State	George Stafford, Deputy Secretary of State for Coastal Resources 518-473-2459 gstaffor@dos.state.ny.us	Fred Anders, Chief Natural Resource Management Bureau Division of Coastal Resources 518-473-2477 fanders@dos.state.ny.us
New York State Dept. of Environmental Conservation	James Gilmore, Chief, Bureau of Marine Resources 518-402-8924 jgilmor@gw.dec.state.ny.us	Dawn McReynolds Section Head, Marine Habitat, Bureau of Marine Resources (631) 444-0452 dxmcreyn@gw.dec.state.ny.us
Connecticut Dept. of Energy and Environmental Protection	Betsey Wingfield, Chief Bureau of Water Management 860-424-3704 betsey.wingfield@po.state.ct.us	Brian Thompson, Director Office of Long Island Sound Programs (860) 424-3034 brian.thompson@po.state.ct.us

Appendix B

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN PROJECT DELIVERY TEAM		
AGENCY	**MEMBER**	**MEMBER**
USACE New England District (NAE)	Mike Keegan, Project Manager 978-318-8087 michael.f.keegan@usace.army.mil	Mark Habel 978-318-8871 mark.l.habel@usace.army.mil
USACE New York District (NAN)	Nancy Brighton 917-790-8703 nancy.j.brighton@usace.army.mil	
EPA Region I	Mel Cote 617-918-1553 cote.mel@epa.gov	Jean Brochi 617-918-1536 brochi.jean@epa.gov
EPA Region II	Doug Pabst 212-637-3797 pabst.douglas@epa.gov	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov
National Marine Fisheries Service	Diane Rusanowsky 203-882-2671 drusano@clam.mi.nmfs.gov	
New York State Dept. of State	Jennifer Street 518-474-1737 Jennifer.Street@dos.state.ny.us	Fred Anders 518-473-2477 fanders@dos.state.ny.us
New York State Dept. of Environmental Conservation	John Ferguson 518-402-8829 jjfergus@gw.dec.state.ny.us	
Connecticut Dept. of Energy and Environmental Protection	George Wisker 860-424-3034 george.wisker@po.state.ct.us	Diane Duva 860-424-3271 diane.duva@po.state.ct.us
Connecticut Dept. of Transportation	Joe Salvatore 860-594-2539 joseph.salvatore@po.state.ct.us	
Rhode Island Coastal Resources Management Council	Dan Goulet 401-783-3370 dgoulet@crmc.state.ri.gov	

Appendix C

LONG ISLAND SOUND REGIONAL DREDGING TEAM		
AGENCY	**MEMBER**	**ALTERNATE**
USACE North Atlantic Division (NAD)	James Haggerty 347-370-4650 james.w.haggerty@usace.army.mil	
USACE New England District (NAE)	Robert DeSista 978-318-8879 robert.j.desista@usace.army.mil	Jay Mackay 978-318-8142 joseph.b.mackay@usace.army.mil
USACE New York District (NAN)	Stephen Ryba 917-790-8411 Stephen.Ryba@usace.army.mil	Alexander Gregory 917-790-8411 Alexander.Gregory@usace.army.mil
EPA Region I	Jean Brochi 617-918-1536 brochi.jean@epa.gov	Mel Cote 617-918-1553 cote.mel@epa.gov
EPA Region II	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov	Doug Pabst 212-637-3797 pabst.douglas@epa.gov
NOAA National Marine Fisheries Service	Diane Rusanowsky 203-882-2671 drusano@clam.mi.nmfs.gov	
New York Dept. of State	Jennifer Street 518-474-1737 Jennifer.Street@dos.state.ny.us	
New York State Dept. of Environmental Conservation	Charles de Quillfeldt 631 444-0468 cxdequil@gw.dec.state.ny.us	
Connecticut Dept. of Energy and Environmental Protection	George Wisker Office of Long Island Sound Programs 860-424-3034 george.wisker@po.state.ct.us	Diane Duva Bureau of Waste Management 860-424-3271 diane.duva@po.state.ct.us

Appendix D

Long Island Sound Annual Dredging Report - for the Dredging Year Ending July 5, 2011
Summary of All Dredging and Disposal Activities

		CONNECTICUT			NEW YORK			
		Federal (USACE) Navigation Projects	Other Federal Projects	Private Permit Activities	Federal (USACE) Navigation Projects	Other Federal Projects	Private Permit Activities	Total All Projects and States
Open Water Disposal								155,310
	CLIS	0	0	76,340	0	0	8,600	84,940
	WLIS	0	0	28,910	0	0	0	28,910
	NLDS	0	0	0	0	0	0	0
	CSDS	0	0	41,460	0	0	0	41.460
Confined Disposal								0
	CAD Cells	0	0	0	0	0	0	0
	Upland Containment	0	0	0	0	0	0	0
	Landfill	0	0	0	0	0	0	0
Beneficial Use								24,000
	CAD Cap	0	0	0	0	0	0	0
	Beach/Bar Nourishment	24,000	0	0	0	0	0	24,000
	Habitat Creation/ Enhance	0	0	0	0	0	0	0
	Brownfield Remediation	0	0	0	0	0	0	0
Treated Dredged Material								0
	Upland Disposal	0	0	0	0	0	0	0
	Commercial Use	0	0	0	0	0	0	0
TOTAL ALL DISPOSAL		24,000	0	146,710	0	0	8,600	179,310

Fifth Annual Report Regarding Progress in Developing a Dredged Material Management Plan for the Long Island Sound Region

For the Period July 6, 2009 – July 5, 2010

U.S. Environmental Protection Agency, Region 1
December 2010

INTRODUCTION

This is the fifth annual report by the U.S. Environmental Protection Agency (EPA) on progress toward completion of a dredged material management plan (DMMP) for the Long Island Sound region, and related efforts to "reduce or eliminate" the need for open-water disposal of dredged material in Long Island Sound.

BACKGROUND

EPA Regulatory Requirements

On June 3, 2005, EPA issued a final rule to designate two open-water dredged material disposal sites, Central Long Island Sound and Western Long Island Sound, for the placement of dredged material from harbors and navigation channels in the Long Island Sound vicinity in the states of Connecticut and New York [40 CFR Part 228.15(b)(4) and (b)(5)].

The use of these two sites is subject to restrictions that are described in the site designation rule and are intended to reduce or eliminate the disposal of dredged material in Long Island Sound. Use of the sites pursuant to these designations may be suspended or terminated in accordance with these restrictions.

One of these restrictions links continued use of the sites to the completion of a regional dredged material management plan (DMMP) for Long Island Sound. A DMMP is a comprehensive planning process and decision-making tool to address the management of dredged material for a specific harbor or navigation project, group of related projects, or geographic area. Additional detail on the DMMP is provided in the next section.

A related restriction requires EPA to conduct an annual review of progress toward completion of the DMMP. EPA is complying with this requirement by producing an annual report on or about the anniversary of the effective date of the site designations (July 5, 2005), and making the report available to the general public.

Another restriction is intended to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP by requiring the formation of an interagency Long Island Sound Regional Dredging Team (RDT). The RDT reviews dredging projects to ensure that a thorough effort has been conducted to identify practicable alternatives to open-water disposal and ensure the use of those alternatives to the maximum extent practicable. In addition to information on the status of the DMMP, this EPA annual report includes information on RDT deliberations conducted in the preceding year, and on the quantity of dredged material and its final placement or disposal location. Additional detail on the form and function of the RDT is provided in a later section.

Dredged Material Management Plans

The U.S. Army Corps of Engineers (USACE) regulations require each of its district offices to develop a DMMP for all Federal Navigation Projects for which there is an indication of insufficient placement or disposal capacity to accommodate maintenance dredging for the next 20 years. A DMMP addresses

a wide range of environmentally acceptable, cost-effective, and practicable alternatives for the management of dredged material, culminating with the selection of a base plan and a recommended plan that ensures that sufficient capacity for dredged material placement exists for a project or group of projects for the required 20-year planning period. The range of alternatives includes those that may provide environmental or commercial benefits through beneficial use of dredged material. The scope of a DMMP may also include private dredging projects that are geographically related to the federal project(s), which may require the sponsors of those projects to provide non-federal funds to support the additional work.

The DMMP process involves a phased approach. The first phase, a Preliminary Assessment, draws on existing information to: (1) determine the economic and engineering need for dredging according to existing and reasonably prospective navigation traffic; (2) identify the anticipated locations and volumes of dredged material to be generated within the study area; (3) examine existing dredged material disposal sites and management practices to determine if shortfalls in capacity or opportunities for better management exist; and (4) provide an estimate of the cost of completing the DMMP. The Preliminary Assessment determines whether a federal interest exists in participating in a feasibility-level DMMP study.

If the PA phase recommends the development of a DMMP after the PA is completed and approved, the DMMP is initiated. The first step is development of a Project Management Plan (PMP) that describes: (1) the scope of the DMMP; (2) the sequence of the studies; (3) a plan for acquisition management covering the various study tasks (labor, contracts, other agency contributions); (4) a plan for public involvement and participation; and (5) an estimated budget, organized by federal fiscal year budget cycle.

Following review and acceptance of the PMP by the project team which also can consist of cooperating federal and state agencies, feasibility-level study efforts would commence, subject to the availability of staff and funding. These studies generally focus on the following topics: (1) dredging needs; (2) management options; (3) capacities of placement sites; (4) environmental compliance requirements; (5) potential for beneficial use of dredged material; and (6) indicators of continued economic justification. The PMP is considered a “living document,” subject to change based on new information and input from the public and other agencies.

The management structure for a typical DMMP comprises the following components:

- Project Manager: Individual responsible for day-to-day management of project.
- Project Delivery Team (PDT): The working group (in some cases involving members of other agencies) that will assist with the development of the DMMP.
- Agency Technical Review Team: Required by the USACE to review the plan for technical merit and cost-effectiveness.
- Technical working groups: These may be formed to provide assistance to the Project Delivery Team, with representation from other federal and state agencies, and sometimes non-government organizations and private citizens.

For compliance with the National Environmental Policy Act (NEPA), the USACE prepares an Environmental Assessment, Environmental Impact Statement or a Programmatic Environmental

Impact Statement (PEIS), whatever is the more appropriate document that evaluates the analyses and recommendations of the DMMP.

.

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN

Management Structure

The USACE is the lead agency for development of the Long Island Sound Dredged Material Management Plan (LIS DMMP). The New England District and New York District, with oversight by the North Atlantic Division, are developing the DMMP in cooperation with EPA Regions 1 and 2, the National Oceanic and Atmospheric Administration (NOAA), the New York State Department of State (NYS DOS), the New York State Department of Environmental Conservation (NYS DEC), the Connecticut Department of Environmental Protection (CT DEP), the Connecticut Department of Transportation (CT DOT) and the Rhode Island Coastal Resources Management Council (RI CRMC).

Management of the LIS DMMP was assigned to the USACE New England District, who has identified a project manager responsible for overall management of the effort. The participating agencies agreed to adopt the traditional management structure by establishing and assigning representatives to a LIS DMMP Project Delivery Team (PDT). Although not a standard component of the DMMP management structure, due to the large scope of the project and strong public interest, the agencies also formed a Steering Committee of higher level agency officials to facilitate communication, priority-setting, and the commitment of resources for the LIS DMMP.

During this reporting period, the Steering Committee members met once on February 8, 2010, and participated in a minimum of quarterly conference calls. The Steering Committee members were available to provide direction to the PDT, resolve outstanding issues, and track progress on the DMMP. The PDT attended the February Steering Committee meeting and participated in monthly conference calls. These conference calls were held to discuss DMMP work efforts, including the Dredging Needs Survey, Upland Placement, Beneficial Use and dewatering site inventory, project budget, and proposed schedule for future work tasks. The current rosters for the Steering Committee and PDT are attached as Appendices A and B.

Planning Process

The overarching goal of the LIS DMMP is to develop a comprehensive plan for dredged material management in Long Island Sound that ensures federal dredging needs are met, and identify alternatives that can be used by others that will lead, over time, to the reduction or elimination of open-water disposal in the Sound. The DMMP will try to meet this goal by using a broad–based, public process that protects the environment based on best scientific data and analysis, while meeting society's need for safe and economically viable navigation for water based commerce, transportation, national security, and other public purposes. Recognizing that there are numerous institutional, regulatory, social, and financial barriers to utilizing dredged material beneficially, one purpose of the DMMP is to document these barriers and recommend plans to overcome them.

For the Long Island Sound DMMP, it should be noted that the site designation restrictions apply to all federal projects, and non–federal projects generating more than 25,000 cubic yards of dredged material

in the region. The LIS DMMP will identify potential environmentally acceptable, practicable management alternatives that can be utilized by various dredging proponents in their analysis of options to manage their dredging projects.

The Preliminary Assessment for the LIS DMMP was completed and approved by the USACE in June 2006. The Project Management Plan, which serves as the initial work plan for the LIS DMMP, was completed and approved by the USACE, in consultation with the PDT, in October 2007. As previously noted, the PMP is subject to change based on new information and input from the public and other agencies.

The USACE will be preparing a Programmatic Environmental Impact Statement (PEIS) in conjunction with the LIS DMMP to ensure compliance with NEPA. The USACE published the Notice of Intent to develop a PEIS for the LIS DMMP in the Federal Register on August 31, 2007 (72 FR 50332). EPA, the USACE, and state agencies conducted a series of six public information and NEPA scoping meetings to kick off the LIS DMMP and PEIS process on November 26-29, 2007. The agencies held three meetings in each of the two states to present progress on the planning for the LIS DMMP and solicit public input on both the scope and process of the LIS DMMP and PEIS. Public comments will be considered in identifying and developing the activities and investigations to be performed in the LIS DMMP and PEIS effort. The presentations from the public meetings and other related documents are available on the USACE LIS DMMP Project website, which was established in August 2007 (http://www.nae.usace.army.mil/projects/ri/LISDMMP/LISDMMP.html).

On March 24, 2008, the USACE initiated contractual efforts for the LIS DMMP study efforts. The reports are available on the above mentioned Corps website. The Dredging Needs Survey, which estimates the volume of dredged material that will be generated by location and by time frame for the entire region over a 20-year planning horizon, was initiated in June 2008 and completed in Oct 2009. An updated two-phase Literature Review was initiated in April 2008 and completed in June 2010. The Economic Update was initiated in January 2010 and completed in March 2010. The initial Upland Placement Inventory, which is to identify and catalog potential upland placement alternatives for the entire region over a 20-year planning horizon, as well as the inventory of possible shore-side transfer sites and beneficial use sites, was initiated in August 2008 and completed in October 2009. A second phase designed to provide specific site information such as capacity, restriction, etc. is scheduled for completion in December 2010. The Federal and State Regulatory Update was initiated in March 2009 and is scheduled for completion by December 2011. The Cultural Update was initiated in May 2010 and completed in August 2010. The first of several LIS DMMP newsletters was sent electronically and by mail to the public in February 2010.

Funding

In February 2005, the governors of the two states sent a joint letter to the USACE requesting its assistance with the development of the DMMP and, in separate letters, asked members of their respective congressional delegations to seek appropriation of federal funds to initiate the DMMP. The PDT estimated that it would cost $12 million and take 5-6 years to complete the LIS DMMP. The USACE agreed to work with the states on the DMMP and requests for funds have been included in the President's budget for federal fiscal years (FY) 2007 and 2008. In FY07, $1.7 million was included in the President's proposed budget, but this was eliminated by passage of a Continuing Resolution that

was based on the FY06 federal budget.

On December 26, 2007, the President signed the 2008 Consolidated Appropriations Act, which included $3.525 million for the LIS DMMP. The FY 2009 Appropriation Bill provided an additional $980,000 and the FY 2010 Appropriation Bill provided an additional $2,939,000 for the LIS DMMP efforts. The FY 2011 President's budget requested an additional $2,000,000 for the LIS DMMP effort.

LONG ISLAND SOUND REGIONAL DREDGING TEAM

Purpose

As described above, the site designation rule contemplated that a Regional Dredging Team would be established to review dredging proponents' alternative's analyses to ensure that they conducted a comprehensive analysis for practicable alternatives to open-water disposal and recommend their use to the maximum extent practicable, to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP. The following excerpt from the RDT guidance describes its primary function:

> The RDT is charged with reviewing all permit applications and authorizations subject to the … site designation rule restrictions and is not precluded from voluntarily providing advice to any other dredging project to help achieve the goal of reducing or eliminating the need for open water disposal in Long Island Sound. The RDT will work to identify all practicable alternatives to open water disposal and to advise regarding their use to the maximum extent practicable. Further, those identified practicable alternative use opportunities will be advanced through the appropriate state and federal authorities. All agencies will retain their respective final regulatory decision-making authority and regulatory time frames for project review.

In July 5, 2006, EPA, USACE, NOAA, and the states agreed to form an RDT and assigned representatives. The RDT began drafting a charter to describe the procedures the RDT would use to review the alternatives analyses developed by dredging project proponents, determine the adequacy of the analyses, and make recommendations on alternative dredged material placement options that should be considered by the USACE and other regulatory agencies. The RDT charter was approved by the Steering Committee in March 2007. The charter describes how the RDT will enhance communication and discussion among the participating agencies to facilitate the timely review and presentation of recommendations on the placement of dredged material from Long Island Sound dredging projects. Through the review process, the RDT will become aware of possible alternatives to open-water disposal that it can communicate to potential applicants as well as appropriate state and federal authorities.

Current Status

During this reporting period, the RDT met via conference call to discuss the alternatives analysis prepared by Triton Environmental for Tilcon, Connecticut, Inc. to dredge their Pine Orchard Dock facility and adjacent access channel in Branford Harbor in Branford, CT. In addition, Joe Seebode,

resigned from the RDT chairmanship due to a change in his position with the Corps NY District and recommended Robert DeSista from the Corps New England District for the chairmanship of the RDT. The Steering Committee approved the selection of the new chair at the February 8, 2010 Steering Committee meeting.

DREDGED MATERIAL DISPOSAL IN LONG ISLAND SOUND

It is the stated goal of the states of Connecticut and New York to reduce or eliminate the disposal of dredged material in Long Island Sound. To determine if this goal is being met will require measuring and tracking the amount of dredged material being disposed of or placed in the Sound and other locations. Currently, most open-water disposal in the Sound occurs at one of the four dredged material disposal sites in the Sound: Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals (CSDS), and New London (NLDS).

Alternatives include: upland placement or disposal; beach nourishment (depositing sand on or near an eroding beach); habitat restoration (e.g., depositing dredged material in sub-tidal areas to raise elevation and restore or create wetlands); confined aquatic disposal (CAD) cells (depositing unsuitable dredged material in a pit excavated below the floor of the harbor or navigation channel, and covering with clean material); and confined disposal facilities (using dredged material to increase the size of or create islands, e.g., to expand port facilities). Some of these alternatives, including beach nourishment, habitat creation/restoration, and capping (for both upland and aquatic habitat remediation purposes, in certain circumstances) are considered beneficial to the environment (i.e., beneficial uses). The following excerpt from the RDT guidance describes this process:

> The RDT will track and document the volume of dredged material approved for open water disposal as well as other alternative disposal methods, and submit this information for inclusion in the annual report on progress of the DMMP. This information will be part of the annual report on the progress of the DMMP to be issued by the EPA.

EPA is complying with this guidance by working with the RDT to compile dredged material disposal records on an annual basis, and reporting these data in an annual report for a one-year period ending July 5 each year. The data in the annual report will be compared with dredged material disposal data from all disposal activity in Long Island Sound averaged over the period from 1982-2004. This is the fifth annual report.

Dredged Material Disposal in Long Island Sound, 1982-2004 (in cubic yards [c.y.])

Disposal Site	Total Dredged Material Disposal	Avg. Annual Dredged Material Disposal
NLDS	3,069,546	133,459
CSDS	1,295,998	56,348
CLIS	8,019,678	348,682
WLIS	1,870,921	81,344
Totals	14,256,143	619,833

Overall, there was a total of 547,491 c.y. of dredged material generated in the Long Island Sound vicinity for the period July 6, 2009 – July 5, 2010, of which:

- 296,424 c.y. were disposed at open-water disposal sites in Long Island Sound;
- 218,167 c.y. were placed at containment sites; and
- 32,900 c.y. were used beneficially for beach nourishment.

Of the 296,424 c.y. disposed in the Sound:

- 277,474 c.y. went to CLIS (vs. historical annual average of 348,682 c.y.);
- 11,950 c.y. went to WLIS (vs. historical annual average of 81,344 c.y.);
- 0 c.y. went to NLDS (vs. historical annual average of 133,459 c.y.); and
- 7,000 c.y. went to CSDS (vs. a historical annual average of 56,348 c.y.).

Of the 296,424 c.y. disposed in the Sound 141,630 c.y. came from private projects. The 218,167 c.y. disposed at containment sites, in this case, a Confined Aquatic Disposal (CAD) cell, came from a single U.S. Navy project in Groton, CT.

Recent Dredged Material Disposal in Long Island Sound Compared with Historic Averages
(in cubic yards [c.y.])

Disposal Site	Avg. Annual Dredged Material Disposal	2008	2009	2010	Change from Previous Reporting Period (2009) c.y.	Change from Historic Average (1982-2004) c.y.
NLDS	133,459	0	0	0	0	-133,459
CSDS	56,348	11,300	197,035	7,000	-190,035	-49,348
CLIS	348,682	24,575	559,760	277,474	-282,286	-71,208
WLIS	81,344	24,135	6,950	11,950	5,000	-69,394
Totals	619,833	60,010	763,745	296,424	-467,321	-323,409

The average annual amount of dredged material disposed at the four open-water sites in the Sound from 1982-2004, was 619,833 c.y. For the period July 6, 2009 – July 5, 2010, there was a total disposed of 296,424 c.y., which is a decrease of 323,409 c.y. or approximately 52 percent less yardage than the average. For further details, see Appendix D.

While there is generally some variability from one year to the next in the amount of dredged material disposed of in the Sound, there are many factors influencing this variability. Regardless, it is too early to determine any kind of long-term trend. The amount of dredged material disposed in the Sound during the current reporting period of July 6, 2009 – July 5, 2010, was less than the amount disposed during the prior reporting period of July 6, 2008 - July 5, 2009 (296,424 c.y. vs. 763,745 c.y. respectively); this appears to have resulted from variability in the size of projects and funding rather than from any difference in analysis of alternatives.

EPA will continue to report on an annual basis about the LIS RDT deliberations as well as each dredging project that was completed in the preceding year, including the name of the applicant, the alternatives that were evaluated, the volume of dredged material, and its final placement or disposal location.

For further information, please contact:

Jean Brochi
US Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-1
Boston, MA 02119-3912
Telephone: (617) 918-1536
Fax: (617) 918-0536
brochi.jean@epa.gov

Appendix A

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN STEERING COMMITTEE		
AGENCY	**MEMBER**	**ALTERNATE**
NOAA	David Kaiser, Senior Policy Analyst Office of Ocean and Coastal Resource Management 603-862-2719 Fax: 603-862-3957 david.kaiser@noaa.gov	
Corps North Atlantic Division (NAD)	David Leach, Chief Interagency, International and Environmental Services 347-370-4629 david.j.Leach@usace.army.mil	Joe Vietri, Chief Planning Division 718-765-7070 joseph.r.vietri@usace.army.mil
Corps New England District (NAE)	Bill Scully, Deputy District Engineer Programs and Project Management 978-318-8230 william.c.scully@usace.army.mil	Robert (Bobby) Byrne, Chief Programs & Project Management Division 978-318-8509 robert.h.byrne@usace.army.mil
Corps New York District (NAN)	Joe Seebode Programs and Project Management 917-790-8207 Joseph.j.seebode@usace.army.mil	
EPA Region I	Stephen Perkins, Director Office of Ecosystem Protection 617-918-1501 perkins.stephen@epa.gov	Lynne Hamjian, Chief Office of Ecosystem Protection Surface Water Branch 617-918-1601 hamjian.lynne@epa.gov
EPA Region II	Kevin Bricke, Deputy Director Division of Environmental Planning and Protection 212-637-3736 bricke.kevin@epa.gov	Jeff Gratz, Chief Division of Environmental Planning and Protection 212-637-3873 gratz.jeff@epa.gov
New York State Dept. of State	George Stafford, Deputy Secretary of State for Coastal Resources 518-473-2459 gstaffor@dos.state.ny.us	Fred Anders, Chief Natural Resource Management Bureau Division of Coastal Resources 518-473-2477 fanders@dos.state.ny.us
New York State Dept. of Environmental Conservation	James Gilmore, Chief, Bureau of Marine Resources 518-402-8924 jgilmor@gw.dec.state.ny.us	
Connecticut Dept. of Environmental Protection	Betsey Wingfield, Chief Bureau of Water Management 860-424-3704 betsey.wingfield@po.state.ct.us	Brian Thompson, Director Office of Long Island Sound Programs (860) 424-3034 brian.thompson@po.state.ct.us

Appendix B

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN PROJECT DELIVERY TEAM		
AGENCY	**MEMBER**	**MEMBER**
Corps New England District (NAE)	Mike Keegan, Project Manager 978-318-8087 michael.f.keegan@usace.army.mil	Mark Habel 978-318-8871 mark.l.habel@usace.army.mil
Corps New York District (NAN)	Nancy Brighton 917-790-8703 nancy.j.brighton@usace.army.mil	Nancy Brighton 917-790-8703 nancy.j.brighton@usace.army.mil
EPA Region I	Mel Cote 617-918-1553 cote.mel@epa.gov	Jean Brochi 617-918-1536 brochi.jean@epa.gov
EPA Region II	Doug Pabst 212-637-3797 pabst.douglas@epa.gov	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov
National Marine Fisheries Service	Diane Rusanowsky 203-882-2671 drusano@clam.mi.nmfs.gov	
New York State Dept. of State	Jennifer Street 518-474-1737 Jennifer.Street@dos.state.ny.us	Fred Anders 518-473-2477 fanders@dos.state.ny.us
New York State Dept. of Environmental Conservation	John Ferguson 518-402-8829 jjfergus@gw.dec.state.ny.us	
Connecticut Dept. of Environmental Protection	George Wisker 860-424-3034 george.wisker@po.state.ct.us	Diane Duva 860-424-3271 diane.duva@po.state.ct.us
Connecticut Dept. of Transportation	Joe Salvatore 860-594-2539 joseph.salvatore@po.state.ct.us	
Rhode Island Coastal Resources Management Council	Dan Goulet 401-783-3370 dgoulet@crmc.state.ri.gov	

Appendix C

LONG ISLAND SOUND REGIONAL DREDGING TEAM		
AGENCY	**MEMBER**	**ALTERNATE**
Corps North Atlantic Division (NAD)	James Haggerty 347-370-4650 james.w.haggerty@usace.army.mil	
Corps New England District (NAE)	Robert DeSista 978-318-8879 robert.j.desista@usace.army.mil	Jay Mackay 978-318-8142 joseph.b.mackay@usace.army.mil
Corps New York District (NAN)	TBD	
EPA Region I	Jean Brochi 617-918-1536 brochi.jean@epa.gov	Mel Cote 617-918-1553 cote.mel@epa.gov
EPA Region II	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov	Doug Pabst 212-637-3797 pabst.douglas@epa.gov
NOAA National Marine Fisheries Service	Diane Rusanowsky 203-882-2671 drusano@clam.mi.nmfs.gov	
New York Dept. of State	Jennifer Street 518-474-1737 Jennifer.Street@dos.state.ny.us	
New York State Dept. of Environmental Conservation	Charles de Quillfeldt 631 444-0468 cxdequil@gw.dec.state.ny.us	
Connecticut Dept. of Environmental Protection	George Wisker Office of Long Island Sound Programs 860-424-3034 george.wisker@po.state.ct.us	Diane Duva Bureau of Waste Management 860-424-3271 diane.duva@po.state.ct.us

Appendix D

Long Island Sound Annual Dredging Report - for the Dredging Year Ending July 5, 2010
Summary of All Dredging and Disposal Activities

Disposal Sites and Methods		CONNECTICUT			NEW YORK			Total All Projects and States	Total All Projects and States
		Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities	Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities		
Open Water Disposal								296,424	
	CLIS	0	154,794	122,680	0	0	0		277,474
	WLIS	0		11,950	0	0	0		11,950
	NLDS	0		0	0	0	0		0
	CSDS	0		7,000	0	0	0		7,000
Confined Disposal								218,167	
	CAD Cells	0	218,167	0	0	0	0		218,167
	Upland Containment	0	0	0	0	0	0		0
	Landfill	0	0	0	0	0	0		0
Beneficial Use								32,900	0
	CAD Cap	0	0	0	0	0	0		0
	Beach/Bar Nourishment	30,000	0	2,900	0	0	0		32,900
	Habitat Creation/Enhance	0	0	0	0	0	0		0
	Brownfield Remediation	0	0	0	0	0	0		0
Treated Dredged Material									0
	Upland Disposal	0	0	0	0	0	0		0
	Commercial Use	0	0	0	0	0	0		0
TOTAL ALL DISPOSAL		30,000	372,961	144,530	0	0	0	547,591	547,591

Fourth Annual Report Regarding Progress in Developing a Dredged Material Management Plan for the Long Island Sound Region

For the Period July 6, 2008 – July 5, 2009

U.S. Environmental Protection Agency, Region 1
October 2009

INTRODUCTION

This is the fourth annual report by the U.S. Environmental Protection Agency (EPA) on progress toward completion of a dredged material management plan (DMMP) for the Long Island Sound region, and related efforts to "reduce or eliminate" the need for open-water disposal of dredged material in Long Island Sound.

BACKGROUND

EPA Regulatory Requirements

On June 3, 2005, EPA issued a final rule to designate two open-water dredged material disposal sites, Central Long Island Sound and Western Long Island Sound, for the placement of dredged material from harbors and navigation channels in the Long Island Sound vicinity in the states of Connecticut and New York [40 CFR Part 228.15(b)(4) and (b)(5)].

The use of these two sites is subject to restrictions that are described in the site designation rule and are intended to reduce or eliminate the disposal of dredged material in Long Island Sound. Use of the sites pursuant to these designations may be suspended or terminated in accordance with these restrictions.

One of these restrictions links continued use of the sites to the completion of a regional dredged material management plan (DMMP) for Long Island Sound. A DMMP is a comprehensive planning process and decision-making tool to address the management of dredged material for a specific harbor or navigation project, group of related projects, or geographic area. Additional detail on the DMMP is provided in the next section.

A related restriction requires EPA to conduct an annual review of progress toward completion of the DMMP. EPA is complying with this requirement by producing an annual report on or about the anniversary of the effective date of the site designations (July 5, 2005), and making the report available to the general public.

Another restriction is intended to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP by requiring the formation of an interagency Long Island Sound Regional Dredging Team (RDT). The RDT reviews dredging projects to ensure that a thorough effort has been conducted to identify practicable alternatives to open-water disposal and ensure the use of those alternatives to the maximum extent practicable. In addition to information on the status of the DMMP, this EPA annual report includes information on RDT deliberations conducted in the preceding year, and on the quantity of dredged material and its final placement or disposal location. Additional detail on the form and function of the RDT is provided in a later section.

Dredged Material Management Plans

The U.S. Army Corps of Engineers (USACE) regulations require each of its district offices to develop a DMMP for all Federal Navigation Projects for which there is an indication of insufficient

placement or disposal capacity to accommodate maintenance dredging for the next 30 years. A DMMP addresses a wide range of environmentally acceptable, cost-effective, and practicable alternatives for the management of dredged material, culminating with the selection of a base plan and a recommended plan that ensures that sufficient capacity for dredged material placement exists for a project or group of projects for the required 30-year planning period. The range of alternatives includes those that may provide environmental or commercial benefits through beneficial use of dredged material. The scope of a DMMP may also include private dredging projects that are geographically related to the federal project(s), which may require the sponsors of those projects to provide non-federal funds to support the additional work.

The DMMP process involves a phased approach. The first phase, a Preliminary Assessment, draws on existing information to: (1) determine the economic and engineering need for dredging according to existing and reasonably prospective navigation traffic; (2) identify the anticipated locations and volumes of dredged material to be generated within the study area; (3) examine existing dredged material disposal sites and management practices to determine if shortfalls in capacity or opportunities for better management exist; and (4) provide an estimate of the cost of completing the DMMP. The Preliminary Assessment determines whether a federal interest exists in participating in a feasibility-level DMMP study and also identifies potential non-federal sponsor(s) of the DMMP.

After the PA phase is completed, the DMMP is initiated. The first step is development of a Project Management Plan (PMP) that describes: (1) the scope of the DMMP; (2) the sequence of the studies; (3) a plan for acquisition management covering the various study tasks (labor, contracts, other agency contributions); (4) a plan for public involvement and participation; and (5) an estimated budget, organized by federal fiscal year budget cycle.

Following review and acceptance of the PMP by the cooperating federal and state agencies, feasibility-level study efforts would commence, subject to the availability of staff and funding. These studies generally focus on the following topics: (1) dredging needs; (2) management options; (3) capacities of placement sites; (4) environmental compliance requirements; (5) potential for beneficial use of dredged material; and (6) indicators of continued economic justification. The PMP is considered a "living document," subject to change based on new information and input from the public and other agencies.

The management structure for a typical DMMP comprises the following components:

- Project Manager: Individual responsible for day-to-day management of project.
- Project Delivery Team (PDT): The interagency working group that will assist with the development of the DMMP.
- Agency Technical Review Team: Required by the USACE to review the plan for technical merit and cost-effectiveness.
- Technical working groups: These may be formed to provide assistance to the Project Delivery Team, with representation from other federal and state agencies, and sometimes non-government organizations and private citizens.

For compliance with the National Environmental Policy Act (NEPA), the USACE prepares a Programmatic Environmental Impact Statement (PEIS) that evaluates the analyses and recommendations of the DMMP.

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN

Management Structure

The USACE is the lead agency for development of the Long Island Sound Dredged Material Management Plan (LIS DMMP). The New England District and New York District, with oversight by the North Atlantic Division, are developing the DMMP in cooperation with EPA Regions 1 and 2, the National Oceanic and Atmospheric Administration (NOAA), the New York State Department of State (NYS DOS), the New York State Department of Environmental Conservation (NYS DEC), the Connecticut Department of Environmental Protection (CT DEP), the Connecticut Department of Transportation (CT DOT) and the Rhode Island Coastal Resources Management Council (RI CRMC).

Management of the LIS DMMP was assigned to the USACE New England District, which has assigned a project manager. The participating agencies agreed to adopt the traditional management structure by establishing and assigning representatives to a LIS DMMP Project Delivery Team (PDT). Although not a standard component of the DMMP management structure, due to the large scope of the project and strong public interest, the agencies also formed a Steering Committee of higher level agency officials to facilitate communication, priority-setting, and the commitment of resources for the LIS DMMP.

During the reporting period, the Steering Committee held monthly teleconferences to provide direction to the PDT, resolve outstanding issues, and track progress on the DMMP. The PDT held monthly conference calls during this reporting period. These conference calls were held to discuss DMMP work efforts, including the Dredging Needs Survey and Upland Placement Inventory, project budget, and proposed schedule for future work tasks. The current rosters for the Steering Committee and PDT are attached as Appendices A and B.

Planning Process

The overarching goal of the LIS DMMP is to develop a comprehensive plan for dredged material management in Long Island Sound that ensures USACE dredging needs are met, and identify alternatives that can be used by others that will lead, over time, to the reduction or elimination of open-water disposal in the Sound. The DMMP will try to meet this goal by using a broad–based, public process that protects the environment based on best scientific data and analysis, while meeting society's need for safe and economically viable navigation for water based commerce, transportation, national security, and other public purposes. Recognizing that there are numerous institutional, regulatory, social, and financial barriers to utilizing dredged material beneficially, one purpose of the DMMP is to document these barriers and recommend plans to overcome them.

For the Long Island Sound DMMP, it should be noted that the site designation restrictions apply to all federal projects, and non–federal projects in the region generating more than 25,000 cubic yards of

dredged material. The LIS DMMP will identify environmentally acceptable, practicable management alternatives for disposal of dredged material from the Corps Federal navigation projects in the region. The LIS DMMP will also identify environmentally acceptable, practicable management alternatives that can be considered by other dredging proponents in their analysis of options to manage their dredging projects.

The Preliminary Assessment for the LIS DMMP was completed and approved by the USACE in June 2006. The Project Management Plan, which serves as the initial work plan for the LIS DMMP, was completed and approved by the USACE, in consultation with the PDT, in October 2007. As previously noted, the PMP is subject to change based on new information and input from the public and other agencies. The initiation of the actual DMMP studies is dependent on the appropriation of federal funding to the USACE by Congress.

As previously noted, the USACE will be preparing a Programmatic Environmental Impact Statement (PEIS) in conjunction with the LIS DMMP to ensure compliance with NEPA. The USACE published the Notice of Intent to develop a PEIS for the LIS DMMP in the Federal Register on August 31, 2007 (72 FR 50332). EPA, the USACE, and state agencies conducted a series of six public information and NEPA scoping meetings to kick off the LIS DMMP and PEIS process on November 26-29, 2007. The agencies held three meetings in each of the two states to present progress on the planning for the LIS DMMP and solicit public input on both the scope and process of the LIS DMMP and PEIS. Public comments will be considered in identifying and developing the activities and investigations to be performed in the LIS DMMP and PEIS effort. The presentations from the public meetings and other related documents are available on the USACE LIS DMMP Project website, which was established in August 2007 (http://www.nae.usace.army.mil/projects/ri/LISDMMP/LISDMMP.html).

On March 24, 2008, the USACE contracted for the first two LIS DMMP study efforts. The Dredging Needs Survey, which is to estimate how much dredging, is projected to occur and how much dredged material will be generated in the entire region over a 30 year planning horizon, was initiated in June 2008 and the final report was completed in October 2009. The Upland Placement, Beneficial Use, and Sediment De-Watering Site Inventory, which is to identify and catalog potential upland placement alternatives for the entire region over a 30 year planning horizon, as well as the inventory of possible shore-side transfer sites and beneficial use sites, was initiated in August 2008 and the final report was completed in October 2009. Both studies build upon the information collected and evaluations prepared for the Environmental Impact Statement (EIS) for the Designation of Dredged Material Disposal Sites in Central and Western Long Island Sound, April 2004. Also, on August 26, 2009, the USACE initiated a task to update the environmental database from the 2004 EIS to further refine the availability of existing data to be used in the LIS DMMP alternatives analysis.

Funding

The PDT estimates that it will cost about $12 million and take 5-6 years to complete the LIS DMMP. In February 2005, the governors of the two states sent a joint letter to the USACE requesting its assistance with the development of the DMMP and, in separate letters, asked members of their respective congressional delegations to seek appropriation of federal funds to initiate the DMMP. The USACE agreed to work with the states on the DMMP and requests for funds have been included

in the President's budget for federal fiscal years (FY) 2007 and 2008. In FY07, $1.7 million was included in the President's proposed budget, but this was eliminated by passage of a Continuing Resolution that was based on the FY06 federal budget.

On December 26, 2007, the President signed the 2008 Consolidated Appropriations Act, which included $3.525 million for the LIS DMMP. The FY 2009 Appropriation Bill provided an additional $980,000 for the LIS DMMP efforts.

LONG ISLAND SOUND REGIONAL DREDGING TEAM

Purpose

As described above, the site designation rule contemplated that a Regional Dredging Team would be established to review dredging proponents' alternative's analysis to ensure that they conducted a comprehensive analysis for practicable alternatives to open-water disposal and recommend their use to the maximum extent practicable, to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP. The following excerpt from the RDT guidance describes its primary function:

> The RDT is charged with reviewing all permit applications and authorizations subject to the … site designation rule restrictions and is not precluded from voluntarily providing advice to any other dredging project to help achieve the goal of reducing or eliminating the need for open water disposal in Long Island Sound. The RDT will work to identify all practicable alternatives to open water disposal and to advise regarding their use to the maximum extent practicable. Further, those identified practicable alternative use opportunities will be advanced through the appropriate state and federal authorities. All agencies will retain their respective final regulatory decision-making authority and regulatory time frames for project review.

In July 5, 2006, EPA, USACE, NOAA, and the states agreed to form an RDT and assigned representatives. The RDT began drafting a charter to describe the procedures the RDT would use to review the alternatives analyses developed by dredging project proponents, determine the adequacy of the analyses, and make recommendations on alternative dredged material placement options that should be considered by the USACE and other regulatory agencies. The RDT charter was approved by the Steering Committee in March 2007. The charter describes how the RDT will enhance communication and discussion among the participating agencies to facilitate the timely review and presentation of recommendations on the placement of dredged material from Long Island Sound dredging projects. Through the review process, the RDT will become aware of possible alternatives to open-water disposal that it can communicate to potential applicants as well as appropriate state and federal authorities.

Current Status

During this reporting period, the RDT did not meet since no projects were proposed that would use the designated CLIS or WLIS sites for ocean placement of dredged material.

Dredged Material Disposal in Long Island Sound

It is the stated goal of the states of Connecticut and New York to reduce or eliminate the disposal of dredged material in Long Island Sound. To determine if this goal is being met will require measuring and tracking the amount of dredged material being disposed of or placed in the Sound and other locations. Currently, most open-water disposal in the Sound occurs at one of the four dredged material disposal sites in the Sound: Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals (CSDS), and New London (NLDS).
Alternatives include: upland placement or disposal; beach nourishment (depositing sand on or near an eroding beach); habitat restoration (e.g., depositing dredged material in sub-tidal areas to raise elevation and restore or create wetlands); confined aquatic disposal (CAD) cells (depositing unsuitable dredge material in a pit excavated below the floor of the harbor or navigation channel, and covering with clean material); and confined disposal facilities (using dredged material to increase the size of or create islands, e.g., to expand port facilities). Some of these alternatives, including beach nourishment, habitat creation/restoration, and capping (for both upland and aquatic habitat remediation purposes, in certain circumstances) are considered beneficial to the environment (i.e., beneficial uses). The following excerpt from the RDT guidance describes this process:

> The RDT will track and document the volume of dredged material approved for open water disposal as well as other alternative disposal methods, and submit this information for inclusion in the annual report on progress of the DMMP. This information will be part of the annual report on the progress of the DMMP to be issued by the EPA.

EPA is complying with this guidance by working with the RDT to compile dredged material disposal records on an annual basis, and reporting this data in an annual report for a one-year period ending July 5 each year. The data in the annual report will be compared with dredged material disposal data from all disposal activity in Long Island Sound averaged over the period from 1982-2004. This is the fourth annual report.

Dredged Material Disposal in Long Island Sound, 1982-2004 (in cubic yards [c.y.])

Disposal Site	Total Dredged Material Disposal	Avg. Annual Dredged Material Disposal
CLIS	8,019,678	348,682
WLIS	1,870,921	81,344
NLDS	3,069,546	133,459
CSDS	1,295,998	56,348
Totals	14,256,143	619,833

Overall, there was a total of 771,145 c.y. of dredged material generated in the Long Island Sound vicinity for the period July 6, 2008 – July 5, 2009, of which:

- 763,745 c.y. were disposed at open-water disposal sites in Long Island Sound;
- 7,400 c.y. were placed at an upland containment sites; and
- 0 c.y. were used beneficially for beach nourishment.

Of the 763,745 c.y. disposed in the Sound:

- 559,760 c.y. went to CLIS (vs. historical annual average of 348,682 c.y.);
- 6,950 c.y. went to WLIS (vs. historical annual average of 81,344 c.y.);
- 0 c.y. went to NLDS (vs. historical annual average of 133,459 c.y.); and
- 197,035 c.y. went to CSDS (vs. a historical annual average of 56,348 c.y.).

Private projects (non federal) account for 235,150 c.y. of dredged material disposed in the Sound and 7,400 c.y. of dredged material disposed at upland sites.

Recent Dredged Material Disposal in Long Island Sound Compared with Historic Averages
(in cubic yards [c.y.])

Disposal Site	Avg. Annual Dredged Material Disposal (1982-2004) c.y.	2007	2008	2009	Change from Previous Reporting Period (2008) c.y.	2009 Change compared to Avg. Annual Disposal (1982-2004) c.y.
CLIS	348,682	64,970	24,575	559,760	535,185	211,078
WLIS	81,344	3,600	10,135	6,950	-3,185	-74,394
NLDS	133,459	369,635	0	0	0	-133,459
CSDS	56,348	9,470	11,300	197,035	185,735	140,687
Totals	619,833	447,675	46,010	763,745	717,735	143,912

The average annual amount of dredged material disposed at the four open-water sites in the Sound from 1982-2004, was 619,833 c.y. For the period July 6, 2008 – July 5, 2009 there was a total of 763,745 c.y. disposed in the Sound, which is an increase of 143,912 c.y. or approximately 23 percent more yardage than the average. For further details, see Appendix D.

While there is generally some variability from one year to the next in the amount of dredged material disposed of in the Sound, there are many factors influencing this variability. Regardless, it is too early to determine any kind of long-term trend. The amount of dredged material disposed in the Sound during the current reporting period of July 6, 2008 – July 5, 2009 was greater than the amount disposed during the prior reporting period of July 6, 2007 - July 5, 2008 (763,745 c.y. vs. 46,010 c.y. respectively); this appears to have resulted from variability in the size of projects and funding rather than from any difference in analysis of alternatives.

EPA will continue to report on an annual basis about the LIS RDT deliberations as well as each dredging project that was completed in the preceding year, including the name of the applicant, the alternatives that were evaluated, the volume of dredged material, and its final placement or disposal location. For further information, please contact:

Jean Brochi
US Environmental Protection Agency
5 Post Office Square, Suite 100 (Mail Code: OEP06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1536
Fax: (617) 918-0536 brochi.jean@epa.gov

Appendix A

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN STEERING COMMITTEE		
AGENCY	**MEMBER**	**ALTERNATE**
NOAA	David Kaiser, Senior Policy Analyst Office of Ocean and Coastal Resource Management, NOAA 603-862-2719 Fax: 603-862-3957 david.kaiser@noaa.gov	
Corps North Atlantic Division (NAD)	Joe Vietri, Chief Planning Division 718-765-7070 joseph.r.vietri@usace.army.mil	
Corps New England District (NAE)	Bill Scully, Deputy District Engineer Programs and Project Management 978-318-8230 william.c.scully@usace.army.mil	Robert (Bobby) Byrne, Chief Programs & Project Management Division 978-318-8509 robert.h.byrne@usace.army.mil
Corps New York District (NAN)	Frank Santomauro, Chief Planning Division 917-790-8700 frank.santomauro@usace.army.mil	
EPA Region I	Stephen Perkins, Director Office of Ecosystem Protection 617-918-1501 perkins.stephen@epa.gov	Lynne Hamjian, Chief Office of Ecosystem Protection Surface Water Branch 617-918-1601 hamjian.lynne@epa.gov
EPA Region II	Kevin Bricke, Deputy Director Division of Environmental Planning and Protection 212-637-3736 bricke.kevin@epa.gov	Jeff Gratz, Chief Clean Water Regulatory Branch Division of Environmental Planning and Protection 212-637-3873 gratz.jeff@epa.gov
New York State Dept. of State	George Stafford, Deputy Secretary of State for Coastal Resources 518-473-2459 gstaffor@dos.state.ny.us	Fred Anders, Chief Natural Resource Management Bureau Division of Coastal Resources 518-473-2477 fanders@dos.state.ny.us
New York State Dept. of Environmental Conservation	James Gilmore, Chief, Bureau of Marine Resources 518-402-8924 jgilmor@gw.dec.state.ny.us	
Connecticut Dept. of Environmental Protection	Betsey Wingfield, Chief Bureau of Water Management 860-424-3704 betsey.wingfield@po.state.ct.us	Brian Thompson, Director Office of Long Island Sound Programs 860-424-3034 brian.thompson@po.state.ct.us

Appendix B

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN PROJECT DELIVERY TEAM		
AGENCY	**MEMBER**	**MEMBER**
Corps New England District (NAE)	Mike Keegan, Project Manager 978-318-8087 michael.f.keegan@usace.army.mil	Mark Habel 978-318-8871 mark.l.habel@usace.army.mil
Corps New York District (NAN)		Nancy Brighton 917-790-8703 nancy.j.brighton@usace.army.mil
EPA Region I	Mel Cote 617-918-1553 cote.mel@epa.gov	Jean Brochi 617-918-1536 brochi.jean@epa.gov
EPA Region II	Doug Pabst 212-637-3797 pabst.douglas@epa.gov	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov
National Marine Fisheries Service	Diane Rusanowsky 203-882-2671 drusano@clam.mi.nmfs.gov	
New York State Dept. of State	Jennifer Street 518-474-1737 Jennifer.Street@dos.state.ny.us	Fred Anders 518-473-2477 fanders@dos.state.ny.us
New York State Dept. of Environmental Conservation	John Ferguson 518-402-8829 jfergus@gw.state.ny.us	
Connecticut Dept. of Environmental Protection	George Wisker 860-424-3034 george.wisker@po.state.ct.us	Diane Duva 860-424-3271 diane.duva@po.state.ct.us
Connecticut Dept. of Transportation	Joe Salvatore 860-594-2539 joseph.salvatore@po.state.ct.us	
Rhode Island Coastal Resources Management Council	Dan Goulet 401-783-3370 dgoulet@crmc.state.ri.us	

Appendix C

LONG ISLAND SOUND REGIONAL DREDGING TEAM		
AGENCY	**MEMBER**	**ALTERNATE**
Corps North Atlantic Division (NAD)	James Haggerty 718-765-7150 james.w.haggerty@usace.army.mil	
Corps New England District (NAE)	Robert DeSista 978-318-8879 robert.j.desista@usace.army.mil	Jay Mackay 978-318-8142 joseph.b.mackay@usace.army.mil
Corps New York District (NAN)	Joe Seebode 917-790-8209 joseph.j.seebode@nan02.usace.army.mil	
EPA Region I	Jean Brochi 617-918-1536 brochi.jean@epa.gov	Mel Cote 617-918-1553 cote.mel@epa.gov
EPA Region II	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov	Doug Pabst 212-637-3797 pabst.douglas@epa.gov
NOAA National Marine Fisheries Service	Diane Rusanowsky 203-882-2671 drusano@clam.mi.nmfs.gov	
New York Dept. of State	Jennifer Street 518-474-1737 Jennifer.Street@dos.state.ny.us	
New York State Dept. of Environmental Conservation	Chuck Hamilton cthamilt@gw.dec.state.ny.us	
Connecticut Dept. of Environmental Protection	George Wisker Office of Long Island Sound Programs 860-424-3034 george.wisker@po.state.ct.us	
	Diane Duva Bureau of Waste Management 860-424-3271 diane.duva@po.state.ct.us	David McKeegan Bureau of Waste Management 860-424-3313 david.mckeegan@po.state.ct.us

Appendix D

Long Island Sound Annual Dredging Report - for the Dredging Year Ending 5 July 2009
Summary of All Dredging and Disposal Activities

Disposal Sites and Methods		CONNECTICUT			NEW YORK			Total All Projects and States
		Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities	Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities	
Open Water Disposal		528,595	0	207,250	0	0	35,300	771,145
	CLIS	355,885	0	168,575	0	0	35,300	559,760
	WLIS	0	0	6,950	0	0	0	6,950
	NLDS	0	0	0	0	0	0	0
	CSDS	172,710	0	24,325	0	0	0	197,035
Confined Disposal								
	CAD Cells	0	0	0	0	0	0	0
	Upland Containment	0	0	7,400				7,400
	Landfill	0	0	0	0	0	0	0
Beneficial Use								
	CAD Cap	0	0	0	0	0	0	0
	Beach/Bar Nourishment	0	0	0	0	0	0	0
	Habitat Creation/Enhance	0	0	0	0	0	0	0
	Brownfield Remediation	0	0	0	0	0	0	0
Treated Dredged Material		0	0	0	0	0	0	0
	Upland Disposal	0	0	0	0	0	0	0
	Commercial Use	0	0	0	0	0	0	0
TOTAL ALL DISPOSAL		528,595	0	207,250	0	0	35,300	771,145

Third Annual Report Regarding Progress in Developing a Dredged Material Management Plan for the Long Island Sound Region

For the Period July 6, 2007 – July 5, 2008

U.S. Environmental Protection Agency, Region 1
October 2008

INTRODUCTION

This is the third annual report by the U.S. Environmental Protection Agency (EPA) on progress toward completion of a dredged material management plan (DMMP) for the Long Island Sound region, and related efforts to "reduce or eliminate" the need for open-water disposal of dredged material in Long Island Sound.

BACKGROUND

EPA Regulatory Requirements

On June 3, 2005, EPA issued a final rule to designate two open-water dredged material disposal sites, Central Long Island Sound and Western Long Island Sound, for the placement of dredged material from harbors and navigation channels in the Long Island Sound vicinity in the states of Connecticut and New York [40 CFR Part 228.15(b)(4) and (b)(5)].

The use of these two sites is subject to restrictions that are described in the site designation rule and are intended to reduce or eliminate the disposal of dredged material in Long Island Sound. Use of the sites pursuant to these designations may be suspended or terminated in accordance with these restrictions.

One of these restrictions links continued use of the sites to the completion of a regional dredged material management plan (DMMP) for Long Island Sound. A DMMP is a comprehensive planning process and decision-making tool to address the management of dredged material for a specific harbor or navigation project, group of related projects, or geographic area. Additional detail on the DMMP is provided in the next section.

A related restriction requires EPA to conduct an annual review of progress toward completion of the DMMP. EPA is complying with this requirement by producing an annual report on or about the anniversary of the effective date of the site designations (July 5, 2005), and making the report available to the general public.

Another restriction is intended to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP by requiring the formation of an interagency Long Island Sound Regional Dredging Team (RDT). The RDT reviews dredging projects to ensure that a thorough effort has been conducted to identify practicable alternatives to open-water disposal and ensure the use of those alternatives to the maximum extent practicable. In addition to information on the status of the DMMP, this EPA annual report includes information on RDT deliberations conducted in the preceding year, and on the quantity of dredged material and its final placement or disposal location. Additional detail on the form and function of the RDT is provided in a later section.

Dredged Material Management Plans

The U.S. Army Corps of Engineers (USACE) regulations require each of its district offices to develop a DMMP for all Federal Navigation Projects for which there is an indication of insufficient placement or disposal capacity to accommodate maintenance dredging for the next 20 years. A DMMP addresses

a wide range of environmentally acceptable, cost-effective, and practicable alternatives for the management of dredged material, culminating with the selection of a base plan and a recommended plan that ensures that sufficient capacity for dredged material placement exists for a project or group of projects for the required 20-year planning period. The range of alternatives includes those that may provide environmental or commercial benefits through beneficial use of dredged material. The scope of a DMMP may also include private dredging projects that are geographically related to the federal project(s), which may require the sponsors of those projects to provide non-federal funds to support the additional work.

The DMMP process involves a phased approach. The first phase, a Preliminary Assessment, draws on existing information to: (1) determine the economic and engineering need for dredging according to existing and reasonably prospective navigation traffic; (2) identify the anticipated locations and volumes of dredged material to be generated within the study area; (3) examine existing dredged material disposal sites and management practices to determine if shortfalls in capacity or opportunities for better management exist; and (4) provide an estimate of the cost of completing the DMMP. The Preliminary Assessment determines whether a federal interest exists in participating in a feasibility-level DMMP study and also identifies potential non-federal sponsor(s) of the DMMP.

After the PA phase is completed, the DMMP is initiated. The first step is development of a Project Management Plan (PMP) that describes: (1) the scope of the DMMP; (2) the sequence of the studies; (3) a plan for acquisition management covering the various study tasks (labor, contracts, other agency contributions); (4) a plan for public involvement and participation; and (5) an estimated budget, organized by federal fiscal year budget cycle.

Following review and acceptance of the PMP by the cooperating federal and state agencies, feasibility-level study efforts would commence, subject to the availability of staff and funding. These studies generally focus on the following topics: (1) dredging needs; (2) management options; (3) capacities of placement sites; (4) environmental compliance requirements; (5) potential for beneficial use of dredged material; and (6) indicators of continued economic justification. The PMP is considered a "living document," subject to change based on new information and input from the public and other agencies.

The management structure for a typical DMMP comprises the following components:

- Project Manager: Individual responsible for day-to-day management of project.
- Project Delivery Team (PDT): The interagency working group that will assist with the development of the DMMP.
- Agency Technical Review Team: Required by the USACE to review the plan for technical merit and cost-effectiveness.
- Technical working groups: These may be formed to provide assistance to the Project Delivery Team, with representation from other federal and state agencies, and sometimes non-government organizations and private citizens.

For compliance with the National Environmental Policy Act (NEPA), the USACE prepares a Programmatic Environmental Impact Statement (PEIS) that evaluates the analyses and recommendations of the DMMP.

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN

Management Structure

The USACE is the lead agency for development of the Long Island Sound Dredged Material Management Plan (LIS DMMP). The New England District and New York District, with oversight by the North Atlantic Division, are developing the DMMP in cooperation with EPA Regions 1 and 2, the National Oceanic and Atmospheric Administration (NOAA), the New York State Department of State (NYS DOS), the New York State Department of Environmental Conservation (NYS DEC), the Connecticut Department of Environmental Protection (CT DEP), the Connecticut Department of Transportation (CT DOT) and the Rhode Island Coastal Resources Management Council (RI CRMC).

Management of the LIS DMMP was assigned to the USACE New England District, which has assigned a project manager. The participating agencies agreed to adopt the traditional management structure by establishing and assigning representatives to a LIS DMMP Project Delivery Team (PDT). Although not a standard component of the DMMP management structure, due to the large scope of the project and strong public interest, the agencies also formed a Steering Committee of higher level agency officials to facilitate communication, priority-setting, and the commitment of resources for the LIS DMMP.

During the reporting period, the Steering Committee held monthly teleconferences to provide direction to the PDT, resolve outstanding issues, and track progress on the DMMP. The PDT met twice during this reporting period, and many of its members also participated in the monthly Steering Committee calls. The meetings were held on August 27-29, 2007, in Newington, CT to finalize comments on the LIS DMMP PMP, and on April 29, 2008, in Newington, CT to discuss DMMP work efforts, including the Dredging Needs Survey and Upland Placement Inventory, project budget, and proposed schedule for future work tasks. The current rosters for the Steering Committee and PDT are attached as Appendices A and B.

Planning Process

The overarching goal of the LIS DMMP is to develop a comprehensive plan for dredged material management in Long Island Sound that ensures federal dredging needs are met, and that will lead, over time, to the reduction or elimination of open-water disposal in the Sound. The DMMP will try to meet this goal by using a broad–based, public process that protects the environment based on best scientific data and analysis, while meeting society's need for safe and economically viable navigation for water based commerce, transportation, national security, and other public purposes. Recognizing that there are numerous institutional, regulatory, social, and financial barriers to utilizing dredged material beneficially, one purpose of the DMMP is to document these barriers and recommend plans to overcome them.

For the Long Island Sound DMMP, it should be noted that the site designation restrictions apply to all federal projects, and non–federal projects generating more than 25,000 cubic yards of dredged material in the region. The LIS DMMP will identify potential environmentally acceptable, practicable management alternatives that can be utilized by various dredging proponents in their analysis of options to manage their dredging projects. The DMMP will provide its users with an array of

suitable/feasible options that they could use in their alternatives analyses that will meet or exceed their needs.

The Preliminary Assessment for the LIS DMMP was completed and approved by the USACE in June 2006. The Project Management Plan, which serves as the initial work plan for the LIS DMMP, was completed and approved by the USACE, in consultation with the PDT, in October 2007. As previously noted, the PMP is subject to change based on new information and input from the public and other agencies. The initiation of the actual DMMP studies is dependent on the appropriation of federal funding to the USACE by Congress.

As previously noted, the USACE will be preparing a Programmatic Environmental Impact Statement (PEIS) in conjunction with the LIS DMMP to ensure compliance with NEPA. The USACE published the Notice of Intent to develop a PEIS for the LIS DMMP in the Federal Register on August 31, 2007 (72 FR 50332). EPA, the USACE, and state agencies conducted a series of six public information and NEPA scoping meetings to kick off the LIS DMMP and PEIS process on November 26-29, 2007. The agencies held three meetings in each of the two states to present progress on the planning for the LIS DMMP and solicit public input on both the scope and process of the LIS DMMP and PEIS. Public comments will be considered in identifying and developing the activities and investigations to be performed in the LIS DMMP and PEIS effort. The presentations from the public meetings and other related documents are available on the USACE LIS DMMP Project website, which was established in August 2007 (http://www.nae.usace.army.mil/projects/ri/LISDMMP/LISDMMP.html).

On March 24, 2008, the USACE contracted for the first two LIS DMMP study efforts. The Dredging Needs Survey, which is to estimate how much dredging will occur and how much dredged material will be generated in the entire region over a 20-year planning horizon, was initiated in June 2008. The Upland Placement Inventory, which is to identify and catalog potential upland placement alternatives for the entire region over a 20-year planning horizon, as well as the inventory of possible shore-side transfer sites, was initiated in August 2008. Both studies will build upon information collected for the Environmental Impact Statement for the Designation of Dredged Material Disposal Sites in Central and Western Long Island Sound, April 2004.

Funding

The PDT estimates that it will cost $12 million and take 5-6 years to complete the LIS DMMP. In February 2005, the governors of the two states sent a joint letter to the USACE requesting its assistance with the development of the DMMP and, in separate letters, asked members of their respective congressional delegations to seek appropriation of federal funds to initiate the DMMP. The USACE agreed to work with the states on the DMMP and requests for funds have been included in the President's budget for federal fiscal years (FY) 2007 and 2008. In FY07, $1.7 million was included in the President's proposed budget, but this was eliminated by passage of a Continuing Resolution that was based on the FY06 federal budget.

On December 26, 2007, the President signed the 2008 Consolidated Appropriations Act, which included $3.525 million for the LIS DMMP. In June 2008, the USACE contracted approximately $300,000 of the $3.525 million to conduct the first two studies.

LONG ISLAND SOUND REGIONAL DREDGING TEAM

Purpose

As described above, the site designation rule contemplated that a Regional Dredging Team would be established to review dredging proponents' alternative's analysis to ensure that they conducted a comprehensive analysis for practicable alternatives to open-water disposal and recommend their use to the maximum extent practicable, to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP. The following excerpt from the RDT guidance describes its primary function:

> The RDT is charged with reviewing all permit applications and authorizations subject to the … site designation rule restrictions and is not precluded from voluntarily providing advice to any other dredging project to help achieve the goal of reducing or eliminating the need for open water disposal in Long Island Sound. The RDT will work to identify all practicable alternatives to open water disposal and to advise regarding their use to the maximum extent practicable. Further, those identified practicable alternative use opportunities will be advanced through the appropriate state and federal authorities. All agencies will retain their respective final regulatory decision-making authority and regulatory time frames for project review.

In July 5, 2006, EPA, USACE, NOAA, and the states agreed to form an RDT and assigned representatives. The RDT began drafting a charter to describe the procedures the RDT would use to review the alternatives analyses developed by dredging project proponents, determine the adequacy of the analyses, and make recommendations on alternative dredged material placement options that should be considered by the USACE and other regulatory agencies. The RDT charter was approved by the Steering Committee in March 2007. The charter describes how the RDT will enhance communication and discussion among the participating agencies to facilitate the timely review and presentation of recommendations on the placement of dredged material from Long Island Sound dredging projects. Through the review process, the RDT will become aware of possible alternatives to open-water disposal that it can communicate to potential applicants as well as appropriate state and federal authorities.

Current Status

During this reporting period, the RDT met once, on August 28, 2007, in conjunction with the previously noted PDT meeting on August 27-29 in Newington, CT. The purpose of the meeting was to review a proposal by several consultants for private marinas and boat yards to combine upward of 20 permitted private dredging projects to share capping material required by their permits. The RDT members also participated in the public scoping meetings in NY and CT in November 26-29, 2007.

Dredged Material Disposal in Long Island Sound

It is the stated goal of the states of Connecticut and New York to reduce or eliminate the disposal of dredged material in Long Island Sound. To determine if this goal is being met will require measuring and tracking the amount of dredged material being disposed of or placed in the Sound and other

locations. Currently, most open-water disposal in the Sound occurs at one of the four dredged material disposal sites in the Sound: Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals (CSDS), and New London (NLDS).

Alternatives include: upland placement or disposal; beach nourishment (depositing sand on or near an eroding beach); habitat restoration (e.g., depositing dredged material in sub-tidal areas to raise elevation and restore or create wetlands); confined aquatic disposal (CAD) cells (depositing unsuitable dredge material in a pit excavated below the floor of the harbor or navigation channel, and covering with clean material); and confined disposal facilities (using dredged material to increase the size of or create islands, e.g., to expand port facilities). Some of these alternatives, including beach nourishment, habitat creation/restoration, and capping (for both upland and aquatic habitat remediation purposes, in certain circumstances) are considered beneficial to the environment (i.e., beneficial uses). The following excerpt from the RDT guidance describes this process:

> The RDT will track and document the volume of dredged material approved for open water disposal as well as other alternative disposal methods, and submit this information for inclusion in the annual report on progress of the DMMP. This information will be part of the annual report on the progress of the DMMP to be issued by the EPA.

EPA is complying with this guidance by working with the RDT to compile dredged material disposal records on an annual basis, and reporting this data in an annual report for a one-year period ending July 5 each year. The data in the annual report will be compared with dredged material disposal data from all disposal activity in Long Island Sound averaged over the period from 1982-2004. This is the third annual report.

Dredged Material Disposal in Long Island Sound, 1982-2004 (in cubic yards [c.y.])

Disposal Site	Total Dredged Material Disposal	Avg. Annual Dredged Material Disposal
NLDS	3,069,546	133,459
CSDS	1,295,998	56,348
CLIS	8,019,678	348,682
WLIS	1,870,921	81,344
Totals	14,256,143	619,833

Overall, there was a total of 101,010 c.y. of dredged material generated in the Long Island Sound vicinity for the period July 6, 2007 – July 5, 2008, of which:

- 46,010 c.y. were disposed at open-water disposal sites in Long Island Sound;
- 50,000 c.y. were placed at an upland containment site; and
- 5,000 c.y. were used beneficially for beach nourishment.

Of the 46,010 c.y. disposed in the Sound:

- 24,575 c.y. went to CLIS (vs. historical annual average of 348,682 c.y.);
- 10,135 c.y. went to WLIS (vs. historical annual average of 81,344 c.y.);
- 0 c.y. went to NLDS (vs. historical annual average of 133,459 c.y.); and
- 11,300 c.y. went to CSDS (vs. a historical annual average of 56,348 c.y.).

All 46,010 c.y. disposed in the Sound came from private projects.

Recent Dredged Material Disposal in Long Island Sound Compared with Historic Averages
(in cubic yards [c.y.])

Disposal Site	Avg. Annual Dredged Material Disposal	2006	2007	2008	Change from Previous Reporting Period (2007) c.y.	Change compared to Avg. Annual Disposal (1982-2004) c.y.
NLDS	133,459	0	369,635	0	-369,635	-133,459
CSDS	56,348	0	9,470	11,300	1,830	-45,048
CLIS	348,682	208,410	64,970	24,575	-40,395	-324,107
WLIS	81,344	15,550	3,600	10,135	6,535	-71,209
Totals	619,833	223,960	447,675	46,010	-401,665	-573,823

Compared with the average annual amount of dredged material disposed at the four open-water sites in the Sound from 1982-2004, which was 619,833 c.y. for the period July 6, 2007 – July 5, 2008, there was a total of 46,010 c.y., or about 7.4 percent of the historical annual average. For further details, see Appendix D.

While there is generally some variability from one year to the next in the amount of dredged material disposed of in the Sound, and there are many factors influencing this variability, reductions in the federal budget again may have been one of the largest factors in the lower amount of disposal over the past year. Regardless, it is too early to determine any kind of long-term trend. The amount of dredged material disposed in the Sound during the current reporting period of July 6, 2007 – July 5, 2008 was less than the amount disposed during the prior reporting period of July 6, 2006-July 5, 2007 (46,010 c.y. vs. 447,675 c.y. respectively); this appears to have resulted from variability in the size of projects rather than from any difference in analysis of alternatives.

EPA will continue to report on an annual basis about the LIS RDT deliberations as well as each dredging project that was completed in the preceding year, including the name of the applicant, the alternatives that were evaluated, the volume of dredged material, and its final placement or disposal location. For further information, please contact:

Jean Brochi
U.S. Environmental Protection Agency
One Congress Street, Suite 1100 (COP)
Boston, MA 02114
Telephone: (617) 918-1536
Fax: (617) 918-0536
brochi.jean@epa.gov

Appendix A

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN STEERING COMMITTEE		
AGENCY	**MEMBER**	**ALTERNATE**
NOAA	David Kaiser, Senior Policy Analyst Office of Ocean and Coastal Resource Management, NOAA 603-862-2719 Fax: 603-862-3957 david.kaiser@noaa.gov	
Corps North Atlantic Division (NAD)	Joe Vietri, Chief Planning Division 718-765-7070 joseph.r.vietri@usace.army.mil	
Corps New England District (NAE)	Bill Scully, Deputy District Engineer Programs and Project Management 978-318-8230 william.c.scully@usace.army.mil	Robert (Bobby) Byrne, Chief Programs & Project Management Division 978-318-8509 robert.h.byrne@usace.army.mil
Corps New York District (NAN)	Frank Santomauro, Chief Planning Division 917-790-8700 frank.santomauro@usace.army.mil	
EPA Region I	Stephen Perkins, Director Office of Ecosystem Protection 617-918-1501 perkins.stephen@epa.gov	Lynne Hamjian, Chief Office of Ecosystem Protection Surface Water Branch 617-918-1601 hamjian.lynne@epa.gov
EPA Region II	Kevin Bricke, Deputy Director Division of Environmental Planning and Protection 212-637-3736 bricke.kevin@epa.gov	Jeff Gratz, Chief Clean Water Regulatory Branch Division of Environmental Planning and Protection Telephone: 212-637-3873 email: gratz.jeff@epa.gov
New York State Dept. of State	George Stafford, Deputy Secretary of State for Coastal Resources 518-473-2459 gstaffor@dos.state.ny.us	Fred Anders, Chief Natural Resource Management Bureau Division of Coastal Resources 518-473-2477 fanders@dos.state.ny.us
New York State Dept. of Environmental Conservation	James Gilmore, Chief, Bureau of Marine Resources 518-402-8924 jgilmor@gw.dec.state.ny.us	
Connecticut Dept. of Environmental Protection	Betsey Wingfield, Chief Bureau of Water Management 860-424-3704 betsey.wingfield@po.state.ct.us	Brian Thompson, Director Office of Long Island Sound Programs (860) 424-3034 brian.thompson@po.state.ct.us

Appendix B

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN PROJECT DELIVERY TEAM		
AGENCY	**MEMBER**	**MEMBER**
Corps New England District (NAE)	Mike Keegan, Project Manager 978-318-8087 michael.f.keegan@usace.army.mil	Mark Habel 978-318-8871 mark.l.habel@usace.army.mil
Corps New York District (NAN)	Chris Ricciardi 917-790-8630 christopher.g.ricciardi@usace.army.mil	Nancy Brighton 917-790-8703 nancy.j.brighton@usace.army.mil
EPA Region I	Mel Cote 617-918-1553 cote.mel@epa.gov	Jean Brochi 617-918-1536 brochi.jean@epa.gov
EPA Region II	Doug Pabst 212-637-3797 pabst.douglas@epa.gov	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov
National Marine Fisheries Service	Diane Rusanowsky 203-882-2671 drusano@clam.mi.nmfs.gov	
New York State Dept. of State	Jennifer Street 518-474-1737 Jennifer.Street@dos.state.ny.us	Fred Anders 518-473-2477 fanders@dos.state.ny.us
New York State Dept. of Environmental Conservation	John Ferguson 518-402-8829 jfergus@gw.state.ny.us	
Connecticut Dept. of Environmental Protection	George Wisker 860-424-3034 george.wisker@po.state.ct.us	Diane Duva 860-424-3271 diane.duva@po.state.ct.us
Connecticut Dept. of Transportation	Joe Salvatore 860-594-2539 joseph.salvatore@po.state.ct.us	
Rhode Island Coastal Resources Management Council	Dan Goulet 401-783-3370 dgoulet@crmc.state.ri.us	

Appendix C

LONG ISLAND SOUND REGIONAL DREDGING TEAM		
AGENCY	**MEMBER**	**ALTERNATE**
Corps North Atlantic Division (NAD)	James Haggerty 718-765-7150 james.w.haggerty@usace.army.mil	
Corps New England District (NAE)	Robert DeSista 978-318-8879 robert.j.desista@usace.army.mil	Jay Mackay 978-318-8142 joseph.b.mackay@usace.army.mil
Corps New York District (NAN)	Joe Seebode 917-790-8209 joseph.j.seebode@nan02.usace.army.mil	
EPA Region I	Jean Brochi 617-918-1536 brochi.jean@epa.gov	Mel Cote 617-918-1553 cote.mel@epa.gov
EPA Region II	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov	Doug Pabst 212-637-3797 pabst.douglas@epa.gov
NOAA National Marine Fisheries Service	Diane Rusanowsky 203-882-2671 drusano@clam.mi.nmfs.gov	
New York Dept. of State	Jennifer Street 518-474-1737 Jennifer.Street@dos.state.ny.us	
New York State Dept. of Environmental Conservation	Chuck Hamilton cthamilt@gw.dec.state.ny.us	
Connecticut Dept. of Environmental Protection	George Wisker Office of Long Island Sound Programs 860-424-3034 george.wisker@po.state.ct.us	
	Diane Duva Bureau of Waste Management 860-424-3271 diane.duva@po.state.ct.us	David McKeegan Bureau of Waste Management 860-424-3313 david.mckeegan@po.state.ct.us

Appendix D

Long Island Sound Annual Dredging Report - for the Dredging Year Ending 5 July 2008
Summary of All Dredging and Disposal Activities

Disposal Sites and Methods		CONNECTICUT			NEW YORK			Total All Projects and States
		Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities	Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities	
Open Water Disposal		0	0	37,825	0	0	8,185	46,010
	CLIS	0	0	24,575	0	0	0	24,575
	WLIS	0	0	1,950	0	0	8,185	10,135
	NLDS	0	0	0	0	0	0	0
	CSDS	0	0	11,300	0	0	0	11,300
Confined Disposal		0	0	0	0	0	0	0
	CAD Cells	0	0	0	0	0	0	0
	Upland Containment	0	0	0	0	0	50,000	50,000
	Landfill	0	0	0	0	0	0	0
Beneficial Use		0	0	0	0	0	0	0
	CAD Cap	0	0	0	0	0	0	0
	Beach/Bar Nourishment	0	0	0	0	0	5,000	5,000
	Habitat Creation/Enhance	0	0	0	0	0	0	0
	Brownfield Remediation	0	0	0	0	0	0	0
Treated Dredged Material		0	0	0	0	0	0	0
	Upland Disposal	0	0	0	0	0	0	0
	Commercial Use	0	0	0	0	0	0	0
TOTAL ALL DISPOSAL		0	0	37,825	0	0	63,185	101,010

Note: There was no Federal Navigation dredging activity in the Long Island Sound region during the reporting period.

Second Annual Report Regarding Progress in Developing a Dredged Material Management Plan for the Long Island Sound Region

For the Period July 6, 2006 – July 5, 2007

U.S. Environmental Protection Agency, Region 1
December 2007

INTRODUCTION

This is the second annual report by the U.S. Environmental Protection Agency (EPA) on progress toward completion of a dredged material management plan (DMMP) for the Long Island Sound region, and related efforts to "reduce or eliminate" the need for open-water disposal of dredged material in Long Island Sound.

BACKGROUND

EPA Regulatory Requirements

On June 3, 2005, EPA issued a final rule to designate two open-water dredged material disposal sites, Central Long Island Sound and Western Long Island Sound, for the placement of dredged material from harbors and navigation channels in the Long Island Sound vicinity in the states of Connecticut and New York [40 CFR Part 228.15(b)(4) and (b)(5)].

The use of these two sites is subject to restrictions that are described in the site designation rule and are intended to reduce or eliminate the disposal of dredged material in Long Island Sound. Use of the sites pursuant to these designations may be suspended or terminated in accordance with these restrictions.

One of these restrictions links continued use of the sites to the completion of a regional dredged material management plan (DMMP) for Long Island Sound. A DMMP is a comprehensive planning process and decision-making tool to address the management of dredged material for a specific harbor or navigation project, group of related projects, or geographic area. Additional detail on the DMMP is provided in the next section.

A related restriction requires EPA to conduct an annual review of progress toward completion of the DMMP. EPA is complying with this requirement by producing an annual report on or about the anniversary of the effective date of the site designations (July 5, 2005), and making the report available to the general public.

Another restriction is intended to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP by requiring the formation of an interagency Long Island Sound Regional Dredging Team (RDT). The RDT reviews dredging projects to ensure that a thorough effort has been conducted to identify practicable alternatives to open-water disposal and ensure the use of those alternatives to the maximum extent practicable. In addition to information on the status of the DMMP, this EPA annual report includes information on RDT deliberations conducted in the preceding year, and on the quantity of dredged material and its final placement or disposal location. Additional detail on the form and function of the RDT is provided in a later section.

Dredged Material Management Plans

The U.S. Army Corps of Engineers (USACE) regulations require each of its district offices to develop a DMMP for all Federal Navigation Projects for which there is an indication of insufficient placement or disposal capacity to accommodate maintenance dredging for the next 20 years. A DMMP addresses a wide range of environmentally acceptable, cost-effective, and practicable alternatives for the management of dredged material, culminating with the selection of a recommended plan that ensures that sufficient capacity for dredged material placement exists for a project or group of projects for the required 20-year planning period. The range of alternatives includes those that may provide environmental or commercial benefits through beneficial use of dredged material. The scope of a DMMP may also include private dredging projects that are geographically related to the federal project(s), which may require the sponsors of those projects to provide non-federal matching funds to support the additional work.

The DMMP process involves a phased approach. The first phase, a Preliminary Assessment, draws on existing information to: (1) determine the economic and engineering need for dredging according to existing and reasonably prospective navigation traffic; (2) identify the anticipated locations and volumes of dredged material to be generated within the study area; (3) examine existing dredged material disposal sites and management practices to determine if shortfalls in capacity or opportunities for better management exist; and (4) provide an estimate of the cost of completing the DMMP. The Preliminary Assessment determines whether a federal interest exists in participating in a feasibility-level DMMP study and also identifies potential non-federal sponsor(s) of the DMMP.

After the PA phase is completed, the DMMP is initiated. The first step is development of a Project Management Plan (PMP) that describes: (1) the scope of the DMMP; (2) the sequence of the studies; (3) a plan for acquisition management covering the various study tasks (labor, contracts, other agency contributions); (4) a plan for public involvement and participation; and (5) an estimated budget, organized by federal fiscal year budget cycle. Following acceptance of the PMP by other federal and state agency partners, feasibility-level study efforts would commence, subject to the availability of staff and funding. These studies generally focus on the following topics: (1) dredging needs; (2) management options; (3) capacities of placement sites; (4) environmental compliance requirements; (5) potential for beneficial use of dredged material; and (6) indicators of continued economic justification. The PMP is considered a "living document," subject to change based on new information and input from the public and other agencies.

The management structure for a typical DMMP comprises the following components:

- Project Manager: Individual responsible for day-to-day management of project.
- Project Delivery Team (PDT): The interagency working group that will assist with the development of the DMMP.
- Independent Technical Review Team: Required by the USACE to review the plan for technical merit and cost-effectiveness.

- Technical working groups: These may be formed to provide assistance to the Project Delivery Team, with representation from other federal and state agencies, and sometimes non-government organizations and private citizens.

For compliance with the National Environmental Policy Act (NEPA), the USACE usually prepares a Programmatic Environmental Impact Statement (PEIS) that evaluates the analyses and recommendations of the DMMP.

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN

Management Structure

The U.S. Army Corps of Engineers is the lead agency for development of the Long Island Sound Dredged Material Management Plan (LIS DMMP). The USACE North Atlantic Division, New England District, and New York District are developing the DMMP in cooperation with EPA Regions 1 and 2, the National Oceanic and Atmospheric Administration (NOAA), the New York State Department of State (NYS DOS); the New York State Department of Environmental Conservation (NYS DEC); the Connecticut Department of Environmental Protection (CT DEP), the Connecticut Department of Transportation (CT DOT) and the Rhode Island Coastal Resources Management Council (RI CRMC).

Management of the LIS DMMP was assigned to the USACE New England District, which has assigned a project manager. The participating agencies agreed to adopt the traditional management structure by establishing and assigning representatives to a LIS DMMP Project Delivery Team (PDT). Although not a standard component of the DMMP management structure, due to the large scope of the project and strong public interest, the agencies also formed a Steering Committee of higher level agency officials to facilitate communication, priority-setting, and the commitment of resources for the LIS DMMP.

During the reporting period, the Steering Committee met by teleconference every 6-8 weeks to provide direction to the PDT, resolve outstanding issues, and track progress on the DMMP. The PDT met several times in person and by teleconference to identify DMMP work efforts, project budget and proposed schedule. The current rosters for the Steering Committee and PDT are attached as Appendices A and B.

Planning Process

The overarching goal of the LIS DMMP is to develop a comprehensive plan for dredged material management in Long Island Sound that ensures federal dredging needs are met, and that will lead, over time, to the reduction or elimination of open-water disposal in the Sound. The DMMP will try to meet this goal by using a broad–based, public process that protects the environment based on best scientific data and analysis, while meeting society's need for safe and economically viable navigation for water based commerce, transportation, national security, and other public purposes. Recognizing that there are

numerous institutional, regulatory, social, and financial barriers to utilizing dredged material beneficially, one purpose of the DMMP is to document these barriers and recommend plans to overcome them.

For the Long Island Sound DMMP, it should be noted that the site designation restrictions require the inclusion of private projects generating more than 25,000 cubic yards of dredged material as well as all federal projects in the region. The LIS DMMP will identify potential environmentally acceptable, practicable management plans that can be utilized by various dredging proponents in their analysis of options to manage their dredging projects. The DMMP will provide its users with an array of suitable/feasible options that they could use in their alternatives analyses that will meet or exceed their needs.

The Preliminary Assessment for the LIS DMMP was completed and approved by the USACE in June 2006. The Project Management Plan, which serves as the initial work plan for the LIS DMMP, was completed and approved by the USACE, in consultation with the PDT, in October 2007. As previously noted, the PMP is subject to change based on new information and input from the public and other agencies. The initiation of the actual DMMP studies is dependent on the appropriation of federal funding to the USACE by Congress.

The USACE will be developing a PEIS in conjunction with the LIS DMMP to ensure compliance with NEPA. EPA, the USACE, and state agencies conducted a series of six public information and NEPA scoping meetings to kick off the LIS DMMP process on November 26-29, 2007. The agencies held three meetings in each of the two states to present progress on the planning for the LIS DMMP, and solicit public input on both the scope and process of the DMMP and PEIS. Public comments will be considered in identifying and developing the activities and investigations to be performed in the LIS DMMP effort.

Funding

The PDT estimates that it will cost $12 million and take 5-6 years to complete the LIS DMMP. In February 2005, the governors of the two states sent a joint letter to the USACE requesting its assistance with the development of the DMMP and, in separate letters, asked members of their respective congressional delegations to seek appropriation of federal funds to initiate the DMMP. The USACE agreed to work with the states on the DMMP and requests for funds have been included in the President's budget for federal fiscal years (FY) 2007 and 2008. In FY07, $1.7 million was earmarked for the USACE in the President's proposed budget, but this was eliminated by passage of a Continuing Resolution that was based on the FY06 federal budget.

On December 26, 2007, the President signed the 2008 Consolidated Appropriations Act, which includes $3.525 million in the USACE budget for the LIS DMMP.

To assist with the public participation component of the DMMP process, EPA secured

$100,000 in FY06 funds from the Long Island Sound Study (National Estuary Program). EPA used these funds to conduct the public information and NEPA scoping meetings described above to inform the public of the agencies' initial efforts on the DMMP and PEIS, to solicit feedback on these efforts, and gain input on future direction.

LONG ISLAND SOUND REGIONAL DREDGING TEAM

Purpose

As described above, the site designation rule contemplated that a Regional Dredging Team would be established to identify practicable alternatives to open-water disposal and recommend their use to the maximum extent practicable, to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP. The following excerpt from the RDT guidance describes its primary function:

> The RDT is charged with reviewing all permit applications and authorizations subject to the … site designation rule restrictions and is not precluded from voluntarily providing advice to any other dredging project to help achieve the goal of reducing or eliminating the need for open water disposal in Long Island Sound. The RDT will work to identify all practicable alternatives to open water disposal and to advise regarding their use to the maximum extent practicable. Further, those identified practicable alternative use opportunities will be advanced through the appropriate state and federal authorities. All agencies will retain their respective final regulatory decision-making authority and regulatory time frames for project review.

During the previous reporting period from July 5, 2005 – July 5, 2006, EPA, USACE, NOAA, and the states agreed to form an RDT and assigned representatives. The RDT began drafting a charter to describe the procedures the RDT would use to review the alternatives analyses developed by dredging project proponents, determine the adequacy of the analyses, and make recommendations on alternative dredged material placement options that should be considered by the USACE and other regulatory agencies.

Current Status

During the current reporting period, the RDT held two meetings to finalize its charter and review its first dredging project. The RDT charter was approved by the Steering Committee in March 2007. The charter describes how the RDT will enhance communication and discussion among the participating agencies to facilitate the timely review and presentation of recommendations on the placement of dredged material from Long Island Sound dredging projects. Through the review process, the RDT will become aware of possible alternatives

to open-water disposal that it can communicate to potential applicants as well as appropriate state and federal authorities.

The RDT reviewed one dredging project involving the removal of 66,000 cubic yards of sediment around the docks of the Public Service Enterprise Group's (PSEG) Bridgeport Harbor Station in Bridgeport, Connecticut. The RDT determined that the alternatives analysis conducted by PSEG was very thorough and clearly demonstrated that were no reasonably available, practicable alternatives to open-water disposal for this project. Thus the RDT indicated to the regulatory agencies involved in the regulatory permitting process that they concurred with the alternatives analysis presented by the project proponent. The current roster for the RDT is attached as Appendix C.

Dredged Material Disposal in Long Island Sound

It is the stated goal of the states of Connecticut and New York to reduce or eliminate the disposal of dredged material in Long Island Sound. To determine if this goal is being met will require measuring and tracking the amount of dredged material being disposed of or placed in the Sound and other locations. Currently, most open-water disposal in the Sound occurs at one of the four dredged material disposal sites in the Sound: Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals (CSDS), and New London (NLDS).

Alternatives include: upland placement or disposal (preceded by treatment if necessary to remediate contaminated material); beach nourishment (depositing sand on or near an eroding beach); habitat restoration (e.g., depositing dredged material in sub-tidal areas to raise elevation and restore or create wetlands); confined aquatic disposal (CAD) cells (depositing contaminated sediment in a pit excavated below the floor of the harbor or navigation channel, and covering with clean sediment); and confined disposal facilities (using dredged material to increase the size of or create islands, e.g., to expand port facilities). Some of these alternatives, including beach nourishment, habitat creation/restoration, and capping (for both upland and aquatic habitat remediation purposes, in certain circumstances) are considered beneficial to the environment (i.e., beneficial uses). The following excerpt from the RDT guidance describes this process:

> The RDT will track and document the volume of dredged material approved for open water disposal as well as other alternative disposal methods, and submit this information for inclusion in the annual report on progress of the DMMP. This information will be part of the annual report on the progress of the DMMP to be issued by the EPA.

EPA is complying with this guidance by working with the RDT to compile dredged material disposal records on an annual basis, and reporting this data in an annual report for a one-year period ending July 5 each year. The data in the annual report will be compared with dredged material disposal data from all disposal activity in Long Island Sound averaged over the period from 1982-2004. This is the second annual report.

Dredged Material Disposal in Long Island Sound, 1982-2004 (in cubic yards [c.y.])

Disposal Site	Total Dredged Material Disposal	Avg. Annual Dredged Material Disposal
NLDS	3,069,546	133,459
CSDS	1,295,998	56,348
CLIS	8,019,678	348,682
WLIS	1,870,921	81,344
Totals	14,256,143	619,833

Overall, there was a total of 505,425 c.y. of dredged material generated in the Long Island Sound vicinity for the period July 6, 2006 – July 5, 2007, of which:

- 447,675 c.y. were disposed at open-water disposal sites in Long Island Sound;
- 28,750 c.y. were placed at an upland containment site; and
- 29,000 c.y. were used beneficially for beach nourishment.

Of the 447,675 c.y. disposed in the Sound:

- 64,970 c.y. went to CLIS (vs. historical annual average of 348,682 c.y.);
- 3,600 c.y. went to WLIS (vs. historical annual average of 81,344 c.y.);
- 369,635 c.y. went to NLDS (vs. historical annual average of 133,459 c.y.); and
- 9,470 c.y. went to CSDS (vs. a historical annual average of 56,348 c.y.).

Of the 447,675 c.y. disposed in the Sound:

  - 231,325 c.y. represents material from private projects, and
  - 216,350 c.y. represents material from a federal (U.S. Navy) project.

Recent Dredged Material Disposal in Long Island Sound Compared with Historic Averages (in cubic yards [c.y.])

Disposal Site	Avg. Annual Dredged Material Disposal	2006	2007
NLDS	133,459	0	369,635
CSDS	56,348	0	9,470
CLIS	348,682	208,410	64,970
WLIS	81,344	15,550	3,600
Totals	619,833	223,960	447,675

Compared with the average annual amount of dredged material disposed at the four open-water sites in the Sound from 1982-2004, which was 619,791 c.y., for the period July 6, 2006 – July 5, 2007, there was a total of 447,675 c.y., or about 72 percent of the historical annual average. For further details, see Appendix D.

While there is generally some variability from one year to the next in the amount of dredged material disposed of in the Sound, and there are many factors influencing this variability, reductions in the federal budget again may have been one of the largest factors in the lower amount of disposal over the past year. Regardless, it is too early to determine any kind of long-term trend. While the amount of dredged material disposed in the Sound during the current reporting period of July 6, 2006 – July 5, 2007 was greater than the amount disposed during the prior reporting period of July 5, 2005-July 5,

2006 (447,675 c.y. vs. 223,960 c.y. respectively), this appears to have resulted from variability in the size of projects rather than from any difference in analysis of alternatives.

EPA will continue to report on an annual basis about the LIS RDT deliberations as well as each dredging project that was completed in the preceding year, including the name of the applicant, the alternatives that were evaluated, the volume of dredged material, and its final placement or disposal location. For further information, please contact:

Jean Brochi
U.S. Environmental Protection Agency
One Congress Street, Suite 1100 (COP)
Boston, MA 02114
P - (617) 918-1536
F – (617) 918-0536
brochi.jean@epa.gov

Appendix A

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN STEERING COMMITTEE		
AGENCY	**MEMBER**	**ALTERNATE**
NOAA	David Kaiser, Senior Policy Analyst Office of Ocean and Coastal Resource Management, NOAA 603-862-2719 Fax: 603-862-3957 david.kaiser@noaa.gov	
Corps North Atlantic Division (NAD)	Joe Vietri, Chief Planning Division 718-765-7070 joseph.r.vietri@usace.army.mil	
Corps New England District (NAE)	Bill Scully, Deputy District Engineer Programs and Project Management 978-318-8230 william.c.scully@usace.army.mil	Robert (Bobby) Byrne, Chief Programs & Project Management Division 978-318-8509 robert.h.byrne@usace.army.mil
Corps New York District (NAN)	Frank Santomauro, Chief Planning Division 917-790-8700 frank.santomauro@usace.army.mil	TBD
EPA Region I	Stephen Perkins, Director Office of Ecosystem Protection 617-918-1501 perkins.stephen@epa.gov	Lynne Hamjian, Chief Office of Ecosystem Protection Surface Water Branch 617-918-1601 hamjian.lynne@epa.gov
EPA Region II	Kevin Bricke, Deputy Director Division of Environmental Planning and Protection 212-637-3736 bricke.kevin@epa.gov	Doug Pabst, Team Leader Dredged Material Management Team 212-637-3797 pabst.douglas@epa.gov
New York State Dept. of State	George Stafford, Deputy Secretary of State for Coastal Resources 518-473-2459 gstaffor@dos.state.ny.us	Fred Anders, Chief Natural Resource Management Bureau Division of Coastal Resources 518-473-2477 fanders@dos.state.ny.us
New York State Dept. of Environmental Conservation	TBD	TBD
Connecticut Dept. of Environmental Protection	Betsey Wingfield, Chief Bureau of Water Management 860-424-3704 betsey.wingfield@po.state.ct.us	Brian Thompson, Director Office of Long Island Sound Programs (860) 424-3034 brian.thompson@po.state.ct.us

Appendix B

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN PROJECT DELIVERY TEAM		
AGENCY	**MEMBER**	**MEMBER**
Corps New England District (NAE)	Mike Keegan, Project Manager 978-318-8087 michael.f.keegan@usace.army.mil	Mark Habel 978-318-8871 mark.l.habel@usace.army.mil
Corps New York District (NAN)	Chris Ricciardi 917-790-8630 christopher.g.ricciardi@usace.army.mil	Nancy Brighton 917-790-8703 nancy.j.brighton@usace.army.mil
EPA Region I	Mel Cote 617-918-1553 cote.mel@epa.gov	Jean Brochi 617-918-1536 brochi.jean@epa.gov
EPA Region II	Doug Pabst 212-637-3797 pabst.douglas@epa.gov	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov
National Marine Fisheries Service	Diane Rusanowsky 203-882-2671 drusanow@clam.mi.nmfs.gov	
New York State Dept. of State	Steve Resler 518-474-5290 sresler@dos.state.ny.us	Fred Anders 518-473-2477 fanders@dos.state.ny.us
Connecticut Dept. of Environmental Protection	George Wisker 860-424-3034 george.wisker@po.state.ct.us	Diane Duva 860-424-3271 diane.duva@po.state.ct.us
Connecticut Dept. of Transportation	Joe Salvatore 860-594-2539 joseph.salvatore@po.state.ct.us	
Rhode Island Coastal Resources Management Council	Dan Goulet 401-783-3370 dgoulet@crmc.state.ri.us	

Appendix C

LONG ISLAND SOUND REGIONAL DREDGING TEAM		
AGENCY	**MEMBER**	**ALTERNATE**
Corps North Atlantic Division (NAD)	James Haggerty 718-765-7150 james.w.haggerty@usace.army.mil	
Corps New England District (NAE)	Robert DeSista 978-318-8879 robert.j.desista@usace.army.mil	Jay Mackay 978-318-8142 joseph.b.mackay@usace.army.mil
Corps New York District (NAN)	Joe Seebode 917-790-8209 joseph.j.seebode@nan02.usace.army.mil	
EPA Region I	Jean Brochi 617-918-1536 brochi.jean@epa.gov	Mel Cote 617-918-1553 cote.mel@epa.gov
EPA Region II	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov	Doug Pabst 212-637-3797 pabst.douglas@epa.gov
NOAA National Marine Fisheries Service	Diane Rusanowsky 203-882-2671 drusanow@clam.mi.nmfs.gov	
New York Dept. of State	Steven Resler Division of Coastal Resources 518-474-8811 sresler@dos.state.ny.us	
New York State Dept. of Environmental Conservation	Chuck Hamilton cthamilt@gw.dec.state.ny.us	
Connecticut Dept. of Environmental Protection	George Wisker Office of Long Island Sound Programs 860-424-3034 george.wisker@po.state.ct.us	
	Diane Duva Bureau of Waste Management 860-424-3271 diane.duva@po.state.ct.us	David McKeegan Bureau of Waste Management 860-424-3313 david.mckeegan@po.state.ct.us

Appendix D

Long Island Sound Annual Dredging Report - for the Dredging Year Ending 5 July 2007
Summary of All Dredging and Disposal Activities

Disposal Sites and Methods		CONNECTICUT			NEW YORK			Total All Projects and States
		Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities	Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities	
Open Water Disposal		0	216,350	231,325	0	0	0	447,675
	CLIS	0	0	64,970	0	0	0	64,970
	WLIS	0	0	3,600	0	0	0	3,600
	NLDS	0	216,350	153,285	0	0	0	369,635
	CSDS	0	0	9,470	0	0	0	9,470
Confined Disposal		0	0	0	28,750	0	0	28,750
	CAD Cells	0	0	0	0	0	0	0
	Upland Containment	0	0	0	28,750	0	0	28,750
	Landfill	0	0	0	0	0	0	0
Beneficial Use		0	0	0	0	0	29,000	29,000
	CAD Cap	0	0	0	0	0	0	0
	Beach/Bar Nourishment	0	0	0	0	0	29,000	29,000
	Habitat Creation/Enhance	0	0	0	0	0	0	0
	Brownfield Remediation	0	0	0	0	0	0	0
Treated Dredged Material		0	0	0	0	0	0	0
	Upland Disposal	0	0	0	0	0	0	0
	Commercial Use	0	0	0	0	0	0	0
TOTAL ALL DISPOSAL		0	216,350	231,325	28,750	0	29,000	505,425

Long Island Sound Annual Dredging Report - for the Dredging Year Ending 5 July 2007
All Corps of Engineers Civil Works Activities - Federal Navigation Projects

Project Name	Total Project Volume (CY)	Corps Project Mgr.	Corps Contract No.	Dates of Disposal	Disposal Location	Actual Volume Disposed (CY)
Glen Cove Creek, NY	28,750	Jack Karalius	W912DS-06-C-0013	10/2/2006 - 3/16/2007	Upland Diked Area	28,750
TOTAL CY THIS YEAR	28,750					28,750

Note: There was no FNP dredging activity in the Long Island Sound region in the New England District during the reporting period

Long Island Sound Annual Dredging Report - for the Dredging Year Ending 5 July 2007
Private Projects

Project Name	Total Project Volume (CY)	Corps Project Mgr.	Corps Contract No.	Dates of Placement	Placement Location	Actual Volume Placed (CY)
Plum Island	29,000		F-2007-0425	5/17/2007	Beach Nourishment – Plum Island Harbor	29,000
TOTAL CY THIS YEAR	29,000					29,000

First Annual Report Regarding Progress in Developing a Dredged Material Management Plan for the Long Island Sound Region

For the Period July 5, 2005 – July 5, 2006

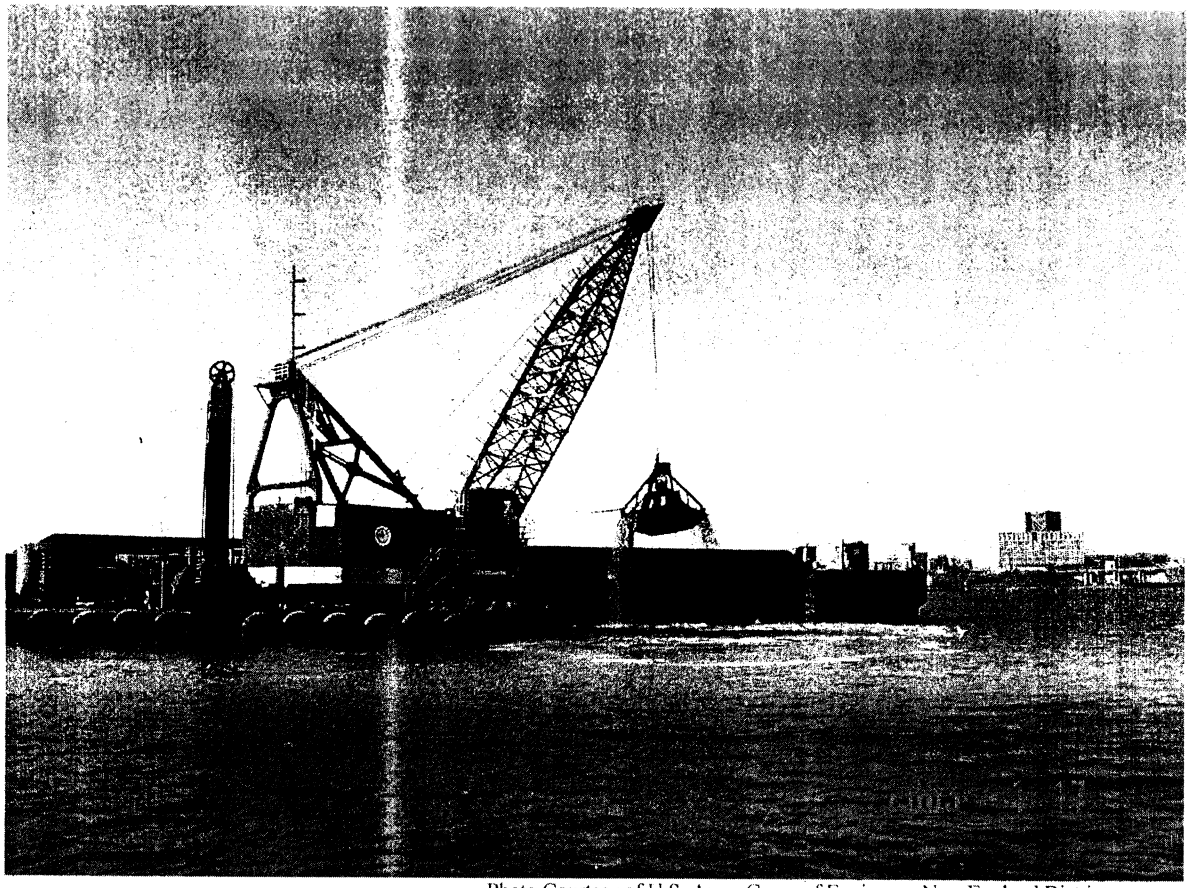


Photo Courtesy of U.S. Army Corps of Engineers, New England District

U.S. Environmental Protection Agency, Region 1
September 1, 2006

Introduction

On June 3, 2005, the U.S. Environmental Protection Agency (EPA) issued final rulemaking to designate two open-water dredged material disposal sites, Central Long Island Sound and Western Long Island Sound, for the placement of dredged material from harbors and navigation channels in the Long Island Sound vicinity in the states of Connecticut and New York [40 CFR Part 228.15(b)(4) and (b)(5)].

To address concerns raised by the state of New York and some sectors of the general public about the potential impact of dredged material disposal on Long Island Sound water quality and fisheries habitat, these site designations are subject to restrictions on their use. These restrictions are described in the site designation rule and are intended to reduce or eliminate the disposal of dredged material in Long Island Sound. Use of the sites pursuant to these designations may be suspended or terminated in accordance with these restrictions.

One of these restrictions, at 40 CFR 228.15(b)(4)(vi)(C), links continued use of the sites to the completion of a regional dredged material management plan (DMMP) for Long Island Sound. A DMMP is a comprehensive planning process and decision-making tool to address the management of dredged material for a specific harbor or navigation project, group of related projects, or geographic area. Additional detail on the DMMP is provided in the next section.

A related restriction, at 40 CFR 228.15(b)(4)(vi)(F), requires EPA to conduct an annual review of progress toward completion of the DMMP. EPA is complying with this requirement by producing an annual report shortly after the anniversary of the effective date of the site designations (July 5, 2005), and making the report available to the general public. This document is the first in what is anticipated to be a series of such reports.

Another restriction, at 40 CFR 228.15(b)(4)(vi)(I), is intended to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP by requiring the formation of an interagency Long Island Sound Regional Dredging Team (RDT). The RDT will review dredging projects to ensure that a thorough effort has been conducted to identify practicable alternatives to open-water disposal and ensure the use of those alternatives to the maximum extent practicable. The RDT also will track and document the placement of dredged material, including the volume that is beneficially used, as well as that approved for open-water disposal or other alternative disposal methods. In addition to information on the status of the DMMP, the EPA annual report will include information about each dredging project and the RDT deliberations conducted in the preceding year, including the quantity of dredged material and its final placement or disposal location. Additional detail on the form and function of the RDT is provided in a later section.

Dredged Material Management Plan

In September 2004, prior to the final rulemaking, representatives of the EPA Regions 1 and 2; U.S. Army Corps of Engineers (USACE) North Atlantic Division, New York District, and New England District; the National Oceanic and Atmospheric

Administration (NOAA) Office of Ocean and Coastal Resource Management (OCRM); the New York State Department of State (NYS DOS); the New York State Department of Environmental Conservation (NYS DEC); and Connecticut Department of Environmental Protection (CT DEP) began a series of meetings and teleconferences to discuss development of a DMMP for the Long Island Sound region.

The USACE regulations require the Corps district offices to develop a DMMP for all Federal Navigation Projects for which there is an indication of insufficient placement or disposal capacity to accommodate maintenance dredging for the next 20 years. A DMMP addresses a wide range of environmentally acceptable, cost-effective, and practicable alternatives for the management of dredged material, culminating with the selection of a final plan that ensures that sufficient capacity for dredged material placement exists for a project or group of projects for the required 20-year planning period. The range of alternatives includes those that may provide environmental or commercial benefits through beneficial use of dredged material. The scope of a DMMP can be expanded to include private dredging projects that are geographically related to the federal project(s), which may require the sponsors of those projects to provide non-federal matching funds to support the additional work. For the Long Island Sound DMMP, it should be noted that the site designation restrictions require the inclusion of private projects as well as all federal projects in the region. The goals of the Long Island Sound DMMP are to ensure that necessary dredging proceeds while working to reduce or eliminate open-water disposal in the Sound.

The DMMP process involves a phased approach. The first phase, a Preliminary Assessment, draws on existing information to: (1) determine the economic and engineering need for dredging according to existing and reasonably prospective navigation traffic; (2) identify the anticipated locations and volumes of dredged material to be generated within the study area; (3) examine existing dredged material disposal sites and management practices to determine if shortfalls in capacity or opportunities for better management exist; and (4) provide an estimate of the cost of completing the DMMP. The Preliminary Assessment will determine whether a federal interest exists in participating in a feasibility-level DMMP study. The Preliminary Assessment also will identify the non-federal sponsor(s) for the DMMP.

The next phase of the DMMP process, termed the Feasibility Phase, requires preparation of a Project Management Plan to describe: (1) the scope of the DMMP; (2) the sequence of the studies; (3) a plan for acquisition management covering the various study tasks (labor, contracts, other agency contributions); (4) a plan for public involvement and participation; and (5) an estimated budget, broken down according to the federal fiscal year budget cycle.

Following acceptance of the Project Management Plan by the agency partners, feasibility-level study efforts would commence, subject to the availability of staff and funding. These studies generally focus on the following topics: (1) dredging needs; (2) management options; (3) capacities of placement sites; (4) environmental compliance requirements; (5) potential for beneficial use of dredged material; and (6) indicators of continued economic justification.

Management Structure

The management structure for a typical DMMP comprises the following components:

- Project Manager: Individual responsible for day-to-day management of project.
- Project Delivery Team: The interagency working group that will assist with the development of the DMMP.
- Independent Technical Review Team: Required by the USACE to review the plan for technical merit and cost-effectiveness.
- Technical working groups: These may be formed to provide assistance to the Project Delivery Team, with representation from other federal and state agencies, and sometimes non-government organizations and private citizens.
- Steering Committee: Although not a standard component of the DMMP management structure, a committee of higher level agency officials may be established to facilitate communication, priority-setting, and the commitment of resources.

With respect to the CLIS and WLIS disposal site designations, the agency representatives agreed that, for the sites to remain open, the rulemaking requires the USACE to develop a DMMP for the Long Island Sound region. However, they also agreed that the USACE would still need to follow its standard procedures and prepare a Preliminary Assessment to document the need for the DMMP. The agency representatives also agreed to adopt the traditional management structure by establishing a Long Island Sound DMMP Project Delivery Team (PDT). Due to the large scope of the project and strong public interest, they followed the process utilized for the DMMP for the Port of New York and New Jersey by forming a Steering Committee to provide overarching project direction. The current rosters for the PDT and the Steering Committee are attached as Appendices A and B. The agency representatives also recognized the need to actively pursue significant federal and non-federal funding in order to carry out this effort.

During 2005, the Steering Committee and PDT met several times to establish roles and responsibilities for the two groups, define preliminary DMMP goals and objectives, and develop a conceptual outline and preliminary budget estimate for the Long Island Sound DMMP. Pursuant to the site designation rulemaking, they also formed a RDT, with representation from the same federal and state agencies as are on the Steering Committee and PDT. The current roster for the RDT is attached as Appendix C. The Steering Committee also developed operating guidance for the PDT and RDT, both of which were completed by January 2006.

Funding

Based largely on the USACE experience with the DMMP for the Port of New York and New Jersey, the PDT estimated that it would cost approximately $16 million and take 5-7 years to complete the Long Island Sound DMMP. The governors of the two states sent a joint letter to the USACE requesting its assistance with the development of the DMMP and, in separate letters, asked members of their respective congressional delegations to seek legislative authorization of federal funds to initiate the DMMP. Copies of these

letters are provided as Appendix D.

The USACE agreed to work with the states on the DMMP, and the President's federal fiscal year budget for 2007 (FY07) includes $1.7 million for the USACE to initiate the effort. While the final funding level will not be known until Congress passes the budget and the President signs it, there appears to be strong support for the appropriations to be passed. The USACE completed the Preliminary Assessment and received final approval at the division level on June 20, 2006. The USACE has done some preliminary work on the Project Management Plan, but has not yet completed it due to insufficient funding. Concentrated work on the Project Management Plan will not begin until FY07 funds become available sometime after October 1, 2006, although the agencies plan to start the process in early September 2006 with some remaining limited funds.

To assist with the public participation component of the DMMP process, EPA secured $100,000 in FY06 funds from the Long Island Sound Study (National Estuary Program). EPA intends to use these funds to conduct public information meetings and other outreach activities to inform the public of the agencies' initial efforts on the DMMP, to solicit feedback on these efforts, and gain input on future direction. These public participation activities are presently on hold pending completion of the Project Management Plan by the USACE, because it serves as the initial work plan for the DMMP and would be central to any public presentations.

Long Island Sound Regional Dredging Team

As described above, and pursuant to 40 CFR 228.15(b)(4)(vi)(F), the EPA, USACE, NOAA, and states of New York and Connecticut agreed to form a Long Island Sound RDT to ensure progress toward reducing or eliminating open-water disposal in Long Island Sound pending completion of the DMMP. The Steering Committee completed the guidance for the RDT in January 2006, and appointed a chairperson from the USACE New York District. The following excerpt from the RDT guidance describes its primary function:

> The RDT is charged with reviewing all permit applications and authorizations subject to the ... site designation rule restrictions and is not precluded from voluntarily providing advice to any other dredging project to help achieve the goal of reducing or eliminating the need for open water disposal in Long Island Sound. The RDT will work to identify all practicable alternatives to open water disposal and to advise regarding their use to the maximum extent practicable. Further, those identified practicable alternative use opportunities will be advanced through the appropriate state and federal authorities. All agencies will retain their respective final regulatory decision-making authority and regulatory time frames for project review.

The RDT held its first meeting on June 28, 2006. The agency representatives focused their discussion on how to integrate this new review mechanism into the existing planning and regulatory process, and also began to develop a charter to institutionalize the RDT operating procedures. The RDT also discussed whether

and how to engage other entities in the review process, and details about meeting frequency and locations.

The RDT's second meeting was held on August 10, 2006. The team spent most of the meeting drafting its charter, which describes the procedures the RDT will use to review dredging projects and make dredged material placement recommendations. The RDT will enhance communication and discussion among the participating agencies to facilitate the timely review and presentation of recommendations on the placement of dredged material from Long Island Sound dredging projects. Through the review process, the RDT will become aware of possible alternatives to open-water disposal that they can communicate to potential applicants as well as appropriate state and federal authorities. The next step is to finalize the charter and seek its approval by the Steering Committee.

Dredged Material Disposal in Long Island Sound

It is the stated goal of the states of Connecticut and New York to reduce or eliminate the disposal of dredged material in Long Island Sound. To determine if this goal is being met will require measuring and tracking the amount of dredged material being disposed of or placed in the Sound and other locations. Currently, most open-water disposal in the Sound occurs at one of four active dredged material disposal sites in the Sound: Western Long Island Sound (WLIS), Central Long Island Sound (CLIS), Cornfield Shoals and New London. In 1982, the USACE issued a programmatic Environmental Impact Statement that identified these four dredged material disposal sites as the ones they would use for open-water disposal for the foreseeable future, and began keeping detailed records of disposal activity at each site. While the WLIS and CLIS disposal sites, as previously described, were recently designated by EPA for long-term use, subject to restrictions, the Cornfield Shoals and New London disposal sites were "selected" by the USACE for short-term use. The availability of these two sites for dredged material disposal will expire five years after commencement of the next disposal activity at each site.

Alternatives to open-water disposal include: upland placement or disposal (preceded by treatment if necessary to remediate contaminated material); beach nourishment (depositing sand on or near an eroding beach); habitat restoration (e.g., depositing dredged material in sub-tidal areas to raise elevation and restore or create wetlands); confined aquatic disposal (CAD) cells (depositing contaminated sediment in a pit excavated below the floor of the harbor or navigation channel, and covering with clean sediment); and confined disposal facilities (using dredged material to increase the size of or create islands, e.g., to expand port facilities). Some of these alternatives, including beach nourishment, habitat creation/restoration, and capping (for both upland and aquatic habitat remediation purposes, in certain circumstances) are considered beneficial to the environment (i.e., beneficial uses). The following excerpt from the RDT guidance describes this process:

> The RDT will track and document the volume of dredged material approved for open water disposal as well as other alternative disposal methods, and submit this information for inclusion in the annual report on progress of the DMMP. This information will be part of the annual report

on the progress of the DMMP to be issued by the EPA.

EPA is complying with this guidance by working with the RDT to compile dredged material placement records on an annual basis, and reporting this data in an annual report for a one-year period ending July 5 each year. Detailed information on dredged material placement volumes and locations is provided in Appendix F.

The data in the annual report will be compared with dredged material disposal data from all disposal activity in Long Island Sound averaged over the period from 1982-2004. Detailed information on annual dredged material disposal volumes is provided in Appendix G. While EPA and the USACE used data for the period 1982-2001 in the Environmental Impact Statement supporting the site designations, the annual report will utilize the complete pre-designation disposal dataset, which includes 2002-2004, to compare with the post-designation data.

Dredged Material Disposal in Long Island Sound, 1982-2004 (in cubic yards[c.y.])

Disposal Site	Total Dredged Material Disposal	Avg. Annual Dredged Material Disposal
New London	3,069,546	133,459
Cornfield Shoals	1,295,998	56,348
Central LIS	8,019,678	348,682
Western LIS	1,870,921	81,344
Totals	14,256,143	619,833

- Overall, there was a total of 287,776 c.y. of dredged material disposed of in the Long Island Sound vicinity for the period July 5, 2005 – July 5, 2006, of which:
  - 223,960 c.y. was disposed at open-water disposal sites;
  - 30,574 c.y. was disposed in a confined aquatic disposal (CAD) cell;
  - 2,242 c.y. was used beneficially to cap the CAD; and
  - 31,000 c.y. was treated and disposed at upland locations.

- Of the 223,960 c.y. disposed in the Sound:
  - 208,410 c.y. went to CLIS (vs. a historical annual average of 348,641 c.y.) and
  - 15,550 c.y. went to WLIS (vs. a historical annual average of 81,344 c.y.).

- Compared with the average annual amount of dredged material disposed of at the four open-water sites in the Sound from 1982-2004, which was 619,833 c.y., for the period July 5, 2005 – July 5, 2006, there was a total of 223,960 c.y., or slightly more than one-third of the historical annual average.

Although the RDT did not review any of the eleven dredging projects that were conducted during the reporting period, since the team wasn't established until late in the reporting period, the dredged material from one project went entirely to upland placement sites. The U.S. Merchant Marine Academy in Kings Point, NY initially explored the possibility of disposing of the 31,000 c.y. of dredged material from their berthing facilities at one of the open-water disposal sites. However, the state of New York and

USACE New York District worked with the project proponent to redirect the material to two upland alternative sites in New Jersey.

While there is generally some variability from one year to the next in the number of dredging projects and volume of dredged material disposed of in the Sound or elsewhere, and there are many factors influencing this variability, reductions in the federal budget may have been one of the largest factors in the lower amount of disposal over the past year. Regardless, it is too early to establish any kind of long-term trend. EPA will continue to report on an annual basis about the LIS RDT deliberations as well as each dredging project that was completed in the preceding year, including the name of the applicant, the alternatives that were evaluated, the volume of dredged material, and its final placement or disposal location. For further information, please contact:

Jean Brochi
U.S. Environmental Protection Agency
One Congress Street, Suite 1100 (COP)
Boston, MA 02114
P - (617) 918-1536
F – (617) 918-0536
brochi.jean@epa.gov

Appendix A

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN STEERING COMMITTEE		
AGENCY	**MEMBER**	**ALTERNATE**
NOAA	David Kaiser, Senior Policy Analyst Office of Ocean and Coastal Resource Management, National Ocean Service 603-862-2719 Fax: 603-862-3957 david.kaiser@noaa.gov	TBD
Corps North Atlantic Division (NAD)	Lloyd Caldwell, Director of Programs 718-765-7129 lloyd.caldwell@usace.army.mil	Joe Vietri, Chief Planning Division 718-765-7070 joseph.r.vietri@usace.army.mil
Corps New England District (NAE)	Bill Scully, Deputy District Engineer Programs and Project Management 978-318-8230 william.c.scully@usace.army.mil	Robert (Bobby) Byrne, Chief Programs & Project Management Division 978-318-8509 robert.h.byrne@usace.army.mil
Corps New York District (NAN)	Stuart Piken, Deputy District Engineer for Programs and Project Management 917-790-8200 stuart.d.piken@usace.army.mil	Frank Santomauro, Chief Planning Division 917-790-8700 frank.santomauro@usace.army.mil
EPA Region I	Linda Murphy, Director Office of Ecosystem Protection 617-918-1501 murphy.linda@epa.gov	Lynne Hamjian, Chief Office of Ecosystem Protection Surface Water Branch 617-918-1601 hamjian.lynne@epa.gov
EPA Region II	Kevin Bricke, Deputy Director Division of Environmental Planning and Protection 212-637-3736 bricke.kevin@epa.gov	Doug Pabst, Team Leader Dredged Material Management Team 212-637-3797 pabst.douglas@epa.gov
New York State Dept. of State	George Stafford, Deputy Secretary of State for Coastal Resources 518-473-2459 gstaffor@dos.state.ny.us	Fred Anders, Chief Natural Resource Management Bureau Division of Coastal Resources 518-473-2477 fanders@dos.state.ny.us
New York State Dept. of Environmental Conservation	Ruth Moore, Deputy Commissioner Natural Resources and Water Quality 518-402-8560 rmoore@gw.dec.state.ny.us	TBD
Connecticut Dept. of Environmental Protection	Betsey Wingfield, Chief Bureau of Water Management 860-424-3704 betsey.wingfield@po.state.ct.us	Brian Thompson, Director Office of Long Island Sound Programs (860) 424-3034 brian.thompson@po.state.ct.us

Appendix B

LONG ISLAND SOUND DREDGED MATERIAL MANAGEMENT PLAN PROJECT DELIVERY TEAM		
AGENCY	**MEMBER**	**MEMBER**
Corps North Atlantic Division (NAD)	Linda Monte, Oceanographer 718-765-7067 linda.b.monte@usace.army.mil	Joe Vietri, Chief, Planning Division 718-765-7070 joseph.r.vietri@usace.army.mil
Corps New England District (NAE)	Michael Keegan, Project Manager 978-318-8087 michael.f.keegan@usace.army.mil	Mark Habel, Study Manager 978-318-8871 mark.l.habel@usace.army.mil
Corps New York District (NAN)	Len Houston, Chief Environmental Analysis Branch 917-790-8702 leonard.houston@usace.army.mil	Deborah Swacker, Study Manager 917-790-8734 deborah.b.swacker@usace.army.mil
Corps New York District (NAN)	Darin Damiani 917-790-8709 darin.r.damiani@usace.army.mil	Nancy Brighton 917-790-8703 nancy.j.brighton@nan02.usace.army.mil
EPA Region I	Mel Cote, Manager Ocean and Coastal Protection Unit Office of Ecosystem Protection 617-918-1553 cote.mel@epa.gov	Jean Brochi, Project Manager Office of Ecosystem Protection 617-918-1536 brochi.jean@epa.gov
EPA Region II	Doug Pabst 212-637-3797 pabst.douglas@epa.gov	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov
New York State Dept. of State	Steve Resler Division of Coastal Resources 518-474-5290 sresler@dos.state.ny.us	Shawn Kiernan Division of Coastal Resources 518-473-3656 skiernan@dos.state.ny.us
Connecticut Dept. of Environmental Protection	George Wisker Office of Long Island Sound Programs 860-424-3034 george.wisker@po.state.ct.us	Diane Duva Bureau of Waste Management 860-424-3271 diane.duva@po.state.ct.us
Connecticut Dept. of Environmental Protection	Paul Stacey Bureau of Water Management 860-424-3728 paul.stacey@po.state.ct.us	TBD

Appendix C

LONG ISLAND SOUND REGIONAL DREDGING TEAM		
AGENCY	**MEMBER**	**MEMBER**
Corps North Atlantic Division (NAD)	James Haggerty 718-765-7150 james.w.haggerty@usace.army.mil	TBD
Corps New England District (NAE)	Robert DeSista 978-318-8879 robert.j.desista@usace.army.mil Jay Mackay 978-318-8142 joseph.b.mackay@usace.army.mil	Sue Holtham 978-318-8536 susan.e.holtham@usace.army.mil
Corps New York District (NAN)	Joe Seebode 917-790-8209 joseph.j.seebode@nan02.usace.army.mil	TBD
EPA Region I	Jean Brochi, Project Manager Office of Ecosystem Protection 617-918-1536 brochi.jean@epa.gov	Mel Cote, Manager Ocean and Coastal Protection Unit Office of Ecosystem Protection 617-918-1553 cote.mel@epa.gov
EPA Region II	Patricia Pechko 212-637-3796 pechko.patricia@epa.gov	Doug Pabst 212-637-3797 pabst.douglas@epa.gov
NOAA National Marine Fisheries Service	Michael Ludwig 203-882-6594 michael.ludwig@noaa.gov	TBD
New York Dept. of State	Steven Resler Division of Coastal Resources 518-474-8811 gcapobia@dos.state.ny.us	Shawn Kiernan Division of Coastal Resources 518-473-3656 skiernan@dos.state.ny.us
New York State Dept. of Environmental Conservation	Chuck Hamilton (631) 444-0295 cthamilt@gw.dec.state.ny.us	TBD
Connecticut Dept. of Environmental Protection	George Wisker Office of Long Island Sound Programs 860-424-3034 george.wisker@po.state.ct.us	TBD
	Diane Duva Bureau of Waste Management 860-424-3271 diane.duva@po.state.ct.us	David McKeegan Bureau of Waste Management 860-424-3313 david.mckeegan@po.state.ct.us

Appendix D

Correspondence regarding development of the Long Island Sound DMMP

(1) Letter from Governors Pataki and Rell to General Strock, Chief of Engineers, February 8, 2005

(2) Letter from Governor Pataki to NY Members of U.S. House of Representatives, May 9, 2006

(3) Letter from Governor Pataki to NY Members of U.S. Senate, May 9, 2006

(4) Letter from Governor Rell to Senator Lieberman, March 15, 2005

(5) Letter from Governor Rell to Senator Lieberman, September 15, 2005

(6) Letter from Governor Rell to Senator Lieberman, February 27, 2006

NEW YORK • CONNECTICUT

February 8, 2005

Lieutenant General Carl A. Strock
Chief of Engineers/Commanding General
U. S. Army Corps of Engineers
441 G St., NW
Washington, DC 20314

Dear General Strock:

We request the U.S. Army Corps of Engineers (Corps) North Atlantic Division Office to develop a Dredged Material Management Plan (DMMP) for the Long Island Sound (LIS) region. Considering the responsibilities of your agency for maintaining major channels and waterways in LIS, as well as your regulatory responsibilities to protect the environmental well being of our waterways under the Clean Water Act, the Corps is uniquely suited to take the lead in the DMMP process. A committee comprised of representatives from the Corps, EPA, New York and Connecticut would manage the effort.

Dredging and appropriate management of dredged sediment is vital to the economic and environmental well-being of both New York and Connecticut. However, as you are aware, dredged material management for LIS dredging projects has been a particularly significant issue and concerns have been raised recently over the proposed EPA designation of open water disposal sites in central and western LIS. To resolve these issues for the long term, we believe the interests of all stakeholders are best served by development of a comprehensive DMMP that would identify feasible and environmentally sound alternatives and establish future protocols for dredged material management. These alternatives include, but are not limited to, reducing sediment sources, reducing contaminant loading, and developing feasible beneficial reuses for dredged material, with the goal of reducing or eliminating the need for open water disposal.

Our respective staffs are prepared to begin immediate discussions regarding the scope and extent of effort necessary to prepare such a plan. We stand ready to seek the support of the New York and Connecticut congressional delegations to assist in providing funding sufficient to complete the development of this plan.

Additionally, we urge the Corps to include funds to undertake a DMMP in your budget request. The States will work with our respective Congressional delegations to support the appropriation.

We are committed to a regional DMMP that will promulgate feasible sediment management options for LIS and request the Corps to immediately begin preparation of the DMMP.

Sincerely,

George E. Pataki
Governor

M. Jodi Rell
Governor

c: Brigadier General Merdith W. B. Temple - Division Commander, North Atlantic Division
Colonel Thomas Koenig, District Engineer - New England District
Colonel Richard J. Polo, Jr., District Engineer - New York District

STATE OF NEW YORK

GEORGE E. PATAKI
GOVERNOR

May 9, 2006

Dear Chairman Hobson and Ranking Member Visclosky:

As you move forward with this year's Energy and Water Development appropriations bill, I would like to bring to your attention a number of environmental and energy infrastructure projects and programs important to New York State, and for which I seek your support in providing adequate federal funds.

- The New York City Watershed Program provides high quality affordable drinking water for the eight million residents of New York City, as well as one million upstate consumers--essentially half of the population of our State. Funding for the program is authorized in the Water Resources Development Act (WRDA) for up to $42.5 million. The innovative New York City Watershed Program ensures the continued protection of the Nation's largest unfiltered drinking water supply in a unique manner that avoids the need to construct a drinking water filtration plant at an estimated cost of $8-10 billion. An appropriation of $15 million to the United States Army Corps of Engineers for FY 07 is needed to ensure we continue this essential and cost-effective drinking water initiative.

- Only two years ago, I wrote to you to express my concern about a decision by the Army Corps to reprogram funds which Congress had appropriated for New York City Watershed projects to other activities. Upon the direction of Secretary Rumsfeld, the Corps agreed to fully restore these funds, totaling approximately $7 million. However, language in the FY 06 Energy and Water Development Appropriations Bill generally prohibits the Corps from restoring reprogrammed funds. I urge you to amend the FY 06 language so that the Corps can honor its agreement to restore the Watershed funds.

- Section 1105 of WRDA authorized $5 million annually to fund the operation, maintenance and rehabilitation of the New York State Barge Canal. For FY 07, the full authorized amount will be necessary to ensure the effective operation of the Barge Canal. In addition, a total of $9 million--half of the $18 million authorized pursuant to Section 553 of WRDA of 1996, as amended by Section 341 of WRDA of 1999--will be needed to address critical rehabilitation, renovation, preservation and maintenance needs along the aging New York State Canal system.

- The Port of New York and New Jersey is an extraordinary economic engine for the entire region and supports 40,000 terminal-based jobs, 189,000 regional off-terminal jobs and an additional 186,000 jobs nationwide. The Army Corps has deemed its project to dredge and deepen the Port's channels to be a National Priority and the President's budget includes $90 million for continued construction. Deepening the channels of the Port is essential to continue to accommodate large cargo ships. This project will ensure that the Nation's major gateway on the Atlantic Ocean continues to fuel the national economy as it has done for many years.

- The Long Island Sound Dredged Material Management Plan, or LIS DMMP, is a cooperative effort of New York, Connecticut, the US EPA and the Army Corps to maintain safe, environmentally sound and economically viable navigation in the Sound's ports and harbors. This initiative is unprecedented and, given the need to ensure safe navigation which protects the Sound's precious natural resources, the assurance of adequate funding is vital. An FY 07 appropriation of $3.5 million to the Corps is needed for this project to proceed. An additional appropriation of $1.5 million to design and site a project in New York that will demonstrate the innovative reuse of dredged material will complement a similar demonstration project which the Corps is now designing for Bridgeport, Connecticut.

- For several years the Department of Energy has implemented a radioactive waste management demonstration project at West Valley on a 90/10 federal/state cost-sharing ratio specified in the West Valley Demonstration Project Act. The Act specifies the work which DOE must undertake to remediate this site, and the President's budget recognizes the importance of this issue by including $73 million for DOE activities at West Valley. New York supports a higher number--$95 million--to sustain jobs and ensure that DOE fulfills its commitments at the site.

- Several New York State agencies and authorities are working together to identify shovel-ready sites for the development of advanced "clean coal" power plants by private sector power developers. The State is committed to assisting these power developers with financing through a number of economic and regulatory incentives, including the establishment of a Clean Coal Initiative Fund of $10 million annually over five years. Federal assistance with development of the technology and capitalization of the Clean Coal Initiative Fund would help to advance this State effort and would support the President's goal of ensuring that our Nation meets its energy needs through clean, sustainable technologies.

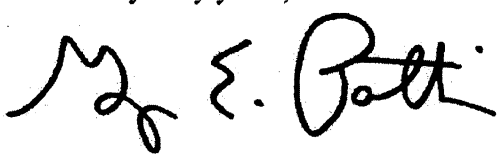
- New York, in order to help our nation reduce its dependence on foreign oil, is seeking a federal appropriation to help develop innovative technologies to produce ethanol from biomass feedstocks containing cellulose. The State is making $20 million available to help construct a pilot-scale cellulosic ethanol facility and then transfer the resulting production capacity to commercial-scale, and seeking further federal funding to assist our effort.

- I also strongly support the President's request to provide $45 million for project engineering and design for the next-generation National Synchrotron Light Source, or NSLS II, that will be built at Brookhaven National Lab. This new facility will provide academia, government and industry scientists from all parts of the United States with world-leading capabilities for basic and applied research in materials and nanoscience, life-sciences and chemistry, and geosciences. I have committed $30 million of New York State funds to construct a Joint Photon Sciences Institute, or JPSI, at the Lab to help maximize the benefits of NSLS II. The JPSI would serve as the intellectual center for development and applications of the photon sciences and as a gateway for users of the NSLS II. Together with this State investment, federal support for the NSLS II will ensure that United States remains the world leader in this critical research.

- I am strongly committed to developing hybrid vehicles in New York State, and I encourage you to appropriate the funds necessary to support federal efforts to help us nurture this emerging technology.

All of these requests provide tangible benefits to New York State's environment through concrete actions that will improve our infrastructure and address on-going problems that threaten our natural resources, public health and environmental quality. I appreciate your assistance to the State for these high priority matters.

Very truly yours,



The Honorable David L. Hobson
Chairman
Subcommittee on Energy and Water Development
2362-B Rayburn House Office Building
Washington, D.C. 20515-6020

The Honorable Peter J. Visclosky
Ranking Minority Member
Subcommittee on Energy and Water Development
2362-B Rayburn House Office Building
Washington, D.C. 20515-6020

STATE OF NEW YORK

GEORGE E. PATAKI
GOVERNOR

May 9, 2006

Dear Chairman Domenici and Ranking Member Reid:

As you move forward with this year's Energy and Water Development appropriations bill, I would like to bring to your attention a number of environmental and energy infrastructure projects and programs important to New York State, and for which I seek your support in providing adequate federal funds.

- The New York City Watershed Program provides high quality affordable drinking water for the eight million residents of New York City, as well as one million upstate consumers--essentially half of the population of our State. Funding for the program is authorized in the Water Resources Development Act (WRDA) for up to $42.5 million. The innovative New York City Watershed Program ensures the continued protection of the Nation's largest unfiltered drinking water supply in a unique manner that avoids the need to construct a drinking water filtration plant at an estimated cost of $8-10 billion. An appropriation of $15 million to the Unites States Army Corps of Engineers for FY 07 is needed to ensure we continue this essential and cost-effective drinking water initiative.

- Only two years ago, I wrote to you to express my concern about a decision by the Army Corps to reprogram funds which Congress had appropriated for New York City Watershed projects to other activities. Upon the direction of Secretary Rumsfeld, the Corps agreed to fully restore these funds, totaling approximately $7 million. However, language in the FY 06 Energy and Water Development Appropriations Bill generally prohibits the Corps from restoring reprogrammed funds. I urge you to amend the FY 06 language so that the Corps can honor its agreement to restore the Watershed funds.

- Section 1105 of WRDA authorized $5 million annually to fund the operation, maintenance and rehabilitation of the New York State Barge Canal. For FY 07, the full authorized amount will be necessary to ensure the effective operation of the Barge Canal. In addition, a total of $9 million--half of the $18 million authorized pursuant to Section 553 of WRDA of 1996, as amended by Section 341 of WRDA of 1999--will be needed to address critical rehabilitation, renovation, preservation and maintenance needs along the aging New York State Canal system.

- The Port of New York and New Jersey is an extraordinary economic engine for the entire region and supports 40,000 terminal-based jobs, 189,000 regional off-terminal jobs and an additional 186,000 jobs nationwide. The Army Corps has deemed its project to dredge and deepen the Port's channels to be a National Priority and the President's budget includes $90 million for continued construction. Deepening the channels of the Port is essential to continue to accommodate large cargo ships. This project will ensure that the Nation's major gateway on the Atlantic Ocean continues to fuel the national economy as it has done for many years.

- The Long Island Sound Dredged Material Management Plan, or LIS DMMP, is a cooperative effort of New York, Connecticut, the US EPA and the Army Corps to maintain safe, environmentally sound and economically viable navigation in the Sound's ports and harbors. This initiative is unprecedented and, given the need to ensure safe navigation which protects the Sound's precious natural resources, the assurance of adequate funding is vital. An FY 07 appropriation of $3.5 million to the Corps is needed for this project to proceed. An additional appropriation of $1.5 million to design and site a project in New York that will demonstrate the innovative reuse of dredged material will complement a similar demonstration project which the Corps is now designing for Bridgeport, Connecticut.

- For several years the Department of Energy has implemented a radioactive waste management demonstration project at West Valley on a 90/10 federal/state cost-sharing ratio specified in the West Valley Demonstration Project Act. The Act specifies the work which DOE must undertake to remediate this site, and the President's budget recognizes the importance of this issue by including $73 million for DOE activities at West Valley. New York supports a higher number--$95 million--to sustain jobs and ensure that DOE fulfills its commitments at the site.

- Several New York State agencies and authorities are working together to identify shovel-ready sites for the development of advanced "clean coal" power plants by private sector power developers. The State is committed to assisting these power developers with financing through a number of economic and regulatory incentives, including the establishment of a Clean Coal Initiative Fund of $10 million annually over five years. Federal assistance with development of the technology and capitalization of the Clean Coal Initiative Fund would help to advance this State effort and would support the President's goal of ensuring that our Nation meets its energy needs through clean, sustainable technologies.

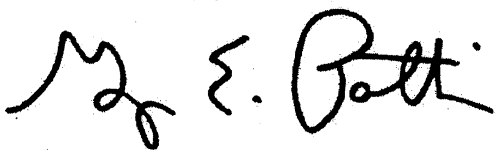
- New York, in order to help our nation reduce its dependence on foreign oil, is seeking a federal appropriation to help develop innovative technologies to produce ethanol from biomass feedstocks containing cellulose. The State is making $20 million available to help construct a pilot-scale cellulosic ethanol facility and then transfer the resulting production capacity to commercial-scale, and seeking further federal funding to assist our effort.

- I also strongly support the President's request to provide $45 million for project engineering and design for the next-generation National Synchrotron Light Source, or NSLS II, that will be built at Brookhaven National Lab. This new facility will provide academia, government and industry scientists from all parts of the United States with world-leading capabilities for basic and applied research in materials and nanoscience, life-sciences and chemistry, and geosciences. I have committed $30 million of New York State funds to construct a Joint Photon Sciences Institute, or JPSI, at the Lab to help maximize the benefits of NSLS II. The JPSI would serve as the intellectual center for development and applications of the photon sciences and as a gateway for users of the NSLS II. Together with this State investment, federal support for the NSLS II will ensure that United States remains the world leader in this critical research.

- I am strongly committed to developing hybrid vehicles in New York State, and I encourage you to appropriate the funds necessary to support federal efforts to help us nurture this emerging technology.

All of these requests provide tangible benefits to New York State's environment through concrete actions that will improve our infrastructure and address on-going problems that threaten our natural resources, public health and environmental quality. I appreciate your assistance to the State for these high priority matters.

Very truly yours,



The Honorable Pete V. Domenici
Chairman
Subcommittee on Energy and Water, and
and Related Agencies
SD-133 Dirksen Senate Office Building
Washington, D.C. 20510-6030

The Honorable Harry Reid
Ranking Minority Member
Subcommittee on Energy and Water,
and Related Agencies
SD-133 Dirksen Senate Office Building
Washington, D.C. 20510-6030

STATE OF CONNECTICUT
EXECUTIVE CHAMBERS
HARTFORD, CONNECTICUT
06106

M. JODI RELL
GOVERNOR

March 15, 2005

Senator Joseph I. Lieberman
706 Hart Senate Office Building
Washington, DC 20510

Dear Senator Lieberman:

I am writing this letter to you and other members of the Connecticut congressional delegation to seek your support for Connecticut's efforts to develop a comprehensive Dredged Material Management Plan (DMMP) for Long Island Sound in cooperation with the state of New York. NY Governor Pataki and I recently sent a joint letter (copy attached) to General Strock, Chief of the Army Corps of Engineers, requesting that the Corps take the lead to develop a DMMP for Long Island Sound. Recent meetings between staff from the states of CT and NY, EPA regions I and II, the Corps of Engineer's New England and New York Districts, and the Corp's North Atlantic Division have initiated the process of scoping the level of effort and the approximate costs necessary to complete such a plan.

It is estimated an appropriation of at least 16 million dollars over a minimum of five years will be required to complete the DMMP. I am requesting the delegation to seek funding for FY 06 of 1.6 million dollars to initiate development of this plan that is so vital to the environmental and economic well-being of both Connecticut and New York.

If you have any questions regarding any of the above, please contact Department of Environmental Protection Commissioner Gina McCarthy at (860) 424-3001. I understand that your staff has been briefed on these matters and are encouraged to contact George Wisker of Commissioner McCarthy's staff at (860) 424-3034 or Rachel Towbin of our Washington Office at (202) 347-4535 to discuss these issues further. Thank you.

Sincerely,

M. Jodi Rell

M. Jodi Rell
Governor

MJR/gw
attachment

TOTAL P.03

STATE OF CONNECTICUT
EXECUTIVE CHAMBERS

M. JODI RELL
GOVERNOR

September 15, 2005

Senator Joseph I. Lieberman
706 Hart Senate Office Building
Washington, DC 20510

Dear Senator Lieberman:

I am again writing to you and other members of the Connecticut congressional delegation to seek your strong support for funding of the cooperative state/federal efforts to maintain safe, environmentally sound and economically viable navigation in our Long Island Sound ports and harbors.

Earlier this year, New York Governor Pataki and I asked the U.S. Army Corps of Engineers to undertake the development of a Dredged Material Management Plan (DMMP) for Long Island Sound. We requested 1.6 million dollars for FY 06 to enable the Corps to initiate this vital process (copy attached). Unfortunately, since funding was not included in either of the passed Senate or House water legislation now in conference, I must now urge you to find a mechanism to include the necessary funding for this planning during conference, or through some other vehicle.

I can't emphasize enough that failure to adequately fund this endeavor, particularly at this critical initial stage, will likely cripple this unprecedented regional effort and result in serious environmental and economic consequences for Connecticut's ports and waterways.

If you have any questions regarding any of the above, or would like to more fully explore the course of action that I have outlined, please contact Department of Environmental Protection Commissioner Gina McCarthy at (860) 424-3001. I understand that your staff has been briefed on these matters and are encouraged to contact George Wisker of the CT DEP at (860) 424-3034 or Rachel Towbin of our Washington Office at (202) 347-4535 to discuss these issues further. Thank you.

Sincerely,

M. Jodi Rell
Governor

MJR/gw
Attachment

STATE CAPITOL, HARTFORD, CONNECTICUT 06106
TEL: (860) 566-4840 • FAX: (860) 524-7396
www.state.ct.us/governor

STATE OF CONNECTICUT
EXECUTIVE CHAMBERS

M. JODI RELL
GOVERNOR

February 27, 2006

Senator Christopher J. Dodd
448 Russell Senate Office Building
Washington, DC 06109

Dear Senator Dodd

Last year, I wrote to you and other members of the Connecticut congressional delegation in connection with the efforts of Connecticut, New York and the U.S. Army Corp of Engineers to develop a comprehensive Dredged Material Management Plan ("DMMP") for Long Island Sound. As you may recall, the Environmental Protection Agency ("EPA") required that this DMMP be completed within eight years as a condition of their approval of the Central and Western Long Island Sound disposal sites. Our continued access to these disposal sites is critical if we are to maintain Connecticut's ports and waterways given their need for periodic dredging and the limited feasible and cost-effective options available at this time for reuse and/or upland disposal.

Federal funding of this planning is critical to maintaining safe, environmentally sound and economically viable navigation in Long Island Sound's ports and waterways. Unfortunately, Connecticut was unsuccessful last year in securing the monies necessary to fund this planning. An opportunity now exists, however, to fund the development of a DMMP for Long Island Sound. It is my understanding that President Bush included $1.742 million in his proposed Fiscal Year 2007 budget for the Long Island Sound DMMP. I urge you to support the President's proposal to fund the Long Island Sound DMMP and aggressively seek the funds necessary for the preparation and implementation of the Long Island Sound DMMP.

If you have any questions or would like additional information, please do not hesitate to contact Commissioner Gina McCarthy of the Connecticut Department of Environmental Protection at (860) 424-3001. Rachel Fawhin in our Washington office may also be of assistance. Her telephone number is (202) 347-4535. Thank you.

Sincerely,

M. Jodi Rell

M. Jodi Rell
Governor

MJR:mmd

STATE CAPITOL, HARTFORD, CONNECTICUT 06106
TEL: (860) 566-4840 • FAX: (860) 524-7396
www.ct.gov

Appendix F

Dredged Material Disposal Data, July 5, 2005 – July 5, 2006

(1) Summary of All Dredging and Disposal Activities

(2) All Corps of Engineers Civil Works Activities

(3) Activities under Permit by Federal Agencies other than the Corps of Engineers

(4) All Non-Federal Permit Activities

Long Island Sound Annual Dredging Report - for the Dredging Year Ending 5 July 2006
Summary of All Dredging and Disposal Activities

Disposal Sites and Methods	CONNECTICUT			NEW YORK			Total All Projects and States
	Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities	Federal (Corps) Navigation Projects	Other Federal Projects	Private Permit Activities	
Open Water Disposal	117,997	0	87,800	0	0	18,163	223,960
CLIS	117,997	0	76,700	0	0	13,713	208,410
WLIS	0	0	11,100	0	0	4,450	15,550
Confined Disposal	30,574	0	0	0	0	0	30,574
CAD Cells	30,574						30,574
Upland Containment	0						0
Landfill							0
Beneficial Use	2,242	0	0	0	0	0	2,242
CAD Cap	2,242						2,242
Beach/Bar Nourishment							0
Habitat Creation/Enhance							0
Brownfield Remediation							0
Treated Dredged Material	0	0	0	0	31,000	0	31,000
Upland Disposal					31,000		31,000
Commercial Use							0
TOTAL ALL DISPOSAL	150,813	0	87,800	0	31,000	18,163	287,776

Long Island Sound Annual Dredging Report - for the Dredging Year Ending 5 July 2006
All Corps of Engineers Civil Works Activities - Federal Navigation Projects

Project Name	Total Project Volume (CY)	Corps Contract No.	Dates of Disposal	Disposal Location	Actual Volume Disposed (CY)
Norwalk Harbor FNP, CT	150,813	2005-C0016	10/27/05 -12/30/05		
Dredged from Channel	65,413			CLIS	65,413
Dredged from Channel	30,574			CAD Cell	30,574
Dredged from CAD Cell	52,584			CLIS	52,584
Dredged from Channel	2,242			CAD Cell Cap	2,242
TOTAL CY THIS YEAR	150,813				150,813

Corps Projects Disposal Summary	Site	State	Volume	Remarks
Open Water	CLIS	CT	117,997	
Open Water	CLIS	NY		
Open Water	WLIS	CT		
Open Water	WLIS	NY		
Confined Disposal	CAD Cell	CT	30,574	
Confined Disposal	CAD Cell	NY		
Confined Disposal	Upland	CT		
Confined Disposal	Upland	NY		
Beneficial Use	Upland Use	CT		
Beneficial Use	Upland Use	NY		
Beneficial Use	Beach Nourishment	CT		
Beneficial Use	Beach Nourishment	NY		
Beneficial Use	CAD Cap	CT	2,242	
Beneficial Use	CAD Cap	NY		
TOTAL			150,813	

NOTE: All FNP CY Volumes are measured in-place as difference between pre-dredge and after-dredge surveys.

Long Island Sound Annual Dredging Report - for the Dredging Year Ending 5 July 2006
Activities under Permit by Federal Agencies other than the Corps of Engineers

Project Name	Waterbody/Location	Total Project Volume (CY)	Yardage Measurement Method	Corps Application No.	Dates of Disposal	Disposal Location	Actual Volume Disposed (CY)
U.S. Merchant Marine Academy (MARAD)	Kings Point, NY	31,000	Scow Measure			Upland NJ	31,000
TOTAL CY		31,000					31,000

Permit Actions Disposal Summary	Site	Source State	Volume	Remarks
Open Water	CLIS	CT	0	
Open Water	CLIS	NY	0	
Open Water	WLIS	CT	0	
Open Water	WLIS	NY	0	
Confined Disposal	CAD Cell	CT	0	
Confined Disposal	CAD Cell	NY	0	
Confined Disposal	Upland	CT	0	
Confined Disposal	Upland	NY	0	
Treated	Uplans	NY	31,000	USMMA material treated with Portland cement and deposited at 2 upland NJ sites
Beneficial Use	CAD Cap	CT	0	
Beneficial Use	CAD Cap	NY	0	
TOTAL VOLUME			31,000	

Note: Yardage Measurement Method is either In-Place (by Difference in Pre-Dredge and After-Dredge Surveys) or Estimated Scow Measure

Long Island Sound Annual Dredging Report - for the Dredging Year Ending 5 July 2006
All Non-Federal Permit Activities
(All Projects other than Corps Civil Works Federal Navigation Projects and other Federal Agency Actions)

Project Name	Waterbody/Location	Total Project Volume (CY)	Yardage Measurement Method	Corps Application No.	Dates of Disposal	Disposal Location	Actual Volume Disposed (CY)
Motiva Enterprises	New Haven Harbor, CT	23,900	Scow Measure	2003-02051	12/30/05 - 2/14/06	CLIS	23,900
Revik, Olav & Rebecca	Bermuda Lagoon, Westport, CT	900	Scow Measure	NAE-2004-3068	11/16/05-11/23/05	CLIS	900
Brewers Point Marina	Menunketesuck River, Westbrook, CT	7,200	Scow Measure	NAE-2004-3725	11/28/05-1/30/06	CLIS	7,200
Guilford Yacht Club Assc.	West River, Guilford, CT	24,500	Scow Measure	NAE-2004-2014	12/15/05-2/14/06	CLIS	24,500
Guilford Yacht Club	West River, Guilford, CT	20,200	Scow Measure	2003-01752 2004-4015	4/7/05-7/1/06	CLIS	20,200
Riverside Yacht Club	Mianus River (Cos Cob Harbor), Greenwich, CT	10,800	Scow Measure	2002-01805	1/1/06-7/1/06	WLIS	10,800
Long Neck Point Owners Association	Darien, CT	100	Scow Measure	NAE-2004-1830	4/11/06	WLIS	300
New York Athletic Club, Pelham Manor, NY	New Rochelle Harbor, NY	20,500	Scow Measure	2000-01118 (NAN) 2001-01303 (NAE)	Dec-05	CLIS	13,713
Wyncote Yacht Club	Huntington Harbor, NY	6,600	Scow Measure	2002-01280	10/3/05-11/14/05	WLIS	4,450
TOTAL CY		114,700					105,963

Permit Actions Disposal Summary	Site	State	Volume	Remarks
Open Water	CLIS	CT	76,700	
Open Water	CLIS	NY	13,713	
Open Water	WLIS	CT	11,100	
Open Water	WLIS	NY	4,450	
Confined Disposal	CAD Cell	CT	0	
Confined Disposal	CAD Cell	NY	0	
Confined Disposal	Upland	CT	0	
Confined Disposal	Upland	NY	0	
Beneficial Use	CAD Cap	CT	0	
Beneficial Use	CAD Cap	NY	0	
TOTAL VOLUME			105,963	

Note: Yardage Measurement Method is either In-Place (by Difference in Pre-Dredge and After-Dredge Surveys) or Estimated Scow Measure

Appendix G

Annual Scow Disposal Volumes in Cubic Yards, 1982-2004

DISPOSAL AREA	1982	1983	1984	1985	1986	1987	1988
NEW LONDON	1,975	192,153	290,454	367,005	207,900	160,905	110,440
CORNFIELD SHOALS	36,920	266,200	84,925	4,100	18,955	20,405	35,625
CENTRAL LIS	283,568	1,234,072	134,925	119,020	253,068	93,290	533,570
WESTERN LIS	60,395	156,085	166,358	423,080	78,360	65,380	39,250
	382,858	1,848,510	676,662	913,205	558,283	339,980	718,885

DISPOSAL AREA	1989	1990	1991	1992	1993	1994	1995
NEW LONDON	41,800	162,357	64,262	79,320	21,930	7,650	787,800
CORNFIELD SHOALS	66,497	29,380	167,616	103,700	16,100	39,940	31,690
CENTRAL LIS	588,755	206,980	126,278	47,223	1,212,140	600,210	280,541
WESTERN LIS	2,250	249,005	114,465	43,211	32,310	13,428	63,235
	699,302	647,722	472,621	273,454	1,282,480	661,228	1,163,266

DISPOSAL AREA	1996	1997	1998	1999	2000	2001	2002
NEW LONDON	504,400	12,725	2,900	23,250	4,450	1,995	11,425
CORNFIELD SHOALS	40,015	49,375	96,575	14,200	52,350	23,850	14,430
CENTRAL LIS	291,395	90,105	115,150	602,695	80,050	98,400	50,625
WESTERN LIS	59,604	14,775	8,950	40,300	35,450	50,250	41,975
	895,414	166,980	223,575	680,445	172,300	174,495	118,455

DISPOSAL AREA	2003	2004
NEW LONDON	4450	8000
CORNFIELD SHOALS	49550	33600
CENTRAL LIS	774606	203012
WESTERN LIS	20150	92655
	848,756	337,267

TOTALS	AVERAGE
3,069,546	133,459
1,295,998	56,348
8,019,678	348,682
1,870,921	81,344
14,256,143	619,832

LONG ISLAND SOUND

FINAL
DREDGED MATERIAL MANAGEMENT PLAN
AND FINAL PROGRAMMATIC
ENVIRONMENTAL IMPACT STATEMENT

APPENDIX K

USACE OCTOBER 21, 2015
GUIDANCE MEMORANDUM
ON THE FEDERAL STANDARD

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

REPLY TO
ATTENTION OF

CECW-CO

OCT 2 1 2015

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Federal Standard Clarification Regarding Federal Dredging Mission and Interactions with Non-Federal Agencies

1. Purpose: This guidance clarifies proper interpretation and implementation of the U.S. Army Corps of Engineers (USACE) regulations 33 CFR Parts 335 through 338, and particularly those parts of the regulations relating to the federal standard, as those regulations relate to federal maintenance dredging for federal navigation channels.

2. Background: From time to time various state governments (e.g., sometimes acting through regional water quality control boards) include conditions in Clean Water Act (CWA) Section 401 Water Quality Certifications (WQC) that would require USACE to conduct maintenance dredging operations and/or placement of the resulting dredged material in ways departing from, and substantially more costly than, what would be required by the federal standard. In addition, at times those states indicate their belief that USACE, rather than the state, must pay all of the incremental costs caused by those departures from the federal standard that the state is seeking.

a. The situation, where a state attempts to use its authority under the CWA Section 401 or under the Coastal Zone Management Act (CZMA) to require USACE to perform its dredging operations in ways that depart from the federal standard, is familiar to most USACE officials nationwide who have been involved with USACE maintenance dredging activities over the years. For example, a common situation encountered by USACE involves requests from various states to USACE to place sand generated by federal maintenance dredging on state beaches at 100 percent federal expense. USACE can sometimes accommodate these requests for beach nourishment, but not at 100 percent federal cost. Rather, non-federal interests must pay all costs in excess of the federal standard placement alternative, which often is open water placement. Even in limited cases where the beach placement might be cost shared under certain statutory authorities available to USACE, the non-federal entity must still agree to pay its share of the entire incremental cost above the federal base plan.

b. Other states have tried to insist that all dredged material generated by federal maintenance dredging be used for the creation of wetlands at 100 percent federal expense, without the statutorily required non-federal cost sharing for that beneficial use of dredged material. In some situations, states propose WQC or CZMA conditions, controls or other requirements unrelated to those statutorily allowed under the CWA or CZMA, and that would change not only the locations of placement of dredged material

Printed on Recycled Paper

generated by federal maintenance dredging, but also how USACE conducts the dredging operations. Other excessive requirements are manifest through a state's insistence on testing, data or exorbitant amounts of information prior to completion of the review process, thus delaying the dredging project beyond the time for completion within the boundaries of the fiscal year appropriations process. On other occasions a state has proposed inclusion of WQC requirements from another state agency or even on behalf of another federal agency, completely outside the bounds of a state's authority under the CWA or CZMA.

3. USACE Policy: USACE long-standing policy regarding such matters was first established by DAEN-CWO-M Memorandum for Division Engineers, subject: Maintenance Dredging Provisions of the Clean Water Act of 1977 (P.L. 95-217) (Enclosure 1). That document is a guidance memo that was issued from the Director of Civil Works dated 25 July 1978. The guidance of that memo was then incorporated into USACE regulations promulgated in 1988 after notice and comment rulemaking, and now contained in 33 CFR Parts 335 through 338. (Enclosure 2).

a. The 1978 guidance and USACE current regulations are predicated on the essential principle that federal funds available for maintenance of federal navigation channels nationwide are limited, and thus must be allocated and spent responsibly and carefully. To that end, USACE establishes the federal standard (in the manner prescribed by USACE regulations; see, e.g., 33 CFR 335.7) that will govern every federal maintenance dredging project. A state's desired dredging methods, placement locations, or other requirements that exceed the federal standard can usually be accommodated to "the maximum extent practicable," so long as the state or non-federal sponsor agrees to pay any difference between the cost of implementing the federal standard and the cost of implementing the state's requirements.

b. If USACE and a state cannot reach agreement regarding how federal maintenance dredging will take place, and if that state asserts its authority under the federal CZMA or CWA Section 401 or Subsection 404(t) to try to impose additional conditions that are inconsistent with the federal standard and that would have to be satisfied at federal expense, then USACE has a number of options available.

c. As a matter of legal authority, the Secretary of the Army (SA) could assert the Army's statutory authority to override the state's interference with navigation, by making use of CWA Subsection 511(a)(2) and/or 404(t). See 33 CFR 337.8(b)(5) (Enclosure 2). However, as a matter of USACE policy, the most likely circumstances in which USACE would recommend to the SA that the SA's override authority should be used would be if the state's action would interfere with navigation essential for the national defense of the United States, or if the state's action would interfere with navigation for

some other state, or would jeopardize to an unacceptable degree interstate or international commerce.

d. If the state's action would not interfere with national defense or with the navigation interests of any other state, then, as a matter of policy, USACE would ordinarily defer dredging until the state alters its position or agrees to fund the difference between the cost of the state's wishes and the cost of implementing the federal standard. While 33 CFR 337.8(b)(5) (Enclosure 2) also allows USACE to consider seeking Congressional appropriations to address state conditions exceeding the federal standard, this option has not been utilized, because the timing of the appropriations process is not always conducive to performing the work and sufficient funds are generally not available to cover USACE authorized dredging needs under the federal standard for all the navigation projects for which we are responsible for maintaining.

4. Guidance.

a. USACE regulations at 33 CFR 337.2(b)(2) (Enclosure 2) focus primarily on alternatives for the placement of dredged material, while not explicitly acknowledging the potential for other disagreements, such as disagreements regarding methods for conducting the dredging itself. However, such disagreements were contemplated in issuance of USACE dredging regulation, as reflected by (but not limited to) the regulation's discussion of potential disagreements between USACE and a state regarding compliance with the CZMA. The regulation in no way reflects any intent by USACE to take a fundamentally different approach regarding potential disagreements with states over dredging plans depending upon whether the disagreements arise under the CZMA or the CWA. In short, these disagreements can arise, and can be resolved under the regulation, regarding the method of dredging, the method or location of placement of the resulting dredged material, or both, as well as any other aspect of USACE dredging and dredged material placement plan. Nevertheless, under the statutory mandate of the CZMA, USACE tries to make its dredging projects consistent with the "enforceable policies" of a federally-approved state coastal zone plan "to the maximum extent practicable," as required by the CZMA statute 16 USC 1456(c)(1)(A).

b. The 25 July 1978 memorandum from the Director of Civil Works in paragraphs 7 and 8 explains deferral of dredging as an option when state requirements exceed federal requirements. The language of that memo was codified in the dredging regulation at 33 CFR 337.2.

c. Section 337.2(b)(3) (Enclosure 2) provides that dredging "...may be deferred" if the CWA Section 401 state water quality certification (WQC) is denied. In the event of

such a denial, USACE effectively implements Section 337.2(b)(3) to reflect the fact that deferral of the dredging project is usually the only option that is available to USACE, as a practical matter, at least in the short run. This is because, absent a CWA Section 401 WQC (or waiver from the state, as allowed by CWA Section 401(a)(1)), USACE lacks a mandated legal prerequisite in order for USACE to place dredged material generated by a USACE dredging project in open waters regulated by the state.

d. Section 337.2(b)(3) provides that if the state denies the WQC, the project dredging "may be deferred," and in such a case, "a report ... will be forwarded ..." to HQUSACE. For purposes of USACE regulation, USACE effectively takes a WQC that includes conditions in excess of the federal standard as the equivalent of a denial of the WQC. When the state issues a WQC that the district engineer (DE) determines to be excessive of the federal standard, the DE should attempt to persuade the state either to accept the federal standard position or to pay for the excessive requirements. If the state does not accept either of those alternatives, the DE in most circumstances should defer dredging and determine if a report under 33 CFR 337.8 is needed. Routine deferral of maintenance dredging that does not involve significant adverse effects on national defense or international or interstate commerce usually does not rise to the threshold of a report unless the DE determines that further guidance from HQUSACE is needed.

e. Section 337.8 addresses "reports to higher echelons" and contemplates that such reports "may be necessary." This provision recognizes that there are a variety of potential reasons why a report to HQUSACE might be warranted, including reasons other than the WQC denial circumstance that is more directly anticipated in Section 337.2. It is important to note that Section 337.8 does not require such reports. The USACE regulations state that reports may be necessary "[w]hen the state denies or unreasonably delays a water quality certification or issues the certification with conditions or controls not related to maintenance or enforcement of state water quality standards or significantly exceeding the federal standard." As reflected in its language, including Section 337.8, the dredging regulation was written to authorize USACE Commanders in the field to make decisions about deferral of dredging because of disagreements with state governments. Annually, many USACE dredging projects are deferred as a routine course of fulfilling our navigation and budgetary responsibilities. Given the fact that Congress does not appropriate sufficient funds to allow USACE to perform maintenance dredging for every authorized navigation project, USACE often defers maintenance dredging for low commercial use projects where deferral of dredging would have local or regional impacts. Those deferrals are consistent with budget authority originating with the President's budget and the limitations imposed by appropriations provided by the Congress. USACE also defers less critical dredging on high and moderate commercial use projects, as well as for projects where the state has

not approved the USACE federal standard by using the state's authority under CWA Section 401 and/or the CZMA. At least in part, Section 337.8 is intended to address those projects where the state attempts to impose, but not pay for, requirements in excess of the federal standard. HQUSACE and the relevant USACE division office should be made aware of these situations.

f. Section 337.8(b) outlines what should be in a report and seeks information "which will aid in determining whether to further defer the dredging and seek congressional appropriations for the added expense..." This provision contemplates that there might be a few extreme circumstances where USACE will consider whether to approach Congress about additional funding to dredge with state conditions in excess of the federal standard. One such circumstance might be a case where a project involves national security or interstate navigation issues, and for which USACE might consider, at least initially, the seeking of special approval and funding for such excess costs rather than exercising the SA's override authority under Section 511(a)(2) or 404(t). Section 337.8(b) was never intended to come into play in more common situations, where there is no compelling basis for a state's requested changes to USACE federal standard dredging plan, other than that state's own local preference for those changes. It also is worth noting that USACE navigation budget has generally remained flat over the past 40 years. Increases in appropriations cover some of the costs of inflation and maintenance that has been deferred due to budgetary constraints. As a general rule, Operation and Maintenance (O&M) budget packages submitted by a USACE district or division that include requests for additional funds for state requirements that exceed the federal standard are not considered or funded during the budget deliberation process. In other words, even if special congressional approval were granted to allow USACE to ignore the federal standard regulation and spend funds on such excess costs, the use of funds for this purpose would still have to come at the expense of other federal navigation projects because the Congress typically does not increase the total USACE Civil Works appropriations specifically to fund state requirements in excess of the federal standard. The result would be that other dredging projects necessary for national defense or interstate or international navigation and commerce would suffer from lack of needed maintenance dredging, if scarce appropriated funds are diverted to pay for state demands that exceed the federal standard. That is why USACE dredging regulations prescribe deferral of dredging as USACE appropriate response for most circumstances where a state tries to use its authority under the CZMA or the CWA to insist that USACE fund requirements that the state wishes to impose in excess of the federal standard.

5. Compliance with the federal standard is mandatory for all USACE dredging projects unless prior coordination with Major Subordinate Commands and HQUSACE has been completed to obtain an exception to that requirement.

CECW-CO
SUBJECT: Federal Standard Clarification Regarding Federal Dredging Mission and Interactions with Non-Federal Agencies

6. Point of contact for this guidance is Mr. Joe Wilson, Senior Navigation Environmental Program Manager, at (202) 761-7697 or Joseph.R.Wilson@usace.army.mil. Legal questions relating to this subject should be directed to Mr. Lance D. Wood, Office of the Chief Counsel, at (202) 761-8556 or lance.d.wood@usace.army.mil.

Encls

STEVEN L. STOCKTON, P.E.
Director of Civil Works

DISTRIBUTION:
Commanders,
Great Lakes and Ohio River Division (CELRD-PDS-O)
Mississippi Valley Division (CEMVD-PD-KM)
North Atlantic Division (CENAD-PDS)
Northwestern Division (CENWD-PDS)
Pacific Ocean Division (CEPOD-PDC)
South Atlantic Division (CESAD-PDS)
South Pacific Division (CESPD-DDE)
Southwestern Division (CESWD-PDS-O)
Alaska District (CEPOA-CO)
Albuquerque District (CESWA-OD)
Baltimore District (CENAB-OP)
Buffalo District (CELRB-TD-OT)
Charleston District (CESAC-TS-O)
Chicago District (CELRC-TS-C)
Detroit District (CELRE-OT-T)
Fort Worth District (CESWF-OD)
Galveston District (CESWG-OD)
Honolulu District (CEPOH-EC)
Huntington District (CELRH-OR)
Jacksonville District (CESAJ-CO-O)
Kansas City District (CENWK-OD)
Little Rock District (CESWL-OP)
Los Angeles District (CESPL-CO)
Louisville District (CELRL-OP)
Memphis District (CEMVM-CO)
Mobile District (CESAM-OP)
Nashville District (CELRN-OP)
(CONT)

CECW-CO
SUBJECT: Federal Standard Clarification Regarding Federal Dredging Mission and Interactions with Non-Federal Agencies

DISTRIBUTION: (CONT)
New England District (CENAE-CO)
New Orleans District (CEMVN-OD)
New York District (CENAN-OP)
Norfolk District (CENAO-CO)
Omaha District (CENWO-OD)
Philadelphia District (CENAP-OP)
Pittsburgh District (CELRP-OR)
Portland District (CENWP-OP)
Rock Island District (CEMVR-OD)
Sacramento District (CESPK-CO)
San Francisco District (CESPN-OR)
Savannah District (CESAS-OP)
Seattle District (CENWS-OD)
St. Louis District (CEMVS-CO)
St. Paul District (CEMVP-CO)
Tulsa District (CESWT-OD)
Vicksburg District (CEMVK-OD)
Walla Walla District (CENWW-OD)
Wilmington District (CESAW-OP)

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314

Enclosure 1

REPLY TO ATTENTION OF:

25 JUL 1978

DAEN-GWO-M

SUBJECT: Maintenance Dredging Provisions of the Clean Water Act of 1977 (P.L. 95-217)

SEE DISTRIBUTION

1. The purpose of this letter is to provide guidance for complying with provisions of the Clean Water Act of 1977 (PL 95-217) that relate to maintenance dredging activities of the U. S. Army Corps of Engineers.

2. The 1977 Act has included a new subsection (t) in Section 404 of the Federal Water Pollution Control Act. This new section 404(t) authorizes any State to regulate, in accordance with its laws, the discharge of dredged material in any portion of the navigable waters within the jurisdiction of the State that results from maintenance dredging involving Corps of Engineers navigation projects. District Engineers should communicate with States that have statutory procedural or substantive requirements concerning the discharge of dredged material to determine what will be necessary for the Corps of Engineers to comply with such requirements as they apply to maintenance dredging involving Corps of Engineers navigation projects. States should be urged to work toward a reasonable phase-in program that recognizes the immediate needs of navigation, the limitations of FY 1978 and FY 1979 funds, and the desirability of tight scheduling to achieve the most economical use of dredging equipment and funding. States should be made aware of the inherent delay of obtaining additional Federal funds necessary for compliance with State requirements.

3. Prior to commencing maintenance dredging, District Engineers shall obtain State water quality certification, unless the State elects to waive its right to certify. Such certification is required by Section 401(a) of the Federal Water Pollution Control Act, as a part of a Section 404 evaluation still prescribed by 33 CFR 209.145. The State water quality certification is used by the State to indicate compliance with its water quality standards which must be as stringent as those prescribed by EPA's "red book" (Quality Criteria for Water). In addition, District Engineers shall obtain a State permit for the disposal of maintenance dredged material required by Section 404(t), unless such requirement is specifically waived in accordance with the provisions of Section 404(t) after the submission of a report in accordance with paragraph 8 of this letter.

4. The excavation phase of dredging is not subject to State authority unless a discharge of dredged material, such as re-entry into the water, occurs during the operation itself. Nonetheless, District Engineers should cooperate with any State that desires special controls on the excavation phase of Corps of Engineers maintenance dredging activities. Expenses for employing such additional special controls should, however, be assumed by the State if not required by application of the EPA guidelines prescribed in 40 CFR 230.

5. District Engineers should develop a dredged material disposal plan that meets the requirements of Section 404(b) Guidelines, State dredged material permit conditions and State water quality certification. When a State requires on-land disposal, but a Section 404(b) determination, through application of the EPA guidelines prescribed in 40 CFR 230 using the EPA "red book" (Quality Criteria for Water) does not require on-land disposal, District Engineers should proceed as follows. In those cases where the project authorization requires a local sponsor to provide suitable disposal areas, the local sponsor should be advised of the need for disposal areas; disposal areas must be made available by a sponsor before dredging proceeds. In other cases where there are no local sponsor requirements to provide disposal areas the State or a prospective local sponsor should be advised that unless the State or the sponsor provides suitable disposal areas, including necessary containment, the added Federal cost of providing these disposal areas will affect the priority of performing dredging on that project. In either case, States should be made aware that additional costs to meet State standards may cause the project to become economically unjustified in accordance with paragraph 7 below. State or local provision of disposal areas to improve the priority of the project would be in line with one of the President's new water policy initiatives announced 6 June 1978 to encourage greater non-Federal financial participation in water resources projects. A suitable disposal area is defined as one of adequate capacity within a reasonable distance of excavation capable of being utilized without adversely affecting the environment of the surrounding waterway. The Corps of Engineers will assume the increased dredged material handling costs associated with placing the material in the furnished sites. The Corps of Engineers will continue with the disposal programs authorized prior to enactment of the subject legislation (such as the diked disposal program authorized by PL 91-611) by placing only material classified under Federal standards as being appropriate for containment in such disposal facilities.

6. Maximum beneficial use of dredged material, such as use for beach nourishment, should be realized where possible, consistent with existing policy. However, if States impose beneficial dredged material uses as permit conditions, any additional expense associated with such provisions will be the responsibility of local interests.

7. District Engineers should evaluate funding requirements to provide for the increased cost of meeting State requirements relating to dredged material disposal, in accordance with existing policy as stated in Chapter 4, paragraph 4 of ER 11-2-101. Funds should be requested so that each waterway and harbor project will be adequately maintained consistent with the reasonable needs of existing commerce and traffic as long as the project remains economically justified. Increased costs to meet State requirements, including cost for such items as additional monitoring, sampling, and handling shall be added to project maintenance costs to determine if the total cost for performing maintenance remains economically justified. For the purpose of determining economic justification, costs will be compared with current traffic use, tonnage, drafts or other available indicators of project need. A determination not to request maintenance funds for a project because the expense exceeds the anticipated economic benefits of continued use of the improvement is consistent with the duty imposed on the Corps of Engineers to apply money appropriated for improvements of rivers and harbors as may be most economical and advantageous to the Federal Government and to discontinue appropriations for any river and harbor work which is deemed unworthy of further improvement (ref: Section 3 of the Act of August 11, 1888 (25 Stat. 423), as amended, (33 U.S.C. 622) and Section 7 of the Act of March 3, 1899 (30 Stat. 1150; 33 U.S.C. 549)). This responsibility is reinforced in Report No. 450, 83rd Congress, 1st Session on the Civil Functions, Department of the Army, Appropriations Bill, Fiscal Year 1954 as follows: "While the Federal Government may have an obligation to maintain navigable waterways, it has no such obligation to maintain those whose use is no longer economical."

8. No maintenance dredging will be performed unless disposal activities are in full compliance with State requirements. If District Engineers are unable to reach agreement with the States, or a State refuses to issue a water quality certificate, or disposal areas will not be provided in accordance with paragraph 5, project dredging will be deferred and a report of facts shall be forwarded to HQDA (DAEN-CWO-M) WASH DC 20314. The report should include justification showing the economic need for dredging, the impact on States outside the permitting jurisdiction if the project is not dredged, a description and estimated cost of State requirements which are additional to Section 404(b) guidelines and/or EPA water quality criteria and the relative urgency of dredging based on threat to national security, life or property. The report should also contain any other facts which will aid in determining whether to further defer the dredging, the priority of the project compared to other national

25 JUL 1978

DAEN-CWO-M
SUBJECT: Maintenance Dredging Provisions of the Clean Water Act of 1977 (P.L. 95-217)

requirements, and the need to obtain a waiver of State requirements pursuant to Section 404(t) and Section 511(a) of the Federal Water Pollution Control Act.

FOR THE CHIEF OF ENGINEERS:

CHARLES I. McGINNIS
Major General, USA
Director of Civil Works

DISTRIBUTION:
Division Engineer, New England
Division Engineer, North Atlantic
Division Engineer, South Atlantic
Division Engineer, Lower Mississippi Valley
Division Engineer, Southwestern
Division Engineer, Missouri River
Division Engineer, Ohio River
Division Engineer, North Central
Division Engineer, South Pacific
Division Engineer, Pacific Ocean
Division Engineer, North Pacific

AUTHORITY: 33 U.S.C. 1344; 33 U.S.C. 1413.

SOURCE: 53 FR 14911, Apr. 26, 1988, unless otherwise noted.

33 CFR Part 335 - OPERATION AND MAINTENANCE OF ARMY CORPS OF ENGINEERS CIVIL WORKS PROJECTS INVOLVING THE DISCHARGE OF DREDGED OR FILL MATERIAL INTO WATERS OF THE U.S. OR OCEAN WATERS

§ 335.1 Purpose.
This regulation prescribes the practices and procedures to be followed by the Corps of Engineers to ensure compliance with the specific statutes governing Army Civil Works operations and maintenance projects involving the discharge of dredged or fill material into waters of the U.S. or the transportation of dredged material for the purpose of disposal into ocean waters. These practices and procedures should be employed throughout the decision/management process concerning methodologies and alternatives to be used to ensure prudent operation and maintenance activities.

§ 335.2 Authority.
Under authority delegated from the Secretary of the Army and in accordance with section 404 of the Clean Water Act of 1977 (CWA) and section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972, hereinafter referred to as the Ocean Dumping Act (ODA), the Corps of Engineers regulates the discharge of dredged or fill material into waters of the United States and the transportation of dredged material for the purpose of disposal into ocean waters. Section 404 of the CWA requires public notice with opportunity for public hearing for discharges of dredged or fill material into waters of the U.S. and that discharge sites can be specified through the application of guidelines developed by the Administrator of the Environmental Protection Agency (EPA) in conjunction with the Secretary of the Army. Section 103 of the ODA requires public notice with opportunity for public hearing for the transportation for disposal of dredged material for disposal in ocean waters. Ocean disposal of dredged material must be evaluated using the criteria developed by the Administrator of EPA in consultation with the Secretary of the Army. Section 103(e) of the ODA provides that the Secretary of the Army may, in lieu of permit procedures, issue regulations for Federal projects involving the transportation of dredged material for ocean disposal which require the application of the same criteria, procedures, and requirements which apply to the issuance of permits. Similarly, the Corps does not issue itself a CWA permit to authorize Corps discharges of dredged material or fill material into U.S. waters, but does apply the 404(b)(1) guidelines and other substantive requirements of the CWA and other environmental laws.

§ 335.3 Applicability.
This regulation (33 CFR parts 335 through 338) is applicable to the Corps of Engineers when undertaking operation and maintenance activities at Army Civil Works projects.

§ 335.4 Policy.
The Corps of Engineers undertakes operations and maintenance activities where appropriate and environmentally acceptable. All practicable and reasonable alternatives are fully considered on an equal basis. This includes the discharge of dredged or fill material into waters of the U.S. or ocean waters in the least costly manner, at the least costly and most practicable location, and consistent with engineering and environmental requirements.

§ 335.5 Applicable laws.
(a) The Clean Water Act (33 U.S.C. 1251*et seq.*) (also known as the Federal Water Pollution Control Act Amendments of 1972, 1977, and 1987).

(b) The Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1401*et seq.*) (commonly referred to as the Ocean Dumping Act (ODA)).

§ 335.6 Related laws and Executive Orders.
(a) The National Historic Preservation Act of 1966 (16 U.S.C. 470a*et seq.*), as amended.
(b) The Reservoir Salvage Act of 1960 (16 U.S.C. 469), as amended.
(c) The Endangered Species Act (16 U.S.C. 1531*et seq.*), as amended.
(d) The Estuary Protection Act (16 U.S.C. 1221).
(e) The Fish and Wildlife Coordination Act (16 U.S.C. 661*et seq.*), as amended.
(f) The National Environmental Policy Act (42 U.S.C. 4341*et seq.*), as amended.
(g) The Wild and Scenic Rivers Act (16 U.S.C. 1271*et seq.*) as amended.
(h) Section 307(c) of the Coastal Zone Management Act of 1976 (16 U.S.C. 1456 (c)), as amended.
(i) The Water Resources Development Act of 1976 (Pub. L. 94-587).
(j) Executive Order 11593, *Protection and Enhancement of the Cultural Environment,* May 13, 1971, (36 FR 8921, May 15, 1971).
(k) Executive Order 11988, *Floodplain Management,* May 24, 1977, (42 FR 26951, May 25, 1977).
(l) Executive Order 11990, *Protection of Wetlands,* May 24, 1977, (42 FR 26961, May 25, 1977).
(m) Executive Order 12372, *Intergovernmental Review of Federal Programs,* July 14, 1982, (47 FR 3959, July 16, 1982).
(n) Executive Order 12114, *Environmental Effects Abroad of Major Federal Actions,* January 4, 1979.

§ 335.7 Definitions.
The definitions of 33 CFR parts 323, 324, 327, and 329 are hereby incorporated. The following terms are defined or interpreted from parts 320 through 330 for purposes of 33 CFR parts 335 through 338.

Beach nourishment means the discharge of dredged or fill material for the purpose of replenishing an eroded beach or placing sediments in the littoral transport process.

Emergency means a situation which would result in an unacceptable hazard to life or navigation, a significant loss of property, or an immediate and unforeseen significant economic hardship if corrective action is not taken within a time period less than the normal time needed under standard procedures.

Federal standard means the dredged material disposal alternative or alternatives identified by the Corps which represent the least costly alternatives consistent with sound engineering practices and meeting the environmental standards established by the 404(b)(1) evaluation process or ocean dumping criteria.

Navigable waters of the U.S. means those waters of the U.S. that are subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or are presently used, have been used in the past, or may be susceptible to use with or without reasonable improvement to transport interstate or foreign commerce. A more complete definition is provided in 33 CFR part 329. For the purpose of this regulation, the term also includes the confines of Federal navigation approach channels extending into ocean waters beyond the territorial sea which are used for interstate or foreign commerce.

Practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Statement of Findings (SOF) means a comprehensive summary compliance document signed by the district engineer after completion of appropriate environmental documentation and public involvement.

Territorial sea means the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, extending seaward a distance of three miles as described in the convention on the territorial sea and contiguous zone, 15 U.S.T. 1606.

33 CFR Part 336 - FACTORS TO BE CONSIDERED IN THE EVALUATION OF ARMY CORPS OF ENGINEERS DREDGING PROJECTS INVOLVING THE DISCHARGE OF DREDGED MATERIAL INTO WATERS OF THE U.S. AND OCEAN WATERS

§ 336.0 General.
Since the jurisdiction of the CWA extends to all waters of the U.S., including the territorial sea, and the jurisdiction of the ODA extends over ocean waters including the territorial sea, the following rules are established to assure appropriate regulation of discharges of dredged or fill material into waters of the U.S. and ocean waters.

(a) The disposal into ocean waters, including the territorial sea, of dredged material excavated or dredged from navigable waters of the U.S. will be evaluated by the Corps in accordance with the ODA.
(b) In those cases where the district engineer determines that the discharge of dredged material into the territorial sea would be for the primary purpose of fill, such as the use of dredged material for beach nourishment, island creation, or construction of underwater berms, the discharge will be evaluated under section 404 of the CWA.
(c) For those cases where the district engineer determines that the materials proposed for discharge in the territorial sea would not be adequately evaluated under the section 404(b)(1) guidelines of the CWA, he may evaluate that material under the ODA.

§ 336.1 Discharges of dredged or fill material into waters of the U.S.
(a)*Applicable laws.*Section 404 of the CWA governs the discharge of dredged or fill material into waters of the U.S. Although the Corps does not process and issue permits for its own activities, the Corps authorizes its own discharges of dredged or fill material by applying all applicable substantive legal requirements, including public notice, opportunity for public hearing, and application of the section 404(b)(1) guidelines.
(1) The CWA requires the Corps to seek state water quality certification for discharges of dredged or fill material into waters of the U.S.
(2) Section 307 of the Coastal Zone Management Act (CZMA) requires that certain activities that a Federal agency conducts or supports be consistent with the Federally-approved state management plan to the maximum extent practicable.
(b)*Procedures.* If changes in a previously approved disposal plan for a Corps navigation project warrant re-evaluation under the CWA, the following procedures should be followed by district enginers prior to discharging dredged material into waters of the U.S. except where emergency action as described in § 337.7 of this chapter is required.
(1) A public notice providing opportunity for a public hearing should be issued at the earliest practicable time. The public notification procedures of § 337.1 of this chapter should be followed.
(2) The public hearing procedures of 33 CFR part 327 should be followed.
(3) As soon as practicable, the district engineer will request from the state a 401 water quality certification and, if applicable, provide a coastal zone consistency determination for the Corps activity using the procedures of § 336.1(b) (8) and (9), respectively, of this part.

(4) Discharges of dredged material will be evaluated using the guidelines authorized under section 404(b)(1) of the CWA, or using the ODA regulations, where appropriate. If the guidelines alone would prohibit the designation of a proposed discharge site, the economic impact on navigation and anchorage of the failure to use the proposed discharge site will also be considered in evaluating whether the proposed discharge is to be authorized under CWA section 404(b)(2).
(5) The EPA Administrator can prohibit or restrict the use of any defined area as a discharge site under 404(c) whenever he determines, after notice and opportunity for public hearing and after consultation with the Secretary of the Army, that the discharge of such materials into such areas will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas, wildlife, or recreation areas. Upon notification of the prohibition of a discharge site by the Administrator the district engineer will complete the administrative processing of the proposed project up to the point of signing the Statement of Findings (SOF) or Record of Decision (ROD). The unsigned SOF or ROD along with a report described in § 337.8 of this chapter will be forwarded through the appropriate Division office to the Dredging Division, Office of the Chief of Engineers.
(6) In accordance with the National Environmental Policy Act (NEPA), and the regulations of the Council on Environmental Quality (40 CFR parts 1500-1508), an Environmental Impact Statement (EIS) or Environmental Assessment (EA) will be prepared for all Corps of Engineers projects involving the discharge of dredged or fill material, unless such projects are included within a categorical exclusion found at 33 CFR part 230 or addressed within an existing EA or EIS. If a proposed maintenance activity will result in a deviation in the operation and maintenance plan as described in the EA or EIS, the district engineer will determine the need to prepare a new EA, EIS, or supplement. If a new EA, EIS, or supplement is required, the procedures of 33 CFR part 230 will be followed.
(7) If it can be anticipated that related work by other Federal or non-Federal interests will occur in the same area as Corps projects, the district engineer should use all reasonable means to include it in the planning, processing, and review of Corps projects. Related work normally includes, but is not necessarily limited to, maintenance dredging of approach channels and berthing areas connected to Federal navigation channels. The district engineer should coordinate the related work with interested Federal, state, regional, and local agencies and the general public at the same time he does so for the Corps project. The district engineer should ensure that related work meets all substantive and procedural requirements of 33 CFR parts 320 through 330. Documents covering Corps maintenance activities normally should also include an appropriate discussion of ancillary maintenance work. District engineers should assist local interests to obtain from the state any necessary section 401 water quality certification and, if required, the section 307 coastal zone consistency concurrence. The absence of such certification or concurrence by the state or the denial of a Corps permit for related work shall not be cause for delay of the Federal project. Local sponsors will be responsible for funding any related work. If permitting of the related work complies with all legal requirements and is not contrary to the public interest, section 10, 404, and 103 permits normally will be issued by the district engineer in a separate SOF or ROD. Authorization by nationwide or regional general permit may be appropriate. If the related work does not receive a necessary state water quality certification and/or CZMA consistency concurrence, or are determined to be contrary to the public interest the district engineer should re-examine the project viability to ensure that continued maintenance is warranted.
(8)*State water quality certification:* Section 401 of the CWA requires the Corps to seek state water quality certification for dredged material disposal into waters of the U.S. The state certification request must be processed to a conclusion by the state within a reasonable period of time. Otherwise, the certification requirements of section 401 are deemed waived. The district engineer will request water quality certification from the state at the earliest practicable time using the following procedures:
(i) In addition to the Corps section 404 public notice, information and data demonstrating compliance with state water quality standards will be provided to the state water quality certifying agency along with the request for water quality certification. The information and data may be included within the 404(b)(1) evaluation. The district engineer will request water quality certification to be consistent with

the maintenance dredging schedule for the project. Submission of the public notice, including information and data demonstrating compliance with the state water quality standards, will constitute a valid water quality certification request pursuant to section 401 of the CWA.
(ii) If the proposed disposal activity may violate state water quality standards, after consideration of disposal site dilution and dispersion, the district engineer will work with the state to acquire data to satisfy compliance with the state water quality standards. The district engineer will use the technical manual "Management Strategy for Disposal of Dredged Material: Contaminant Testing and Controls" or its appropriate updated version as a guide for developing the appropriate tests to be conducted on such dredged material.
(iii) If the state does not take final action on a request for water quality certification within two months from the date of the initial request, the district engineer will notify the state of his intention to presume a waiver as provided by section 401 of the CWA. If the state agency, within the two-month period, requests an extension of time, the district engineer may approve one 30-day extension unless, in his opinion, the magnitude and complexity of the information contained in the request warrants a longer or additional extension period. The total period of time in which the state must act should not exceed six months from the date of the initial request. Waiver of water quality certification can be conclusively presumed after six months from the date of the initial request.
(iv) The procedures of § 337.2 will be followed if the district engineer determines that the state data acquisition requirements exceed those necessary in establishment of the Federal standard.
(9)*State coastal zone consistency:* Section 307 of the CZMA requires that activities subject to the CZMA which a Federal agency conducts or supports be consistent with the Federally approved state management program to the maximum extent practicable. The state is provided a reasonable period of time as defined in § 336.1(b)(9)(iv) to take final action on Federal consistency determinations; otherwise state concurrence can be presumed. The district engineer will provide the state a consistency determination at the earliest practicable time using the following procedures:
(i) The Corps section 404 public notice and any additional information that the district engineer determines to be appropriate will be provided the state coastal zone management agency along with the consistency determination. The consistency determination will consider the maintenance dredging schedule for the project. Submission of the public notice and, as appropriate, any additional information as determined by the district engineer will constitute a valid coastal zone consistency determination pursuant to section 307 of the CZMA.
(ii) If the district engineer decides that a consistency determination is not required for a Corps activity, he may provide the state agency a written determination that the CZMA does not apply.
(iii) The district engineer may provide the state agency a general consistency determination for routine or repetitive activities.
(iv) If the state fails to provide a response within 45 days from receipt of the initial consistency determination, the district engineer will presume state agency concurrence. If the state agency, within the 45-day period, requests an extension of time, the district engineer will approve one 15-day extension unless, in his opinion, the magnitude and complexity of the information contained in the consistency determination warrants a longer or additional extension period. The longer or additional extension period shall not exceed six months from the date of the initial consistency determination.
(v) If the district engineer determines that the state recommendations to achieve consistency to the maximum degree practicable exceed either his authority or funding for a proposed dredging or disposal activity, he will so notify the state coastal zone management agency indicating that the Corps has complied to the maximum extent practicable with the state's coastal zone management program. If the district engineer determines that state recommendations to achieve consistency to the maximum degree practicable do not exceed his authority or funding but, nonetheless, are excessive, he will follow the procedures of § 337.2.
(c)*Evaluation factors.* The following factors will be used, as appropriate, to evaluate the discharge of dredged material into waters of the U.S. Other relevant factors may also be evaluated, as needed.
(1)*Navigation and Federal standard.* The maintenance of a reliable Federal navigation system is essential to the economic well-being and national defense of the country. The district engineer will give full consideration to the impact of the failure to maintain navigation channels on the national

and, as appropriate, regional economy. It is the Corps' policy to regulate the discharge of dredged material from its projects to assure that dredged material disposal occurs in the least costly, environmentally acceptable manner, consistent with engineering requirements established for the project. The environmental assessment or environmental impact statement, in conjunction with the section 404(b)(1) guidelines and public notice coordination process, can be used as a guide in formulating environmentally acceptable alternatives. The least costly alternative, consistent with sound engineering practices and selected through the 404(b)(1) guidelines or ocean disposal criteria, will be designated the Federal standard for the proposed project.

(2)*Water quality.* The 404(b)(1) guidelines at 40 CFR part 230 and ocean dumping criteria at 40 CFR part 220 implement the environmental protection provisions of the CWA and ODA, respectively. These guidelines and criteria provide general regulatory guidance and objectives, but not a specific technical framework for evaluating or managing contaminated sediment that must be dredged. Through the section 404(b)(1) evaluation process (or ocean disposal criteria for the territorial sea), the district engineer will evaluate the water quality impacts of the proposed project. The evaluation will include consideration of state water quality standards. If the district engineer determines the dredged material to be contaminated, he will follow the guidance provided in the most current published version of the technical manual for contaminant testing and controls. This manual is currently cited as: Francingues, N.R., Jr., et al. 1985. “Management Strategy for Disposal of Dredged Material: Contaminant Testing and Controls,” Miscellaneous Paper D-85-1, U.S. Army Waterways Experiment Station, Vicksburg, Mississippi. The procedures of § 336.1(b)(8) will be followed for state water quality certification requests.

(3)*Coastal zone consistency.* As appropriate, the district engineer will determine whether the proposed project is consistent with the state coastal zone management program to the maximum extent practicable. The procedures of § 336.1(b)(9) will be followed for coastal zone consistency determinations.

(4)*Wetlands.* Most wetland areas constitute a productive and valuable public resource, the unnecessary alteration or destruction of which should be discouraged as contrary to the public interest. The district engineer will, therefore, follow the guidance in 33 CFR 320.4(b) and EO 11990, dated May 24, 1977, when evaluating Corps operations and maintenance activities in wetlands.

(5)*Endangered species.* All Corps operations and maintenance activities will be reviewed for the potential impact on threatened or endangered species, pursuant to the Endangered Species Act of 1973. If the district engineer determines that the proposed activity will not affect listed species or their critical habitat, a statement to this effect should be included in the public notice. If the proposed activity may affect listed species or their critical habitat, appropriate discussions will be initiated with the U.S. Fish and Wildlife Service or National Marine Fisheries Service, and a statement to this effect should be included in the public notice. (See 50 CFR part 402).

(6)*Historic resources.* Archeological, historical, or architectural resource surveys may be required to locate and identify previously unrecorded historic properties in navigation channels and at dredged or fill material disposal sites. If properties that may be historic are known or found to exist within the navigation channel or proposed disposal area, field testing and analysis may sometimes be necessary in order to evaluate the properties against the criteria of the National Register of Historic Places. Such testing should be limited to the amount and kind needed to determine eligibility for the National Register; more detailed and extensive work on a property may be prescribed later, as the outcome of review under section 106 of the National Historic Preservation Act. Historic properties are not normally found in previously constructed navigation channels or previously used disposal areas. Therefore, surveys to identify historic properties should not be conducted for maintenance dredging and disposal activities proposed within the boundaries of previously constructed navigation channels or previously used disposal areas unless there is good reason to believe that historic properties exist there.

(i) The district engineer will establish whether historic properties located in navigation channels or at disposal sites are eligible for inclusion in the National Register of Historic Places in accordance with applicable regulations of the Advisory Council on Historic Preservation and the Department of the Interior.

(ii) The district engineer will take into account the effects of any proposed actions on properties included in or eligible for inclusion in the National Register of Historic Places, and will request the comments of the Advisory Council on Historic Preservation, in accordance with applicable regulations of the Advisory Council on Historic Preservation.

(7)*Scenic and recreational values.*

(i) Maintenance dredging and disposal activities may involve areas which possess recognized scenic, recreational, or similar values. Full evaluation requires that due consideration be given to the effect which dredging and disposal of the dredged or fill material may have on the enhancement, preservation, or development of such values. Recognition of these values is often reflected by state, regional, or local land use classification or by similar Federal controls or policies. Operations and maintenance activities should, insofar as possible, be consistent with and avoid adverse effects on the values or purposes for which such resources have been recognized or set aside, and for which those classifications, controls, or policies were established. Special consideration must be given to rivers named in section 3 of the Wild and Scenic Rivers Act and those proposed for inclusion as provided by section 4 and 5 of the Act, or by later legislation.

(ii) Any other areas named in Acts of Congress or Presidential Proclamations, such as National Rivers, National Wilderness Areas, National Seashores, National Parks, and National Monuments, should be given full consideration when evaluating Corps operations and maintenance activities.

(8)*Fish and wildlife.*

(i) In those cases where the Fish and Wildlife Coordination Act (FWCA) applies, district engineers will consult, through the public notification process, with the Regional Directors of the U.S. Fish and Wildlife Service and the National Marine Fisheries Service and the head of the agency responsible for fish and wildlife for the state in which the work is to be performed, with a view to the conservation of fish and wildlife resources by considering ways to prevent their direct and indirect loss and damage due to the proposed operation and maintenance activity. The district engineer will give full consideration to these views on fish and wildlife conservation in evaluating the activity. The proposed operations may be modified in order to lessen the damage to such resources. The district engineer should include such justifiable means and measures for fish and wildlife resources that are found to be appropriate. Corps funding of Fish and Wildlife Service activities under the Transfer of Funds Agreement between the Fish and Wildlife Service and the Corps is not applicable for Corps operation and maintenance projects.

(ii) District engineers should consider ways of reducing unavoidable adverse environmental impacts of dredging and disposal activities. The determination as to the extent of implementation of such measures will be done by the district engineer after weighing the benefits and detriments of the maintenance work and considering applicable environmental laws, regulations, and other relevant factors.

(9)*Marine sanctuaries.* Operations and maintenance activities involving the discharge of dredged or fill material in a marine sanctuary established by the Secretary of Commerce under authority of section 302 of the ODA should be evaluated for the impact on the marine sanctuary. In such a case, certification should be obtained from the Secretary of Commerce that the proposed project is consistent with the purposes of Title III of the ODA and can be carried out within the regulations promulgated by the Secretary of Commerce to control activities within the marine sanctuary.

(10)*Other state requirements.* District engineers will make all reasonable efforts to comply with state water quality standards and Federally approved coastal zone programs using the procedures of §§ 336.1(b) (8), (9), and 337.2. District engineers should not seek state permits or licenses unless authorized to do so by a clear, explicit, and unambiguous Congressional waiver of Federal sovereign immunity, giving the state authority to impose that requirement on Federal activities (e.g., CWA sections 401 and 404(t), and CZMA section 307 (c)(1) and (c)(2)).

(11)*Additional factors.* In addition to the factors described in paragraphs (c)(1) through (9) of this section, the following factors should also be considered.

(i) The evaluation of Corps operations and maintenance activities involving the discharge of dredged or fill material into waters of the U.S. is a continuing process and should proceed concurrently with the processing of state water quality certification and, if required, the provision of a coastal zone

consistency determination to the state. If a local agency having jurisdiction over or concern with the particular activity comments on the project through the public notice coordination, due consideration should be given to those official views as a reflection of local factors.
(ii) Where officially adopted state, regional, or local land use classifications, determinations, or policies are applicable, they normally will be presumed to reflect local views and will be considered in addition to other national factors.

§ 336.2 Transportation of dredged material for the purpose of disposal into ocean waters.
(a)*Applicable law.* Section 103(a) of the ODA provides that the Corps of Engineers may issue permits, after notice and opportunity for public hearing, for the transportation of dredged material for disposal into ocean waters.
(b)*Procedures.* The following procedures will be followed by district engineers for dredged material disposal into ocean waters except where emergency action as described in § 337.7 of this chapter is required.
(1) In accordance with the provisions of section 103 of the ODA, the district engineer should issue a public notice giving opportunity for public hearing, following the procedures described in § 337.1 of this chapter for Corps operation and maintenance activities involving disposal of dredged material in ocean waters, as well as dredged material transported through the territorial sea for ocean disposal.
(2) The public hearing procedures of 33 CFR part 327 should be followed.
(c)*State permits and licenses.* The terms and legislative history of the ODA leave some doubt regarding whether a state has legal authority to exert control over ocean dumping activities of the Corps in the territorial sea covered under the Act (see section 106(d)). Notwithstanding this legal question, the Corps will voluntarily as a matter of comity apply for state section 401 water quality certification and determine consistency with a Federally-approved coastal zone management plan for Corps ocean disposal of dredged material within the three-mile extent of the territorial sea. Moreover, the Corps will attempt to comply with any reasonable requirement imposed by a state in the course of the 401 certification process or the CZMA consistency determination process. Nevertheless, the Corps reserves its legal rights regarding any case where a state unreasonably denies or conditions a 401 water quality certification for proposed Corps ocean disposal of dredged material within the limits of the territorial sea, or asserts that such disposal would not be consistent with an approved state CZMA plan. If such a circumstance arises, the district engineer shall so notify the division engineer who then decides on consultation with CECW-D, CECW-Z, and CECC-E for purposes of determining the Corps of Engineers' appropriate response and course of action.
(d)*Evaluation factors.*
(1) In addition to the appropriate evaluation factors of § 336.1(c), activities involving the transportation of dredged material for the purpose of disposal in ocean waters will be evaluated by the Corps to determine whether the proposed disposal will unreasonably degrade or endanger human health, welfare, or amenities, or the marine environment, ecological systems or economic potentialities. In making this evaluation, the district engineer, in addition to considering the criteria developed by EPA on the effects of the dumping, will also consider navigation, economic and industrial development, and foreign and domestic commerce, as well as the availability of alternatives to ocean disposal, in determining the need for ocean disposal of dredged material. Where ocean disposal is determined to be appropriate, the district engineer will, to the extent feasible, specify disposal sites which have been designated by the Administrator pursuant to section 102(c) of the ODA.
(2) As provided by the EPA regulations at 40 CFR 225.2(b-e) for implementing the procedures of section 102 of the ODA, the regional administrator of EPA may make an independent evaluation of dredged material disposal activities regulated under section 103 of the ODA related to the effects of dumping. The EPA regulations provide that the regional administrator make said evaluation within 15 days after receipt of all requested information. The regional administrator may request from the district engineer an additional 15-day period for a total of to 30 days. The EPA regulations provide that the regional administrator notify the district engineer of non-compliance with the environmental

impact criteria or with any restriction relating to critical areas on the use of an EPA recommended disposal site designated pursuant to section 102(c) of the ODA. In cases where the regional administrator has notified the district engineer in writing that the proposed disposal will not comply with the criteria related to the effects of dumping or related to critical area restriction, no dredged material disposal may occur unless and until the provisions of 40 CFR 225.3 are followed and the Administrator grants a waiver of the criteria pursuant to section 103(d) of the ODA.
(3) If the regional administrator advises the district engineer that the proposed disposal will comply with the criteria, the district engineer will complete the administrative record and sign the SOF.
(4) In situations where an EPA-designated site is not feasible for use or where no site has been designated by the EPA, the district engineer, in accordance with the ODA and in consultation with EPA, may select a site pursuant to section 103. Appropriate NEPA documentation should be used to support site selections. District engineers should address site selection factors in the NEPA document. District engineers will consider the criteria of 40 CFR parts 227 and 228 when selecting ocean disposal sites, as well as other technical and economic considerations. Emphasis will be placed on evaluation to determine the need for ocean disposal and other available alternatives. Each alternative should be fully considered on an equal basis, including the no dredging option.
(5) If the regional administrator advises the district engineer that a proposed ocean disposal site or activity will not comply with the criteria, the district engineer should proceed as follows.
(i) The district engineer should determine whether there is an economically feasible alternative method or site available other than the proposed ocean disposal site. If there are other feasible alternative methods or sites available, the district engineer will evaluate the engineering and economic feasibility and environmental acceptability of the alternative sites.
(ii) If the district engineer makes a determination that there is no economically feasible alternative method or site available, he will so advise the regional administrator of his intent to proceed with the proposed action setting forth his reasons for such determination.
(iii) If the regional administrator advises, within 15 days of the notice of the intent to issue, that he will commence procedures specified by section 103(c) of the ODA to prohibit use of a proposed disposal site, the case will be forwarded through the respective Division office and CECW-D to the Secretary of the Army or his designee for further coordination with the Administrator of EPA and final resolution. The report forwarding the case should be in the format described in § 337.8 of this chapter.
(iv) The Secretary of the Army or his designee will evaluate the proposed project and make a final determination on the proposed disposal. If the decision of the Secretary of the Army or his designee is that ocean disposal at the proposed site is required because of the unavailability of economically feasible alternatives, he will seek a waiver from the Administrator, EPA, of the criteria or of the critical site designation in accordance with section 103(d) of the ODA.

33 CFR Part 337 - PRACTICE AND PROCEDURE

§ 337.0 Purpose.
The practices and procedures part of this regulation apply to all Corps operations and maintenance activities involving the discharge of dredged or fill material in waters of the U.S. and ocean waters and related activities of local interests accomplished to ensure continued functions of constructed Corps projects.

§ 337.1 Public notice.
Presently, public notification of proposed discharges of dredged or fill material is required by the provisions of section 103 of the ODA and sections 401 and 404 of the CWA. District engineers are encouraged to develop procedures to avoid unnecessary duplication of state agency procedures. Joint public notification procedures should be a primary factor in the development of Memoranda of Agreement with the states as described in § 337.4.

(a) With the possible exception of emergency actions as discussed in § 337.7, the district engineer should issue a public notice for projects involving the discharge of dredged or fill material into waters of the U.S. or ocean waters unless the project is authorized by a general permit. Public notices for Corps operation and maintenance activities are normally issued for an indefinite period of time and are not reissued unless changes in the disposal plan warrant re-evaluation under section 404 of the CWA or section 103 of the ODA. The public notice is the primary method of advising all interested parties of Federal projects and of soliciting comments and information necessary to evaluate the probable impact of the discharge of dredged or fill material into waters of the U.S. or ocean waters. The notice should, therefore, include sufficient information to provide a clear understanding of the nature of the activity and related activities of local interests in order to generate meaningful comments. A single public notice may be used for more than one project in appropriate cases. The notice normally should include the following items:
(1) The name and location of the project and proposed disposal site.
(2) A general description of the project and a description of the estimated type, composition, and quantity of materials to be discharged, the proposed time schedule for the dredging activity, and the types of equipment and methods of dredging and conveyance proposed to be used.
(3) A sketch showing the location of the project, including depth of water in the area and all proposed discharge sites.
(4) The nature, estimated amount, and frequency of known and anticipated related dredging and discharge to be conducted by others.
(5) A list of Federal, state, and local environmental agencies with whom the activity is being coordinated.
(6) A statement concerning a preliminary determination of the need for and/or availability of an environmental impact statement.
(7) Any other available information which may assist interested parties in evaluating the likely impact of the proposed activity, if any.
(8) A reasonable period of time, normally thirty days but not less than fifteen days from date of mailing except in emergency situations where the procedures of § 337.7 will be followed, within which interested parties may express their views concerning the proposed project.
(9) If the proposed Federal project would occur in the territorial seas or ocean waters, a description of the project's relationship to the baseline from which the territorial sea is measured.
(10) A statement on the status of state water quality certification under section 401 of the CWA.
(11) For activities requiring a determination of consistency with an approved state coastal zone management plan, the following information will be included in the notice:
(i) A statement on whether or not the proposed activity will be undertaken in a manner consistent to the maximum extent practicable with the state management program.
(ii) Sufficient information to support the consistency determination to include associated facilities and their coastal zone effect.
(iii) Data and supporting information commensurate with the expected effects of the activity on the coastal zone.
(12) A statement on historic resources, state of present knowledge, likelihood of damage or other adverse effect on such resources, etc.
(13) A statement on endangered species.
(14) A statement on evaluation factors to be considered, adapted from that presented at 33 CFR 325.3(b).
(15) The name, address, and telephone number of the Corps employee from whom additional information concerning the project may be obtained.
(16) The signature of the district engineer or his designee on all maintenance dredged material disposal public notices.
(17) For activities regulated under section 103 of the ODA, the following additional information should be integrated into the public notice:
(i) A statement on the designation status of the disposal site.

(ii) If the proposed disposal site is not a designated site, a description of the characteristics of the proposed disposal site and an explanation as to why no previously designated disposal site is feasible.
(iii) A brief description of known dredged material discharges at the proposed disposal site.
(iv) Existence and documented effects of other authorized disposals that have been made at the disposal area.
(v) An estimated length of time during which disposal would continue at the proposed site.
(vi) Information on the characteristics and composition of the dredged material, and the following paragraph:
The proposed transportation of this dredged material for disposing of it in ocean waters is being evaluated to determine that the proposed disposal will not unreasonably degrade or endanger human health, welfare, or amenities or the marine environment, ecological systems, or economic potentialities. In making this determination, the criteria established by the Administrator, EPA pursuant to section 102(a) of the ODA, will be applied. In addition, based upon an evaluation of the potential effect which the failure to utilize this ocean disposal site will have on navigation, economic and industrial development, and foreign and domestic commerce of the United States, an independent determination will be made of the need to dispose of the dredged material in ocean waters, other possible methods of disposal, and other appropriate locations.

(b) The following statement should be included in the public notices:
Any person who has an interest which may be affected by the disposal of this dredged material may request a public hearing. The request must be submitted in writing to the district engineer within the comment period of this notice and must clearly set forth the interest which may be affected and the manner in which the interest may be affected by this activity.

(c) Public notices should be distributed as described in 33 CFR 325.3(c). In addition, public notices should be sent to CECW-D, Office of the Chief of Engineers, Washington, DC 20314, if the project involves the discharge of dredged material in waters of the U.S. or ocean waters. District engineers should also develop, as appropriate, regional mailing lists for Corps maintenance dredging and disposal activities to the extent that property owners adjacent to the navigation channel and disposal area are notified of the proposed activity. In order to effect compliance with Executive Order 12372, district engineers should provide copies of public notices to concerned state and local elected officials.
(d) The district engineer should consider all comments received in response to the public notice in his subsequent actions. All comments expressing objections to or raising questions about the project should be acknowledged. Comments received as form letters or petitions, however, may be acknowledged as a group to the person or organization responsible for the form letter or petition. If comments are received which relate to matters within the special expertise of another agency, the district engineer may seek the advice of that agency. The receipt of comments as a result of the public notice normally should not extend beyond the stated comment period; however, at his discretion, the district engineer may provide an extension.
(e) Notices sent to several agencies within the same state may result in conflicting comments from those agencies. Many states have designated a state agency or individual to provide a single and coordinated state position regarding Federal activities. Where a state has not so designated a single source, the district engineer, as appropriate, may seek from the Governor an expression of his views and desires concerning the proposed and subsequent similar projects.
(f) All comments received from the public notice coordination should be considered in the public interest review process. Comments received from Federal or state agencies which are within the area of expertise of another agency will be communicated with that other agency if the district engineer needs the information to make a final determination on the proposed project.

§ 337.2 State requirements.

The procedures of this section should be followed in implementing state requirements.

(a) District engineers should cooperate to the maximum extent practicable with state agencies to prevent violation of Federally approved state water quality standards and to achieve consistency to the maximum degree practicable with an approved coastal zone management program.
(b) If the state agency imposes conditions or requirements which exceed those needed to meet the Federal standard, the district engineer should determine and consider the state's rationale and provide to the state information addressing why the alternative which represents the Federal standard is environmentally acceptable. The district engineer will accommodate the state's concerns to the extent practicable. However, if a state agency attempts to impose conditions or controls which, in the district engineers opinion, cannot reasonably be accommodated, the following procedures will be followed.
(1) In situations where an agency requires monitoring or testing, the district engineer will strive to reach an agreement with the agency on a data acquisition program. The district engineer will use the technical manual “Management Strategy for Disposal of Dredged Material: Contaminant Testing and Controls” or its appropriate updated version as a guide for developing the appropriate tests to be conducted. If the agency insists on requirements which, in the opinion of the district engineer, exceed those required in establishment of the Federal standard, the agency will be asked to fund the difference in cost. If the agency agrees to fund the difference in cost, the district engineer will comply with the request. If the agency does not fund the additional cost, the district engineer will follow the guidance in paragraph (b) (3) of this section.
(2) When an agency requires special conditions or implementation of an alternative which the Federal standard does not, district engineers will proceed as follows: In those cases where the project authorization requires a local sponsor to provide suitable disposal areas, disposal areas must be made available by a sponsor before dredging proceeds. In other cases where there are no local sponsor requirements to provide disposal areas, the state or the prospective local sponsor will be advised that, unless the state or the sponsor provides suitable disposal areas, the added Federal cost of providing these disposal areas will affect the priority of performing dredging on that project. In either case, states will be made aware that additional costs to meet state standards or the requirements of the coastal zone management program which exceed those necessary in establishment of the Federal standard may cause the project to become economically unjustified.
(3) If the state denies or notifies the district engineer of its intent to deny water quality certification or does not concur regarding coastal zone consistency, the project dredging may be deferred. A report pursuant to § 337.8 of this section will be forwarded to CECW-D, Office of the Chief of Engineers, Washington, DC 20314-1000 for resolution.

§ 337.3 Transfer of the section 404 program to the states.
Section 404(g-1) of the CWA allows the Administrator of the EPA to transfer to qualified states administration of the section 404 permit program for discharges into certain waters of the U.S. Once a state's 404 program is approved, the district engineer will follow state procedures developed in accordance with section 404(g-1) of the CWA for all on-going Corps projects involving the discharge of fill material in transferred waters to the state agency responsible for administering the program. Corps projects involving the discharge of dredged or fill material in waters not transferred to the state will be processed in accordance with this regulation.

§ 337.4 Memoranda of Agreement (MOA).
The establishment of joint notification procedures for Corps projects involving disposal of dredged or fill material should be actively pursued through the development of MOAs with the state. The MOAs may be used to define responsibilities between the state and the Corps district involved. The primary purpose of MOAs will be to avoid or eliminate administrative duplication, when such duplication does not contribute to the overall decision-making process. MOAs for purposes of this regulation will not be used to implement provisions not related to the maintenance or enforcement of Federally-

approved state water quality standards or coastal zone management programs. District engineers are authorized and encouraged to develop MOAs with states and other Federal agencies for Corps projects involving the discharge of dredged or fill material. Copies of all MOAs will be forwarded to CECW-D, Office of the Chief of Engineers, Washington, DC 20314-1000 for approval.

§ 337.5 General authorizations.
Under the provisions of sections 404(e) of the CWA and 104(c) of the ODA certain categories of activities may be authorized on a regional, statewide, or nationwide basis. General authorizations can be a useful mechanism for implementation of the procedural provisions of the CWA, CZMA, and ODA while avoiding unnecessary duplication and paperwork. Through the general authorization process, compliance with all environmental laws and regulations including coastal zone consistency, if applicable, and water quality certification can be accomplished in a single process for a category of activities. Since the emphasis of particular environmental issues for most Corps projects is more regional than nationwide, district engineers are encouraged to develop general authorizations for routine Civil Works activities involving the discharge of dredged or fill material to address the specific requirements of a particular geographic region. When evaluating general categories of activities, the district engineer should follow the same procedure as outlined for individual Federal activities including the water quality certification and/or coastal zone consistency requirements of part 336 of this chapter. General authorizations should include related activities of local interests. Additionally, district engineers should use existing general permits authorized on a statewide or regional basis and the nationwide permits at 33 CFR part 330 for Federal projects involving the disposal of dredged material. The development of new statewide or regional general authorizations for Federal activities should be in accordance with the requirements of §§ 336.1 and 336.2 of this chapter. General permits for related activities of local interests should be developed using the procedures of 33 CFR parts 320 through 330.

§ 337.6 Statement of Findings (SOF).
Upon completion of the evaluation process including required coordination, receipt or waiver of required state certifications, and completion of the appropriate environmental documents, an SOF will be prepared. In cases involving an EIS, a ROD will be prepared in accordance with 33 CFR part 230 and should be used in lieu of the SOF, providing the substantive parts of this section are included in the ROD. The SOF need not duplicate information contained in supporting environmental documents but rather may incorporate it by reference. The SOF should include a comprehensive summary and record of compliance and should be prepared in the following format except that the procedures of 33 CFR 325.2 should be followed for related activities of local interests.

(a) The SOF should identify the name of the preparer, date (which may not necessarily correspond to the date signed), and name of waterway.
(b) The proposed action for which the findings are made should be described.
(c) A coordination section should be provided. The coordination section should reference the public notice number and date. The letters of comment and appropriate responses should be summarized. Any coordination undertaken by local or state agencies should also be discussed.
(d) An environmental effects and impacts section should be used to document compliance with the applicable environmental laws. This section should include the views and/or conditions of the state concerning water quality certification and, if required, the results of the coastal zone consistency process.
(e) A determinations section should reference the results of the EA and/or EIS and any conditions necessary to meet the state's water quality standards or coastal zone management program. Appropriate conditions or modifications should be included in the project specifications. This section should also contain a subsection on consideration of alternatives and cumulative impacts.
(f) A section on the district engineer's findings and conclusions concerning the proposed project should be included.
(g) The SOF should be dated and signed by the district engineer or his designee except in those cases requiring referral to higher authority.

(h) In accordance with the provisions of section 104(g) of the ODA, the district engineer will forward a copy of the SOF to the District Commander, U.S. Coast Guard, if the activity involves the ocean disposal of dredged material.
(i) The Findings of No Significant Impact or ROD, as appropriate, required by 33 CFR part 230 may be incorporated into the SOF, as appropriate.

§ 337.7 Emergency actions.
After obtaining approval from the division engineer, the district engineer will respond to emergency situations on an expedited basis, complying with the procedures of this regulation to the maximum degree practicable. The district engineer will issue a public notice describing the emergency in accordance with § 337.1, if such a notice is practicable in view of the emergency situation; such a public notice should be forwarded to all appropriate Federal and state agencies. The district engineer should prepare a section 404(b)(1) evaluation report and, as necessary, an environmental assessment, if this is practicable in view of the emergency situation. If comments are received from the public notice which, in the judgment of the district engineer, reveal the necessity of modifying the emergency operation, the district engineer should take appropriate measures to modify the emergency operation to reduce, avoid, or minimize adverse environmental impacts. If the district engineer, after receiving comments from the public notice, determines that the emergency action would constitute a major Federal action significantly affecting the quality of the human environment, he should, after consultation with the division engineer, coordinate with the Council on Environmental Quality about alternative arrangements for compliance with the NEPA in accordance with 40 CFR 1506.11 to the extent that it is practicable in view of the emergency situation. District engineers should consult with the appropriate state officials to seek water quality certification or waiver of certification, and should certify that the Federal action is consistent to the maximum extent practicable with an approved coastal zone management plan for emergency activities, to the extent that is practicable in view of the emergency.

§ 337.8 Reports to higher echelons.
(a)*Certain activities involving the discharge of dredged or fill material require action by the division engineer or Chief of Engineers.* Such reports should be prepared in the format described in paragraph (b) of this section. Reports may be necessary in the following situations:
(1) When there is substantial doubt as to the authority, law, regulations, or policies applicable to the Federal project;
(2) When higher authority requests the case be forwarded for decision;
(3) When the state does not concur in a coastal zone consistency determination or attempts to concur with conditions or controls;
(4) When the state denies or unreasonably delays a water quality certification or issues the certification with conditions or controls not related to maintenance or enforcement of state water quality standards or significantly exceeding the Federal standard;
(5) When the regional administrator has advised the district engineer, pursuant to section 404(c) of the CWA, of his intent to prohibit or restrict the use of a specified discharge site; or notifies the district engineer that the discharge of dredged material in ocean waters or territorial seas will not comply with the criteria and restrictions on the use of the site established under the ODA; and the district engineer determines that the proposed disposal cannot be reasonably modified to alleviate the regional administrator's objections; and
(6) When the state fails to grant water quality certification or a waiver of certification or concurrence or waiver of coastal zone consistency for emergency actions.
(b)*Reports.* The report of the district engineer on a project requiring action by higher authority should be in letter form and contain the following information:
(1) Justification showing the economic need for dredging.
(2) The impact on states outside the project area if the project is not dredged.

(3) The estimated cost of agency requirements which exceed those necessary in establishment of the Federal standard.
(4) The relative urgency of dredging based on threat to national security, life or property.
(5) Any other facts which will aid in determining whether to further defer the dredging and seek Congressional appropriations for the added expense or the need to exercise the authority of the Secretary of the Army to maintain navigation as provided by sections 511(a) and 404(t) of the CWA if the disagreement concerns water quality certification or other state permits.
(6) If the disagreement concerns coastal zone consistency, the district engineer will follow the reporting requirement of this section and § 336.1(b)(9) of this chapter.
§ 337.9Identification and use of disposal areas.
(a) District engineers should identify and develop dredged material disposal management strategies that satisfy the long-term (greater than 10 years) needs for Corps projects. Full consideration should be given to all practicable alternatives including upland, open water, beach nourishment, within banks disposal, ocean disposal, etc. Within existing policy, district engineers should also explore beneficial uses of dredged material, such as marsh establishment and dewatering techniques, in order to extend the useful life of existing disposal areas. Requests for water quality certification and/or coastal zone consistency concurrence for projects with identified long-term disposal sites should include the length of time for which the certification and/or consistency concurrence is sought. The section 404(b)(1) evaluation and environmental assessment or environmental impact statement should also address long-term maintenance dredging and disposal. District engineers should use the guidance at 40 CFR 230.80 to shorten environmental compliance processing time. The Corps of Engineers will be responsible for accomplishing or assuring environmental compliance requirements for all disposal areas. This does not preclude the adoption of other agencies NEPA documents in accordance with 40 CFR parts 1500 through 1508.
(b) The identification of disposal sites should include consideration of dredged material disposal needs by project beneficiaries. District engineers are encouraged to require local interests, where the project has a local sponsor, to designate long-term disposal areas.

§ 337.10 Supervision of Federal projects.
District engineers should assure that dredged or fill material disposal activities are conducted in conformance with current plans and description of the project as expressed in the SOF or ROD. Conditions and/or limitations required by a state (e.g., water quality certification), as identified through the coordination process, should be included in the project specifications. Contracting officers should assure that contractors are aware of their responsibilities for compliance with the terms and conditions of state certifications and other conditions expressed in the SOF or ROD.

33 CFR Part 338 - OTHER CORPS ACTIVITIES INVOLVING THE DISCHARGE OF DREDGED MATERIAL OR FILL INTO WATERS OF THE U.S.

§ 338.1 Purpose.
(a) The procedures of this part, in addition to the provisions of 33 CFR parts 335 through 337, should be followed when undertaking Corps operations and maintenance activities involving the discharge of fill material into waters of the U.S., except that the procedures of part 336 of this chapter will be used in those cases where the discharge of fill material is also the discharge of dredged material, *i.e.*, beach nourishment, within banks disposal for erosion control, etc.
(b) After construction of Corps Civil Works water resource projects, certain operations and maintenance activities involving the discharge of fill material require evaluation under the CWA. These activities generally include lakeshore management, installation of boat ramps, erosion protection along the banks of navigation channels, jetty maintenance, remedial erosion control, etc. While these activities are normally addressed in the existing environmental impact statement for the project, new technology or unexpected events such as storms or high waters may require maintenance or remedial work not fully addressed in existing environmental documents or state permits. In determining compliance with the applicable environmental laws and regulations the

district engineer should use the CWA exemptions at 404(f) and NEPA categorical exclusions to the maximum extent practicable. If the district engineer decides that the changes have not been adequately addressed in existing environmental documentation, the procedures of this part should be followed.
[53 FR 14920, Apr. 26, 1988]

§ 338.2 Activities involving the discharge of dredged or fill material into waters of the U.S.
(a) Generally, fill activities conducted by the Corps for operations and maintenance of existing Civil Works water resource and navigation projects are routine and have little, if any, potential for significant degradation of the environment. District engineers are encouraged to develop general authorizations in accordance with section 404 of the CWA and 104 of the ODA following the procedures of § 337.5 of this chapter for categories of such routine activities. The general authorization should satisfy all compliance requirements including water quality certifications and, if applicable, coastal zone consistency determinations. For activities which are not conducive to the development of general authorizations or are more appropriately evaluated on an individual basis, the following procedures should be followed.
(b) A public notice should be issued using the procedures § 337.1 of this chapter.
(c) Water quality certifications should be requested and, if applicable, coastal zone consistency determinations should be provided using the procedures of § 336.1(b) (8) and (9) of this chapter.
(d) The discharge site should be specified through the application of the section 404(b)(1) guidelines.
(e) The procedures of 40 CFR part 230 should be used to determine the NEPA compliance requirements.
(f) The factors of § 336.1(c) of this chapter should be followed when evaluating fill activities.
(g) Upon completion of all required coordination and after receipt of the necessary state certifications, the district engineer should prepare an SOF in accordance with § 337.6.
[53 FR 14920, Apr. 26, 1988]