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Final Report

**Long Island Sound Dredged Material
Management Plan**

**Follow-on Characterization of Small
Site Management Alternatives for
Potential Non-Federal Project
Consideration**

FINAL REPORT

for

Long Island Sound Dredged Material Management Plan Follow-on Characterization of Small Site Management Alternatives for Non-Federal Project Consideration

Submitted to

**Department of the Army
U.S. Army Corps of Engineers
North Atlantic Division
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1.0 INTRODUCTION

In June 2005, the Environmental Protection Agency (EPA) designated two open water dredged material disposal sites in Long Island Sound (LIS) to provide long-term, environmentally acceptable disposal options (EPA, 2004). These sites can potentially be used by Federal, state, municipal, and private entities, which must dredge river and harbor channels, anchorages, turning and maneuvering basins, terminal berths, marinas, and other tidal and subtidal areas in the Long Island Sound region in order to maintain conditions safe for marine commerce, recreational navigation, and other purposes. The Final Rule “Designation of Dredged Material Disposal Sites in Central and Western Long Island Sound, Connecticut” (40 CFR 228.15(b)(4)) anticipated the development of a regional Dredged Material Management Plan (DMMP) for LIS. Subsequent to the publication of the Designation Rule, EPA, the U.S. Army Corps of Engineers (Corps), and appropriate Federal and state resource agencies agreed to partner in the development of a LIS DMMP. The LIS DMMP will include an in-depth analysis of all potential dredged material management alternatives including open-water placement, beneficial use, upland placement, and innovative treatment technologies, which could be used by dredging proponents in developing alternatives analyses for dredging in the LIS vicinity. In addition to preparing the DMMP, on August 31, 2007 the Corps published a Notice of Intent to Prepare a Draft Programmatic Environmental Impact Statement (PEIS) to analyze a Long Island Sound Dredged Material Management Plan. The PEIS will evaluate the overall impacts of alternatives identified in the DMMP.

One of the first tasks undertaken by the Corps for the LIS DMMP was updating the inventory of potential alternative upland disposal sites and upland and along-shore beneficial use opportunities that was part of the 2004 LIS Disposal Site Designation EIS (EPA, 2004). In October 2009, an updated Upland, Beneficial Use, and Sediment De-watering Site Inventory Report was prepared under Phase 1 of this task and identified potential upland disposal, beneficial use, and sediment de-watering sites in the Long Island Sound region (Corps, 2009). The study (Phase 1) included contacting site owners, and preparing a preliminary characterization of existing uses, size, potential to accept dredged material, special conditions, and costs for use. Sites not meeting criteria provided by the LIS DMMP Project Delivery Team (PDT) and sites where owners had no interest or regulatory ability to accept material were then screened-out from the inventory. The October 2009 study generated an inventory of about 157 potential upland and beneficial use material placement sites, and 29 potential de-watering sites (of which 7 were later removed based on input from the PDT) (Corps, 2009).

2.0 PURPOSE

Based on the results of the Phase 1 upland study completed in October 2009, additional detailed examinations of the sites are being conducted to determine the feasibility of these sites for receipt of dredged material. Large-scale sites for potential use by Federal projects or large non-Federal navigational projects are currently being evaluated under a separate study (Phase 2). The study described here (Phase 1A) involves further screening and investigation of the smaller upland, beneficial use, and de-watering sites not being investigated under Phase 2. These sites are being evaluated for use by smaller, mainly non-Federal permittees, to meet one of the stated goals of the LIS 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 results of this additional analysis will be used to determine the feasibility of these sites for receipt of dredged material from small-scale, mainly non-Federal dredging projects.

3.0 METHODS

For this effort, the Upland, Beneficial Use, and Sediment De-watering Site Inventory Report (Corps, 2009) and associated study database were reviewed for information on those smaller sites that were identified, screened, and not recommended for further investigation as Federal project-use sites under the Phase 2 study. Those smaller scale sites were investigated further for suitability for use by smaller-scale projects in this study (Phase 1A).

3.1 Study Area

For the purpose of this analysis, the study area includes the following:

- Connecticut: all counties
- New York: Westchester, Bronx, Queens, Suffolk and Nassau counties, and the Boroughs of Brooklyn (Kings County) and Manhattan (New York County)
- Rhode Island: Washington County.

The study area is shown in Figure 1.

3.2 Selection Criteria for Smaller Sites

The inventory of smaller sites was created by first reviewing the Upland, Beneficial Use, and Sediment De-watering Site Inventory Report (Corps, 2009) to identify the smaller scale sites not being considered for Federal projects.

3.2.1 Upland and Beneficial Use Sites

Of the 157 potential upland and beneficial use material placement sites identified in the 2009 study, those that fell under the following categories were identified for Federal projects, and were not included in this study:

- Active Landfill Site (six sites)
- Habitat Restoration (five sites)
- Redevelopment/Construction (10 sites)
- Brownfield (one site)
- State-owned beaches (11 sites)
- Federal Shore Protection/Beach Erosion projects (seven sites)
- Mine reclamation (one site).

Therefore, of the original 157 upland/beneficial use sites identified, 41 are being considered for Federal and large non-Federal projects and were excluded from this study of smaller sites. The list of potential sites for this study was thus reduced from 157 to 116 sites.

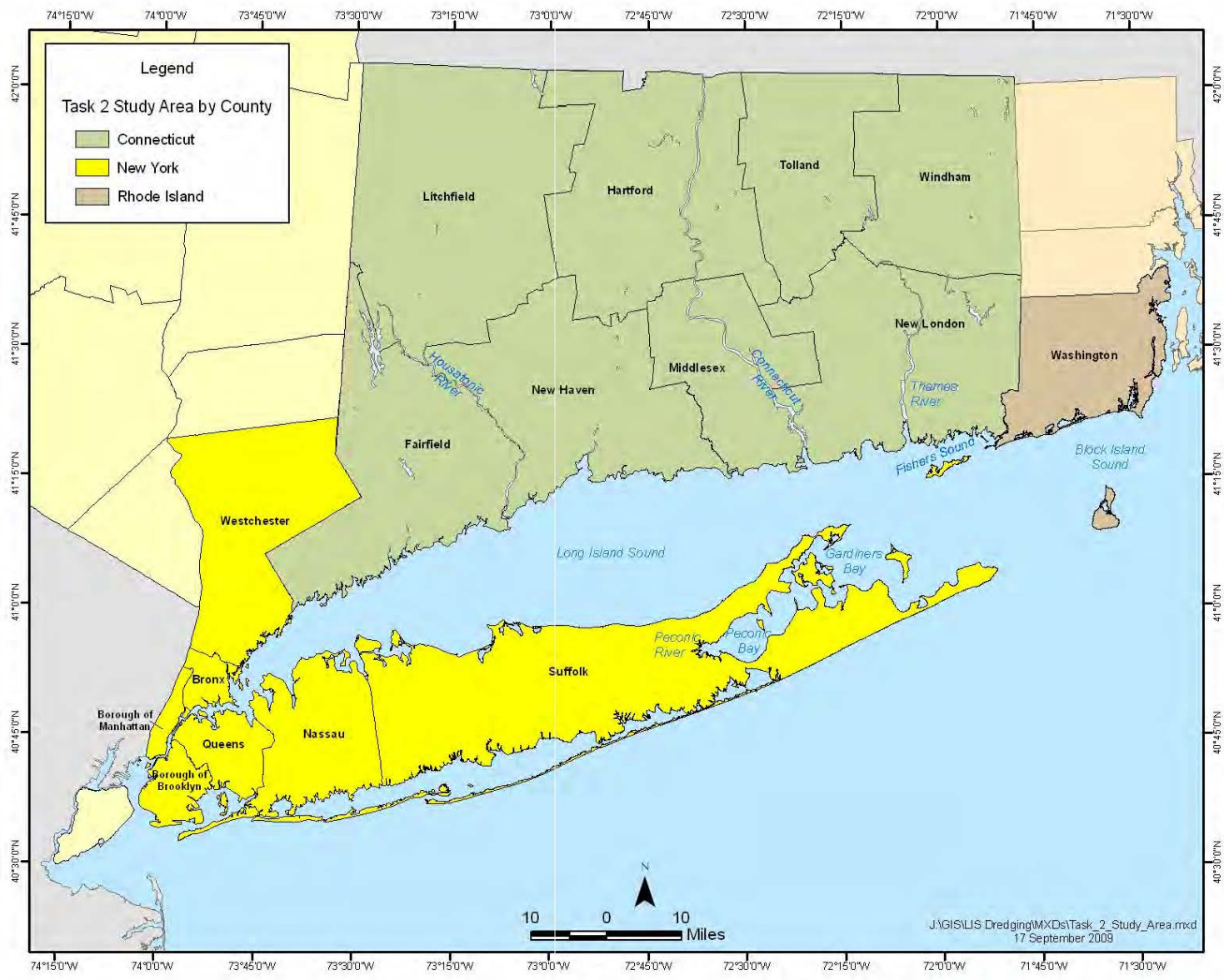


Figure 1. Upland/Beneficial Use Site Inventory Study Area.

Furthermore, the Phase 2 study of larger sites for potential use by Federal projects included any municipal and county-owned beaches within two miles of Federal Navigation Projects (FNPs) potentially generating beach-compatible sandy dredged material. The selected FNPs are listed below:

- Bridgeport Harbor, CT
- Clinton Harbor, CT
- Connecticut River, CT
- Guilford Harbor, CT
- Housatonic River, CT
- Little Narragansett Bay and Watch Hill Cove, CT and RI
- Milford Harbor, CT
- New Haven Harbor, CT
- Patchogue River, CT
- Southport Harbor, CT
- Huntington Harbor, NY
- Mattituck Harbor, NY
- Greenport Harbor, NY
- Lake Montauk Harbor, NY
- Port Jefferson, NY.

In order to identify the municipal and county-owned beaches for evaluation in this study, a GIS map was created to show the location of the municipal and county-owned beaches in relation to the above-listed FNPs. First, Google Earth™ was used to obtain the latitude and longitude coordinates for each of the Federal Navigation Projects. Next, each of the Federal Navigation Projects was mapped using GIS ArcView, and a two mile buffer was placed around the location point. The municipal and county-owned beaches from the October 2009 inventory were then mapped in relation to the Federal Navigation Projects listed above (Figure 2). Ten municipal beaches were identified as being located within two miles of a Federal Navigation Project with sandy dredged material and were removed from further consideration in this study (Table 1). The reason that these ten municipal beaches were eliminated from this study is that they are being evaluated in a separate effort (Phase 2) that is looking at sites that are adequate for Federal projects and large non-Federal projects. The sites evaluated in this report are focused on sites that are too small for Federal use but would be suitable for small non-Federal projects.

Table 1. Municipal and County-owned Beaches Located Within Two Miles of a Federal Navigation Project with Sandy Dredged Material.

Site ID	Site Name	Category
67	Crescent Beach	Beach (Municipal)
68	Gold Star Battalion Beach	Beach (Municipal)
79	Gull Pond Beach (Norman E. Klipp Park)	Beach (Municipal)
81	Breakwater Park Beach	Beach (Municipal)
82	Bailie's Beach	Beach (Municipal)
83	Aldrich Lane Park Beach	Beach (Municipal)
121	Gin Beach	Beach (Municipal)
339	Jacobs Beach	Beach (Municipal)
381	Watch Hill Beach	Beach (Municipal)
382	Napatree Point Beach	Beach (Municipal)

Therefore, an additional 10 sites were excluded from consideration in this study, resulting in a list of 106 smaller sites for follow-on characterization:

- Asphalt and concrete plants (30 sites)
- Municipal and county-owned beaches greater than 2 miles from the above-listed Federal Navigation Projects (76 sites).

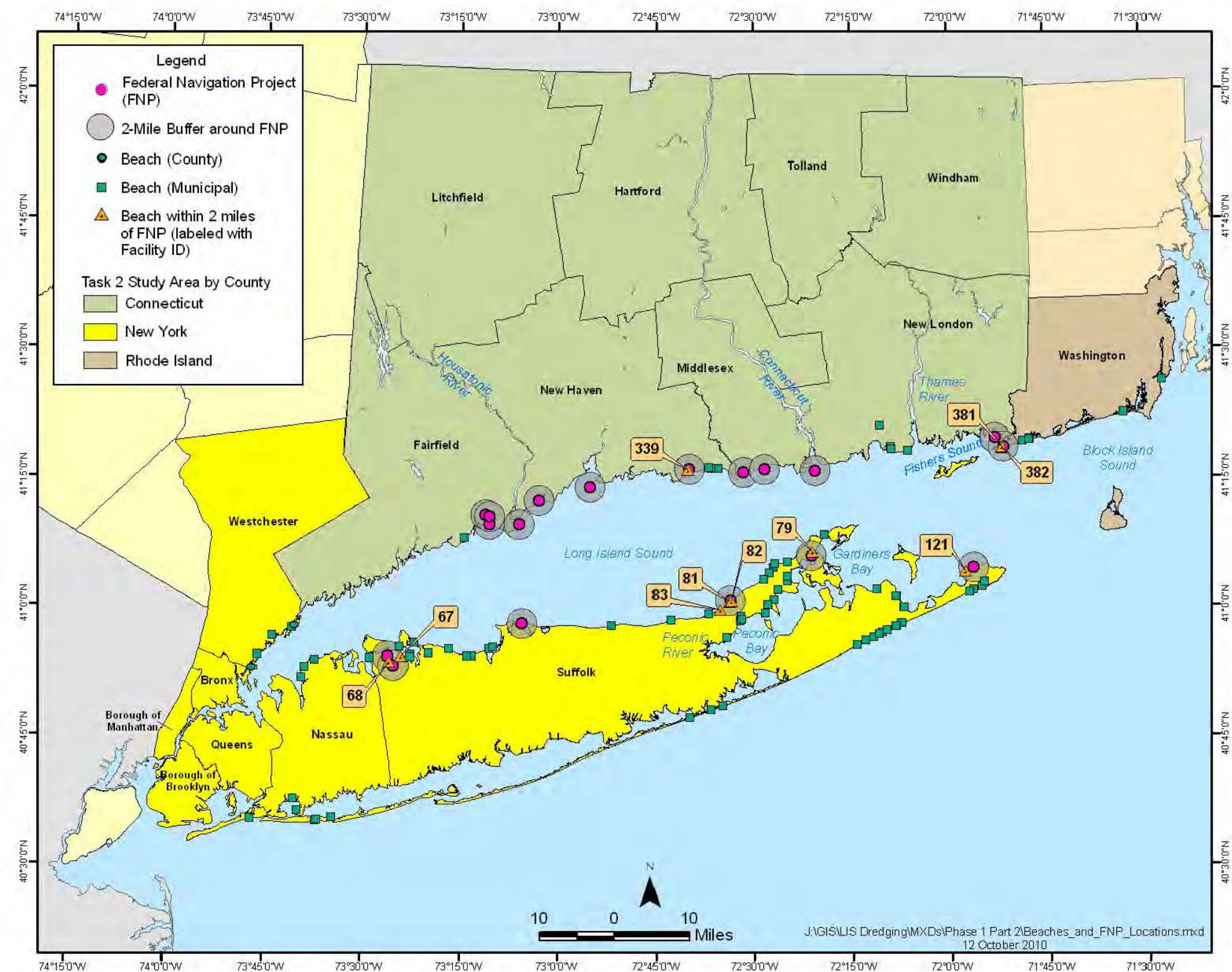


Figure 2. Municipal and County-Owned Beaches Mapped in Relation to Federal Navigation Projects with Sandy Dredged Material.

Note: Those municipal or County-owned beaches located within two-miles of a Federal Navigation Project are identified by their site ID, and were not evaluated in this study.

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3.2.2 De-watering Sites

During the October 2009 study (Phase 1), 113 potential de-watering sites were identified and screened against criteria provided by the Project Delivery Team (Corps, 2009). The first screening in the previous Phase 1 study was to determine which of the 113 possible locations met the 10-acre size minimum criterion. Eighty-four locations had acreage of less than 10 acres and were screened out from further evaluation for Federal and large non-Federal project consideration. These smaller de-watering sites (< 10 acres) were included in this Phase 1A study and evaluated for small-scale, non-Federal projects.

3.3 Initial Detailed Screening

Once the list of upland/beneficial use and de-watering sites for small project consideration was identified, an initial, detailed screening of these sites was conducted using available information to eliminate those sites which are not likely feasible due to the following factors:

- Significant resource impacts
- Competing land uses
- Municipal zoning requirements
- Other factors.

Geospatial data available on-line (Table 2), such as State GIS databases, were used to determine reported presence of wetlands, Federal or state-listed species, cultural resources, or other special resources. In addition, GIS data layers from the cultural resources report, prepared for the LIS DMMP, were obtained and used in the initial screening to identify potential sites that contain cultural or archaeological resources (Corps and the Public Archaeology Laboratory, Inc. [PAL], 2010). The GIS data layers used to perform the initial screening are presented in Table 2. Screening was performed by viewing each upland, beneficial use, and de-watering site location in Google Earth and overlaying the available GIS data layers for that geographic area.

In addition, information from special management programs in New York State, such as the Long Island Sound Coastal Management Program and Local Waterfront Revitalization Programs (LWRPs) were collected and included in the initial screening. The LIS Coastal Management Program is a regional plan designed to address the coastal management issues unique to Long Island Sound and applies to all New York coastal areas within the LIS DMMP study area that are outside the boundary of an LWRP. A LWRP is a land and water use management plan and strategy prepared by a local community to address the critical issues related to its natural, public, working, and/or developed waterfronts and to coordinate state and Federal actions needed to meet local management goals. Applicable LWRP communities within the LIS DMMP study area are listed below:

- New York City
 - City of Rye
 - Town of East Hampton
 - Town of Mamaroneck and Village of Larchmont
 - Town of Smithtown
 - Town of Southold
 - Village of Bayville
 - Village of Greenport
-

- Village of Head of the Harbor
- Village of Lloyd Harbor
- Village of Mamaroneck
- Village of Port Chester
- Village of Sag Harbor.

Copies of the LIS Coastal Management Program and LWRPs were obtained from the New York Department of State, Division of Coastal Resources. These documents were reviewed for relevant information regarding the smaller sites being investigated.

A summary matrix was prepared that listed each of the upland/beneficial use sites and de-watering sites evaluated, the data used to screen the sites, the screening results, and screening comments containing detailed information about the presence of significant resources or conflicting land uses. Those sites proposed to be excluded based on the screening results were also indicated. Images (.jpg) were also created for each of the excluded sites using Google Earth and the relevant data layers. As a result of the initial screening, none of the 106 upland or beneficial use sites were screened out because the placement of dredged material at these sites would potentially be used to enhance existing natural resources or was consistent with existing site uses. Forty-nine of the 84 de-watering sites were excluded from further consideration due of potential resources impacts or conflicting land uses. The 106 upland/beneficial use sites and 35 de-watering sites retained after the initial screening were then characterized in further detail as described below.

3.4 Data Collection

The primary source of site-specific information for those sites retained after the initial screening were phone interviews with the site owners. Owner contact information for the 106 upland and beneficial use sites was available from the previous Phase 1 study database and was updated as necessary. However, no contact information was available for the 35 de-watering sites, and several sources were used to obtain that information, including internet searches, municipal land parcel records, and phone and e-mail communications with local planning and zoning officials. On-line land parcel data sources included:

- Vision Appraisal On-line Databases (<http://www.visionappraisal.com/databases/index.htm>): Assessors On-line Database for many communities in the states of Connecticut and Rhode Island
 - Nassau County Department of Assessment Land Records Viewer (<http://www.nassaucountyny.gov/mynassauproperty/main.jsp>)
 - Suffolk County Department of Information Technology – Suffolk iMap (<http://gis.co.suffolk.ny.us/imaphome/index.html>)
 - New York City Oasis (<http://www.oasisnyc.net/map.aspx>)
 - New York City Department of Finance Digital Tax Map (<http://gis.nyc.gov/dof/dtm/mapviewer.jsf>)
 - City of Norwalk Tax Assessor Information (<http://my.norwalkct.org/eRecordCard/>)
 - City of Bridgeport, CT GIS Web Site (<http://gis.cdm.com/BridgeportCT/>)
 - City of Stamford Tax and Assessment Data Online (<http://www.cityofstamford.org/apps/tax/default.htm>)
 - Killingly, CT Assessor Database (<http://killingly.ias-clt.com/parcel.list.php>)
 - US Parcel Data available in Google Earth Pro.
-

Table 2. GIS Data Layers Used for Initial Screening.

Data Layer	Source	Description
CT, NY, and RI		
National Wetlands Inventory, Geospatial Wetlands Digital Data	USFWS ¹	This data set represents the extent, approximate location, and type of wetlands and deepwater habitats in the conterminous United States.
Archaeological Sensitivity Terrestrial	Corps, 2010	Terrestrial areas sensitive for archaeological cultural resources.
Archaeological Sensitivity Underwater	Corps, 2010	Underwater areas sensitive for cultural resources.
NY		
NYSDEC Lands	NYSDEC ²	Lands under the care, custody, and control of DEC, including Wildlife Management areas, Unique Areas, State Forests, and Forest Preserve.
Bird Conservation Areas	NYSDEC ²	Point locations of Bird Conservation Areas, which are New York State lands that have been officially designated for their value to bird conservation.
Significant Coastal Fish and Wildlife Boundaries	NYDOS ²	Statutory boundary describing significant coastal fish and wildlife habitats identified and recommended by Environmental Conservation and designated by Department of State.
Confidential Archaeological Inventory – NY	Corps, 2010	Inventory of terrestrial archaeological cultural resources for New York.
Historic Resources Inventory – NY – Points	Corps, 2010	Historic aboveground cultural resources inventory produced for the development of the LIS DMMP - includes those sites in the inventory that are located within the project area in the state of New York and best represented by point attributes.
Historic Resources Inventory – NY – Polygons	Corps, 2010	Historic aboveground cultural resources inventory produced for the development of the LIS DMMP - includes those sites in the inventory that are located within the project area in the state of New York and best represented by polygon attributes.
CT		
Critical Habitat	CT DEP ³	Represents significant natural community types occurring in Connecticut with a resolution of +/- 10 meters, and is a subset of habitat-related vegetation associations, described in Connecticut's Natural Vegetation Classification, that were designated as key habitats for species of Greatest Conservation Need in the Comprehensive Wildlife Conservation Strategy. These habitats are known to host a number of rare species including highly specialized invertebrates with very specific habitat associations.
Connecticut Natural Diversity Database Areas	CT DEP ³	Represents general locations of endangered, threatened, and special concern species and significant natural communities (1:24,000-scale). The layer includes state and Federally listed species and significant natural communities.

Table 2. GIS Data Layers Used for Initial Screening (cont.).

Data Layer	Source	Description
Connecticut DEP Property	CT DEP ³	CT DEP: DEP Property is a polygon feature-based layer that includes all land owned in fee simple interest by the State of Connecticut Department of Environmental Protection. Types of property in this layer include parks, forests, wildlife areas, flood control areas, scenic preserves, natural areas, historic reserves, DEP owned waterbodies, water access sites and other miscellaneous properties.
Federal Open Space	CT DEP ³	Federal Open Space is a polygon feature-based layer that includes land owned in either easement or fee simple interest by the Federal government. Types of property in this layer include open space and recreational land open to the public.
1997 Municipal and Private Open Space	CT DEP ³	Municipal and Private Open Space Property is a polygon feature-based layer that includes land owned in fee simple interest by the municipalities, land trusts, and other private entities within the State of Connecticut.
Confidential Archaeological Inventory – CT:	Corps, 2010	Inventory of terrestrial archaeological cultural resources for Connecticut.
Historic Resources Inventory – CT – Points	Corps, 2010	Historic aboveground cultural resources inventory produced for the development of the LIS DMMP - this shapefile includes those sites in the inventory that are located within the project area in the state of Connecticut and best represented by point attributes
Historic Resources Inventory – CT – Polygons	Corps, 2010	Historic aboveground cultural resources inventory produced for the development of the LIS DMMP - this shapefile includes those sites in the inventory that are located within the project area in the state of Connecticut and best represented by polygon attributes
RI		
South Coast Estuarine Habitat; cstlwet	RIDEM, Narragansett Bay Estuary Program ⁴	Eelgrass beds, estuarine and marine wetlands in South Shore delineated from 1999 true color aerial photography and coded according to U.S. Fish and Wildlife Service's Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, L.M., V. Carter, F.C. Golet, and T. Laroe. 1979. [Reprinted 1992]. U.S. Fish and Wildlife Service, Washington DC. FWS/OBS-79/31. 103 pp.)
Historic Candidate Sites of Rhode Island; s44chc92	RIHPHC and RIGIS ⁴	Historic sites in RI that are significant but not listed on the national register of historic places by the RIHPC
Historic Districts in Rhode Island; s44chd99	RIDOA-DOP, RIGIS, and RIHPHC ⁴	Historic districts and properties listed on the national register of historic places
Historic Sites of Rhode Island; s44chs99	RIHPHC and RIGIS ⁴	Historic site point building property or monument listed on the national register of historic places by the RI historic preservation commission

Table 2. GIS Data Layers Used for Initial Screening (cont.).

Data Layer	Source	Description
Municipal & Non-Governmental Organization Conservation Lands; LocCons10	RIDEM ⁴	Non-State Conservation lands are real property permanently protected from future development by fee simple ownership, conservation or other restrictive easements, or deed restrictions held or enforceable by recognized land protection organizations other than the State of Rhode Island. In addition to permanent legally conserved land, a number of properties documented in this dataset are areas that are considered protected by the good-will of the owners (both municipal and private) to prevent or restrict future development beyond the existing use.
Natural Heritage Areas; natHeritage90	RIDEM, The Nature Conservancy Natural Heritage Program, RIGIS ⁴	Estimated Habitat and Range (polygons) of Rare Species and Noteworthy Natural Communities in Rhode Island, August 1990.
State Conservation Lands; StaCons10	RIDEM ⁴	Approximate edges of Conservation Lands protected by the State of Rhode Island through Fee Title Ownership, Conservation Easement, or Deed Restriction.
Confidential Archaeological Inventory – RI	Corps, 2010	Inventory of terrestrial archaeological cultural resources for Rhode Island.
Historic Resources Inventory – RI – Points	Corps, 2010	Historic aboveground cultural resources inventory produced for the development of the LIS DMMP - this shapefile includes those sites in the inventory that are located within the project area in the state of Rhode Island and best represented by point attributes.
Historic Resources Inventory – RI – Polygons	Corps, 2010	Historic aboveground cultural resources inventory produced for the development of the LIS DMMP - this shapefile includes those sites in the inventory that are located within the project area in the state of Rhode Island and best represented by polygon attributes.

USFWS: United States Fish and Wildlife Service

NYSDEC: New York State Department of Environmental Conservation

NYDOS: New York Department of State

CT DEP: Connecticut Department of Environmental Protection

RIDEM: Rhode Island Department of Environmental Management

RIHPHC: Rhode Island Historical Preservation & Heritage Commission

RIGIS: Rhode Island Geographic Information System

RIDOA-DOP: Rhode Island Department of Administration's Division of Planning

¹USFWS National Wetlands Inventory: <http://www.fws.gov/wetlands/Data/GoogleEarth.html>²New York State GIS Clearinghouse: <http://www.nysgis.state.ny.us/>³CT DEP GIS Data: http://www.ct.gov/dep/cwp/view.asp?a=2698&q=322898&depNav_GID=1707&depNav=⁴RIGIS Geospatial Data Catalog: <http://www.edc.uri.edu/rigis/data/>

Beginning in July 2010, phone calls to each of the sites were conducted to gather specific information about site characteristics and requirements. Each site and contact was called at least three times; if contact was not made after three attempts, no additional calls were placed to that point of contact. For the de-watering sites, several calls were often necessary to contact the appropriate person who could provide the requested information regarding the availability of the site.

A script was provided for each phone call which included space for the caller to record responses to the interview questions. During the phone interviews, the following information was collected about each site:

- Person responsible for making decisions regarding the use of dredged material at the site
- Size and boundaries of the site
- Present and abutting land uses
- Drainage and de-watering features
- Special natural resources
- Navigation access and navigable depth
- Site availability (timeframe and hours of operation)
- Site restrictions (time of use, equipment)
- Facilities for transferring material
- Regulatory requirements
- User or tipping fees.

In some cases, a single owner was responsible for multiple sites, and a separate phone interview was completed for each individual site.

An outcome form was completed for each site receiving a phone call. These forms were pre-populated with the site ID, name, address, contact name, and phone number. The details of each call were recorded, including the date, time, and initials of the interviewer, and calling codes were used to document the outcome of each call (e.g., left a message, completed the interview, wrong number, etc.). When the phone calls were completed on August 31, 2010, the outcome of the call, including the responses to the interview questions (if applicable), were entered into the Excel® spreadsheet. A quality assurance review was performed on the data spreadsheet before it was loaded into the study database.

The on-line county and municipal land parcel and tax records referenced above were also used to identify land parcel boundaries and collect specific information about the site (e.g., acreage, land use, etc.). Google Earth was used to obtain site elevation data, and to measure distances to the nearest state highway and rail line. All site-specific data obtained from these sources were loaded into the study database (see Section 3.6).

Those sites that completed the phone interview and expressed a need for dredged material or were available for de-watering operations were retained for further evaluation; those that did not have a need for dredged material or were not available for de-watering were excluded.

In addition, as a result of the phone interviews, Site #89 (Triangle Park Beach) was removed from consideration because it is an upland park with no associated beach. Therefore, the number of potential upland and beneficial use sites was reduced to 105 sites.

3.5 Site Capacity Calculations

Site capacity calculations were performed for the beach nourishment and de-watering sites only. For each of the concrete and asphalt plants, the site owner was asked to provide the potential capacity or estimated material needed for their operations, because these sites would be used to reprocess material using the existing industrial operations at the site, rather than using the site for long-term placement or restoration.

3.5.1 Beach Nourishment Site Capacity Calculations

After reviewing the phone interview responses, the beach sites requiring dredged material were identified, and a methodology was developed to calculate the capacity (volume) for each site. Phone interview data was reviewed to determine any special concerns or previous beach nourishment operations. Based on inspection of aerial photographs, site photographs, and other on-line sources, a boundary for the placement of beach nourishment material was drawn using Google Earth Pro. On-site parking areas were also examined to determine use for staging of equipment, operations, and site access.

The identified boundaries were used to calculate the required beach nourishment area (in square feet). The capacity for each placement/beneficial use site was then calculated based on fill material depths of 3 feet, 5 feet, and 10 feet. Not all sites could accommodate the 5-foot or the 10-foot depths, and notations were made regarding the appropriate material requirements, site assumption(s), and preliminary design considerations.

Site capacity for beach nourishment assumed subaerial (e.g., above mean high water) placement of material and considered the following:

- Site characteristics, such as seawalls or natural outcrops
- Proximity of adjacent parking
- Existing grade and recreational facilities on active beach
- Condition of dunes
- Beach facing/site location (e.g. Long Island Sound, harbor, or open ocean)
- Observed tidal or wave action
- Existing beach profile, where available.

Detailed information will be needed prior to developing design/construction nourishment plans for the each site, including the following:

- Existing coastal processes (cross-shore and alongshore currents, shoreline change rates, wave climate) to determine type of beach nourishment (subaerial, profile, or bar [offshore] placement)
- Potential impact(s) to adjacent shoreline ecosystem/beach facilities
- Geophysical and geotechnical analysis of existing beach material
- Geophysical and geotechnical analysis of potential sand sources (dredged material) to identify suitability for beach placement
- Pre- and post-project beach and offshore survey data (topographic/bathymetric and aerial photography)
- Periodic monitoring of sediment activity and assessment of performance.

Site capacity data for the beach sites, along with site-specific assumptions, were loaded into the database (see Section 3.6) and are presented in Section 4 of this report.

3.5.2 De-watering Site Capacity Calculations

After reviewing the phone interview responses, upland sites were identified for the de-watering of dredged material, and a methodology was developed to calculate the capacity (volume) for each site. Phone interview data for each site was reviewed, and a boundary for the placement of dredged material (de-watering) was drawn using Google Earth Pro. Staging areas for equipment and operations were also identified. For purposes of this report, mechanical dredging and passive de-watering options were used for all site calculations.

Site capacity for dredged material considered the following:

- Footprint and capacity taken up by areas needed for dredged material assuming best management practices for passive de-watering design and operations
- Footprint of re-handling equipment and operations
- Existing drainage and de-watering features, and, if none present, the area needed to construct these facilities
- Property elevation
- Setbacks from wetlands and other environmental features
- Access to navigable waters and shoreline protection features (bulkheads, piers)
- Present site use, and intended future use of the site and use of adjacent properties
- Timeframe in which the site will/may be available for use
- Hours of operation and any restrictions on time of use
- Estimated regulatory requirements and timeframe for regulatory approvals including those needed for site modifications
- Site characteristics such as poor drainage, depth to groundwater, proximity to residential areas, zoning and setback restrictions, and highway/rail access
- Best professional judgment was used to estimate site capacity including a maximum 4-foot height for de-watering material, 25-foot setback from dredged material for retention/drainage facilities, and a 50-foot setback from property boundaries.

Site capacity data for the de-watering sites, along with site-specific assumptions, were loaded into the database (see Section 3.6) and are presented in Section 4 of this report.

3.6 Placement Site Database

The Microsoft Access project database from the October 2009 study was updated to store the detailed evaluation data collected during this study. The database includes tables for the following data:

- Placement and de-watering site information, including site name, address, and contact information
- Phone call tracking data, interview status codes, phone interview response data, and comments
- Initial screening results
- Site transportation information (including general location, nearest major highways and railroads)
- Site capacity calculations, assumptions, and considerations.

The database was used to store information as it was collected, and to track the progress of the phone interviews. During report preparation, database queries were used to create summary tables and export data for GIS mapping.

3.7 Site Summary Sheets

For those sites that have a need for dredged material and provided detailed site-specific information during the phone interviews, a site summary sheet was prepared. Site summaries include an aerial photo (including site boundaries) of each site, as well as a brief one to two page fact sheet that presents the site information collected during the Phase 1 and Phase 1A studies:

- Site location, including aerial images (from Google Earth) delineating the site boundaries (from the October 2009 report or other sources)
- Physical characteristics (drainage, elevation, navigable depth)
- Site access conditions (highways, railways, water access)
- Site requirements (type of material, fees, availability, equipment restrictions, hours of operations)
- Facilities available for transferring material ashore
- Intended use of and capacity to receive or store dredged material
- Land use (site and adjacent areas)
- Ecological conditions and resources
- Regulatory requirements (permits, timeframe, approvals).

The site summaries were generated as an MS Access report, directly from the project database. The summaries are included in this study report in Appendix C. Any copies of plot plan(s) or tax assessors' maps obtained from the municipalities or counties are included with the fact sheets as well.

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4.0 RESULTS

4.1 Upland/Beneficial Use Site Inventory

Review of the 2009 Upland/Beneficial Use Site Inventory (Corps, 2009) using the selection criteria for smaller sites yielded a list of 116 potential upland and beneficial use sites. Ten of the municipal beaches were removed from the list because they are located within two miles of a Federal Navigation Project with sandy dredged material, and are being evaluated in a separate study which is looking at sites large enough to be used by Federal and large non-Federal projects (Phase 2). The sites being considered in this investigation are only large enough to be used by small non-Federal projects. In addition, Site #89 (Triangle Park Beach) was removed from consideration because it is an upland park with no associated beach. As a result, there were 105 upland and beneficial use sites identified for further evaluation (Table 3). The New York counties within the study area had the most potential sites (80), most of which were municipal beaches (60). The CT counties contained 20 potential sites, which were mostly concrete/asphalt plants. The list of potential sites identified, as well as contact information for each site, is presented in Appendix A, and the location of each site is shown in Figure 3.

Table 3. Number of Smaller Upland/Beneficial Use Sites Identified by State.

Category	State			Total
	CT	NY	RI	
Beach (County)	0	2	0	2
Beach (Municipal)	8	60	5	73
Concrete Plant/Asphalt Plant	12	18	0	30
Total	20	80	5	105

The initial screening was performed for all 105 of the potential upland sites, and the results of the screening are presented in Appendix B. Many of the municipal beaches were located in areas with designated significant or critical ecological habitat, bordered wetland areas, and were located in areas sensitive for archaeology. However, none of the upland or beneficial use sites were excluded during the initial screening because the placement of dredged material at these sites would potentially be used to enhance existing natural resources or was consistent with existing site uses. Therefore, phone calls were conducted to collect information on all 105 upland and beneficial use sites identified (Table 4).

Personnel at each of the upland sites (Appendix A) were contacted by phone to gather site specific information and determine the sites' need for dredged material. In some cases, the listed contact person from the Phase 1 study had retired or was not the correct contact for the site, and an updated contact person and phone number was identified. Follow-on phone interviews were completed for 45% of the smaller upland and beneficial use sites being evaluated (Table 4). Based on the results of the phone interviews conducted for this study (Phase 1A), 31 of the 47 site owners interviewed confirmed that they still have a need for material at the site and provided site-specific information as requested. Of the 31 sites that need material, seven are located in Connecticut, 21 in NY, and three in Rhode Island (Figure 4). Most of the sites indicating a need for material were municipal beaches (20 sites), but 11 of the concrete and asphalt plants also indicated that they could accept dredged material if it met site-specific requirements. Site owners for 16 of the sites responded that either the site does not have a need for material or they are currently receiving dredged material from other sources (Table 4).

Site capacity calculations were then performed for the 20 beaches that indicated a need for material. The factors taken into consideration during the calculations, assumptions related to the handling and

placement of material, and the calculated site capacities are presented in Table 5. In addition, potential maximum capacities for the 41 beaches that did not respond to the phone interview, but may have a need for material, were also calculated by assuming the maximum material depth feasible at each site (Table 6). Owners for these sites should be contacted to confirm actual need or available capacity.

Summary fact sheets presenting the site-specific information collected during the phone interviews for the 31 upland sites that could potentially accept dredged material are presented in Appendix C. Any county and municipal land parcel information that was gathered during the data collection task is also included.

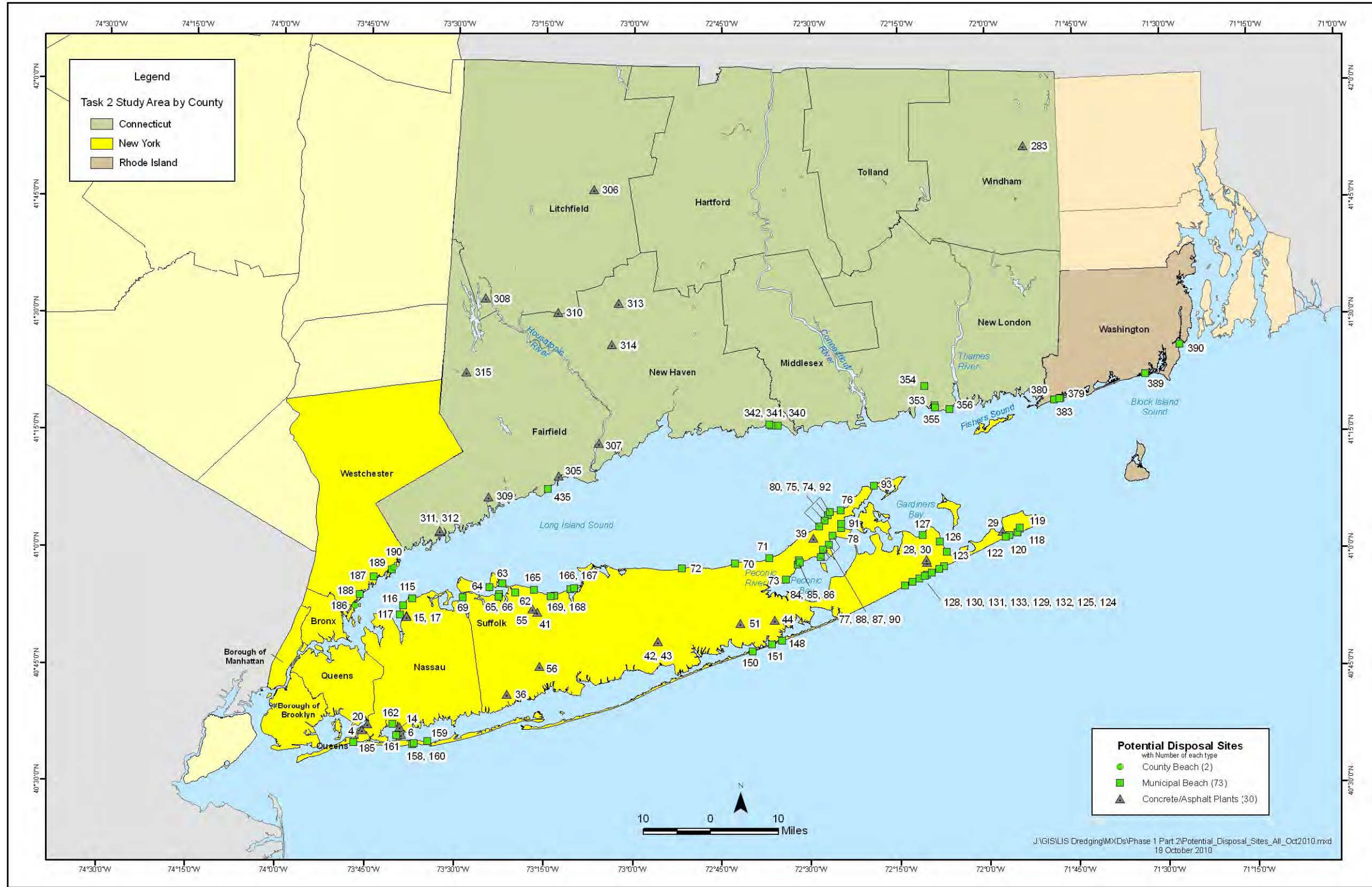


Figure 3. Location and Type of Smaller Potential Upland and Beneficial Use Sites Evaluated During Phase 1A.

Note: The number of each type of potential disposal site is listed in parentheses in the map legend.

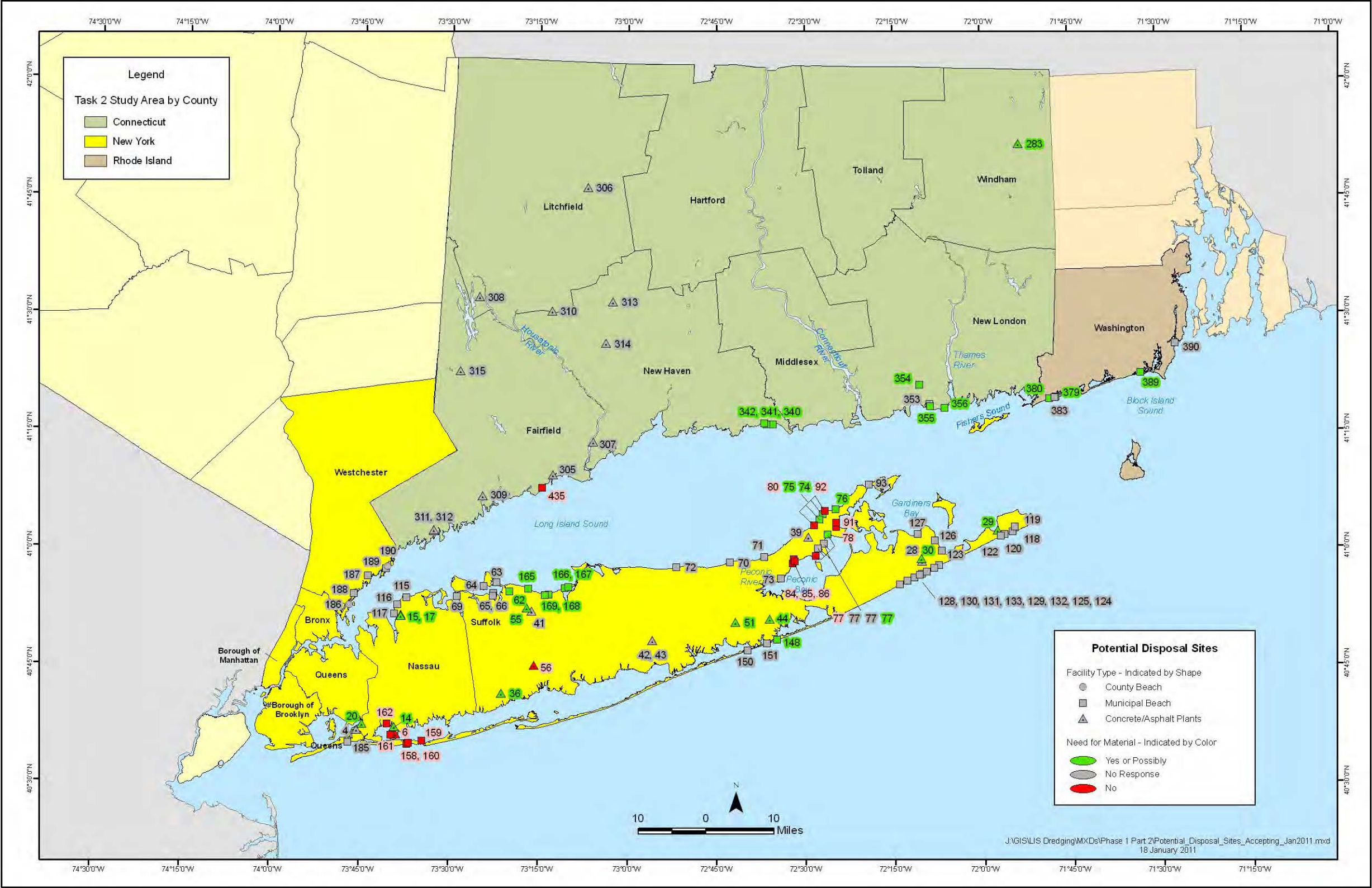


Figure 4. Need for Dredged Material by Smaller Potential Upland and Beneficial Use Sites Based on Phone Interviews Conducted for Phase 1A Study.

Table 4. Response Status and Need for Material for Smaller Upland/Beneficial Use Sites Retained After Initial Screening.

State	Category	Town	Site ID	Site Name	Phone Call Outcome	Need For Material	Comments
NY	Concrete Plant / Asphalt Plant	Inwood	4	ADA Construction Corp.	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. Material Requirements: Can take any type of material as long as it is not contaminated. Timeframe: Unknown.
NY	Concrete Plant / Asphalt Plant	Island Park	6	Bruce DiGiovanni Gen Contr. Inc.	16	No	Already got fill material to level his property, which is storage for cars and trucks. Did not want to answer any questions, and then changed his mind. We started the survey but then he said he was all set and did not want to complete the survey.
NY	Concrete Plant / Asphalt Plant	Oceanside	14	JP Equipment Contracting	16	Yes	They have 7 acres in Kings Park that can handle material.
NY	Concrete Plant / Asphalt Plant	Glen Cove	15	Nassau Ready Mix Corp.	16	Yes	
NY	Concrete Plant / Asphalt Plant	Glen Cove	17	Rason Asphalt Inc. - Glen Cove	16	Yes	Has location south side that would be better if not LIS work
NY	Concrete Plant / Asphalt Plant	Inwood	20	South Island Industries Inc	16	Yes	
NY	Concrete Plant / Asphalt Plant	East Hampton	28	Bistrian Gravel Corp.	02	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 5-10 million cubic yards. Material Requirements: Clean sand. Timeframe: Anytime.
NY	Concrete Plant / Asphalt Plant	Montauk	29	Bistrian Materials, Inc.	16	Yes	Mining Operation at 1065 Flanders Road, Southampton, NY. 17.5 acres in residential area. Depressed area - mining and resale of material. Mining permit.
NY	Concrete Plant / Asphalt Plant	East Hampton	30	Bistrian Materials, Inc.	16	Yes	No immediate water access.
NY	Concrete Plant / Asphalt Plant	Lindenhurst	36	Nicolia Ready Mix Concrete	03	Yes	
NY	Concrete Plant / Asphalt Plant	Cutchogue	39	Corazzini Asphalt Inc.	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 10,000 cubic yards/year. Material Requirements: Sand or gravel. Timeframe: Anytime.
NY	Concrete Plant / Asphalt Plant	Kings Park	41	D'Agostino Brothers Enterprises, Inc.	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. Material Requirements: DEC-approved sand and gravel. Timeframe: Unknown.
NY	Concrete Plant / Asphalt Plant	Yaphank	42	DeChiaro Associates Corp. (Lot 2 & 2A)	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 500,000 tons/year. Material Requirements: DEC-approved sand and gravel. Timeframe: Anytime.
NY	Concrete Plant / Asphalt Plant	Yaphank	43	DeChiaro Associates Corp. (Lot 4 & 4A)	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 500,000 tons/year. Material Requirements: DEC-approved sand and gravel. Timeframe: Anytime.
NY	Concrete Plant / Asphalt Plant	East Quogue	44	East Coast Mines	16	Yes	
NY	Concrete Plant / Asphalt Plant	Speonk	51	Hampton Sand Corp.	16	Yes	Concerns about the condition of material and potential to ruin site. Estimated they could handle 1 - 2 million yards of material. Property is currently for sale. Maybe 70 acres available for material.
NY	Concrete Plant / Asphalt Plant	Kings Park	55	Izzo Brothers Material, Inc.	16	Yes	Very interested in the final outcome. Would love to have additional materials sent to him if relevant. Might call Michael Keegan for details on the DMMP.
NY	Concrete Plant / Asphalt Plant	Bayshore	56	Kenneth P. Edwards Inc.	16	No	Not accepting any material. At capacity, only 1 1/2 acre site. Recommended we contact Roanoke Sand and Gravel, Co. Jim Barker. 631-924-4100 ext. 105. They have a dock and a mine.
NY	Beach (Municipal)	Huntington	62	Crabmeadow Beach	16	Yes	
NY	Beach (Municipal)	Huntington	63	Asharoken Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. Material Requirements: High quality sand. Timeframe: Three beaches need renourishing annually. Renourishment usually done around March.
NY	Beach (Municipal)	Huntington	64	Hobart Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. Material Requirements: High quality sand. Timeframe: Three beaches need renourishing annually. Renourishment usually done around March.
NY	Beach (Municipal)	Huntington	65	Centerport Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. Material Requirements: High quality sand. Timeframe: Three beaches need renourishing annually. Renourishment usually done around March.
NY	Beach (Municipal)	Huntington	66	Fleet's Cove Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. Material Requirements: High quality sand. Timeframe: Three beaches need renourishing annually. Renourishment usually done around March.
NY	Beach (Municipal)	Huntington	69	West Neck Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. Material Requirements: High quality sand. Timeframe: Three beaches need renourishing annually. Renourishment usually done around March.

Table 4. Response Status and Need for Material for Smaller Upland/Beneficial Use Sites Retained After Initial Screening (cont.).

State	Category	Town	Site ID	Site Name	Phone Call Outcome	Need For Material	Comments
NY	Beach (Municipal)	Riverhead	70	Reeves Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown, but aerial photography and GIS could be used to estimate amounts needed. Material Requirements: Sand (aesthetics are important since sand is for private beaches; no 'grey' sand, for example). Timeframe: Anytime.
NY	Beach (Municipal)	Riverhead	71	Iron Pier Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown, but aerial photography and GIS could be used to estimate amounts needed. Material Requirements: Sand (aesthetics are important since sand is for private beaches; no 'grey' sand, for example). Timeframe: Anytime.
NY	Beach (Municipal)	Riverhead	72	Wading River Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown, but aerial photography and GIS could be used to estimate amounts needed. Material Requirements: Sand (aesthetics are important since sand is for private beaches; no 'grey' sand, for example). Timeframe: Anytime.
NY	Beach (Municipal)	Riverhead	73	South Jamesport Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown, but aerial photography and GIS could be used to estimate amounts needed. Material Requirements: Sand (aesthetics are important since sand is for private beaches; no 'grey' sand, for example). Timeframe: Anytime.
NY	Beach (Municipal)	Southold	74	McCabe's Beach	16	Yes	
NY	Beach (Municipal)	Southold	75	Kenny's Beach	16	Yes	
NY	Beach (Municipal)	Southold	76	Town Beach	16	Yes	As we bulkhead LIS, natural beach nourishment is no longer available. Town Beach #76 will be gone in 10-15 years.
NY	Beach (Municipal)	Southold	77	New Suffolk Beach	16	No	
NY	Beach (Municipal)	Southold	78	Goose Creek Beach	16	No	
NY	Beach (Municipal)	Southold	80	Goldsmith Inlet Beach	16	No	
NY	Beach (Municipal)	Southold	84	Mattituck Park District Beach ("Yacht Club Property")	16	No	No dredge material needed.
NY	Beach (Municipal)	Southold	85	Bay Avenue Park Beach	16	No	No dredge material needed.
NY	Beach (Municipal)	Southold	86	Veterans Memorial Park Beach	16	No	No dredge material needed.
NY	Beach (Municipal)	Southold	87	Nassau Point Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: For example, 15,000 cubic yards covers 100 linear yards of beach. Southold has approx. 25 linear miles of beachfront on LIS alone (not to mention Peconic Bay beachfront). So they would need a lot. Material Requirements: Clean sand. Timeframe: Anytime.
NY	Beach (Municipal)	Southold	88	Pequash Avenue Beach (Fleets Neck Beach)	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: For example, 15,000 cubic yards covers 100 linear yards of beach. Southold has approx. 25 linear miles of beachfront on LIS alone (not to mention Peconic Bay beachfront). So they would need a lot. Material Requirements: Clean sand. Timeframe: Anytime.
NY	Beach (Municipal)	Southold	89	Triangle Park Beach	16	Removed from list- a park, not a beach	Upland Park - Remove from inventory
NY	Beach (Municipal)	Southold	90	Emerson Park Beach	16	Yes	Prior authorization needed. Clean sand. Unknown quantity.
NY	Beach (Municipal)	Southold	91	Founder's Landing Beach	16	No	Not available
NY	Beach (Municipal)	Southold	92	Horton's Point Lighthouse Park Beach	16	No	Not available
NY	Beach (Municipal)	Southold	93	Truman's Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: For example, 15,000 cubic yards covers 100 linear yards of beach. Southold has approx. 25 linear miles of beachfront on LIS alone (not to mention Peconic Bay beachfront). So they would need a lot. Material Requirements: Clean sand. Timeframe: Anytime.
NY	Beach (Municipal)	Glen Cove	115	Prybil Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Not sure - 2-3,000 cubic yards - three public beach that could use some sand. Material Requirements: Clean sand fill. Timeframe: As soon as possible.
NY	Beach (Municipal)	Glen Cove	116	Crescent Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Not sure - 2-3,000 cubic yards - three public beach that could use some sand. Material Requirements: Clean sand fill. Timeframe: As soon as possible.

Table 4. Response Status and Need for Material for Smaller Upland/Beneficial Use Sites Retained After Initial Screening (cont.).

State	Category	Town	Site ID	Site Name	Phone Call Outcome	Need For Material	Comments
NY	Beach (Municipal)	Glen Cove	117	Morgan Park Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Not sure - 2-3,000 cubic yards - three public beach that could use some sand. Material Requirements: Clean sand fill. Timeframe: As soon as possible.
NY	Beach (Municipal)	East Hampton	118	Ditch Plain Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: No list - Response "wow - a lot". Material Requirements: Various types, only condition approved from state DEC. Timeframe: Now - immediate.
NY	Beach (Municipal)	East Hampton	119	East Lake Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: No list - Response "wow - a lot". Material Requirements: Various types, only condition approved from state DEC. Timeframe: Now - immediate.
NY	Beach (Municipal)	East Hampton	120	Essex Street Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: No list - Response "wow - a lot". Material Requirements: Various types, only condition approved from state DEC. Timeframe: Now - immediate.
NY	Beach (Municipal)	East Hampton	122	Kirk Park Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: No list - Response "wow - a lot". Material Requirements: Various types, only condition approved from state DEC. Timeframe: Now - immediate.
NY	Beach (Municipal)	East Hampton	123	Alberts Landing Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: No list - Response "wow - a lot". Material Requirements: Various types, only condition approved from state DEC. Timeframe: Now - immediate.
NY	Beach (Municipal)	East Hampton	124	Atlantic Avenue Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: No list - Response "wow - a lot". Material Requirements: Various types, only condition approved from state DEC. Timeframe: Now - immediate.
NY	Beach (Municipal)	East Hampton	125	Indian Wells Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: No list - Response "wow - a lot". Material Requirements: Various types, only condition approved from state DEC. Timeframe: Now - immediate.
NY	Beach (Municipal)	East Hampton	126	Louse Point Town Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: No list - Response "wow - a lot". Material Requirements: Various types, only condition approved from state DEC. Timeframe: Now - immediate.
NY	Beach (Municipal)	East Hampton	127	Maidstone Park Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: No list - Response "wow - a lot". Material Requirements: Various types, only condition approved from state DEC. Timeframe: Now - immediate.
NY	Beach (Municipal)	East Hampton	128	Beach Lane Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: No list - Response "wow - a lot". Material Requirements: Various types, only condition approved from state DEC. Timeframe: Now - immediate.
NY	Beach (Municipal)	East Hampton	129	Egypt Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Don't know - 20-30 cy from 7 different waterways, NRC doing study at Montauk. Material Requirements: Currently - permits would state "beach compatible" Natural resources department would inspect if any question of material, DEC permits required for residents. Timeframe: Wanted to start last year (would purchase a small dredge); ready to go now and will need [material].
NY	Beach (Municipal)	East Hampton	130	Georgica Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Don't know - 20-30 cy from 7 different waterways, NRC doing study at Montauk. Material Requirements: Currently - permits would state "beach compatible" Natural resources department would inspect if any question of material, DEC permits required for residents. Timeframe: Wanted to start last year (would purchase a small dredge); ready to go now and will need [material].
NY	Beach (Municipal)	East Hampton	131	Main Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Don't know - 20-30 cy from 7 different waterways, NRC doing study at Montauk. Material Requirements: Currently - permits would state "beach compatible" Natural resources department would inspect if any question of material, DEC permits required for residents. Timeframe: Wanted to start last year (would purchase a small dredge); ready to go now and will need [material].

Table 4. Response Status and Need for Material for Smaller Upland/Beneficial Use Sites Retained After Initial Screening (cont.).

State	Category	Town	Site ID	Site Name	Phone Call Outcome	Need For Material	Comments
NY	Beach (Municipal)	East Hampton	132	Two Mile Hollow Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Don't know - 20-30 cy from 7 different waterways, NRC doing study at Montauk. Material Requirements: Currently - permits would state "beach compatible" Natural resources department would inspect if any question of material, DEC permits required for residents. Timeframe: Wanted to start last year (would purchase a small dredge); ready to go now and will need [material].
NY	Beach (Municipal)	East Hampton	133	Wiborg Beach	03	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Don't know - 20-30 cy from 7 different waterways, NRC doing study at Montauk. Material Requirements: Currently - permits would state "beach compatible" Natural resources department would inspect if any question of material, DEC permits required for residents. Timeframe: Wanted to start last year (would purchase a small dredge); ready to go now and will need [material].
NY	Beach (Municipal)	Southampton	148	Quogue Village Beach	16	Yes	Just underwent a complete reconstruction in March 2010. Beach was wiped out in November 2009 storms
NY	Beach (Municipal)	Southampton	150	Lashley Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. Material Requirements: Clean sand. Timeframe: Unknown.
NY	Beach (Municipal)	Southampton	151	Rogers Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. Material Requirements: Clean sand. Timeframe: Unknown.
NY	Beach (Municipal)	Hempstead	158	Lido West Town Park Beach	16	No	Allocated to receive dredge material from Army Corps projects-Manhattan District
NY	Beach (Municipal)	Hempstead	159	Town Park at Point Lookout	16	No	Allocated to receive dredge material from Army Corps projects-Manhattan District
NY	Beach (Municipal)	Hempstead	160	Town Park at Sands	16	No	Allocated to receive dredge material from Army Corps projects-Manhattan District
NY	Beach (Municipal)	Hempstead	161	Harbor Isle Beach	16	No	Beaches are already scheduled to receive dredge material; Town conducts their own dredging and replenishment.
NY	Beach (Municipal)	Hempstead	162	Hewlett Point Park Beach	16	No	Beaches are already scheduled to receive dredge material; Town conducts their own dredging and replenishment.
NY	Beach (Municipal)	Smithtown	165	Callahan's Beach	16	Yes	Callahan Beach (#165) and Kings Park Bluff (#169) are most in need of dredge materials.
NY	Beach (Municipal)	Smithtown	166	Long Beach	16	Yes	Callahan Beach (#165) and Kings Park Bluff (#169) are most in need of dredge materials.
NY	Beach (Municipal)	Smithtown	167	Schubert's Beach	16	Yes	Callahan Beach (#165) and Kings Park Bluff (#169) are most in need of dredge materials.
NY	Beach (Municipal)	Smithtown	168	Short Beach	16	Yes	Callahan Beach (#165) and Kings Park Bluff (#169) are most in need of dredge materials.
NY	Beach (Municipal)	Kings Park	169	Kings Park Bluff Beach	16	Yes	Callahan Beach (#165) and Kings Park Bluff (#169) are most in need of dredge materials.
NY	Beach (Municipal)	Queens	185	Rockaway Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: > 1,000,000 cubic yards. Material Requirements: Sand. Timeframe: Anytime.
NY	Beach (County/State)	New Rochelle	186	Glen Island Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. The Parks Dept. used 23,000 tons of sand for one project in April 2007. Material Requirements: Clean sand. Timeframe: Unknown. Dependent on storms.
NY	Beach (Municipal)	Mamaroneck	187	Harbor Island Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. The Parks Dept. used 23,000 tons of sand for one project in April 2007. Material Requirements: Clean sand. Timeframe: Unknown. Dependent on storms.
NY	Beach (Municipal)	New Rochelle	188	Hudson Park Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. The Parks Dept. used 23,000 tons of sand for one project in April 2007. Material Requirements: Clean sand. Timeframe: Unknown. Dependent on storms.
NY	Beach (Municipal)	Rye	189	Oakland Beach/Rye Town Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. The Parks Dept. used 23,000 tons of sand for one project in April 2007. Material Requirements: Clean sand. Timeframe: Unknown. Dependent on storms.
NY	Beach (County/State)	Rye	190	Playland Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: Unknown. The Parks Dept. used 23,000 tons of sand for one project in April 2007. Material Requirements: Clean sand. Timeframe: Unknown. Dependent on storms.
CT	Concrete Plant / Asphalt Plant	Dayville	283	Killingly Asphalt products, LLC (Hot-Mix Asphalt Plant)	16	Yes	
CT	Concrete Plant / Asphalt Plant	Bridgeport	305	O&G Industries, Inc	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 1,000,000 tons. Material Requirements: Sand.
CT	Concrete Plant / Asphalt Plant	Harwinton	306	O&G Industries, Inc	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 1,000,000 tons. Material Requirements: Sand.

Table 4. Response Status and Need for Material for Smaller Upland/Beneficial Use Sites Retained After Initial Screening (cont.).

State	Category	Town	Site ID	Site Name	Phone Call Outcome	Need For Material	Comments
CT	Concrete Plant / Asphalt Plant	Milford	307	O&G Industries, Inc	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 1,000,000 tons. Material Requirements: Sand.
CT	Concrete Plant / Asphalt Plant	New Milford	308	O&G Industries, Inc	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 1,000,000 tons. Material Requirements: Sand.
CT	Concrete Plant / Asphalt Plant	Norwalk	309	O&G Industries, Inc	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 1,000,000 tons. Material Requirements: Sand.
CT	Concrete Plant / Asphalt Plant	Southbury	310	O&G Industries, Inc	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 1,000,000 tons. Material Requirements: Sand.
CT	Concrete Plant / Asphalt Plant	Stamford	311	O&G Industries, Inc	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 1,000,000 tons. Material Requirements: Sand.
CT	Concrete Plant / Asphalt Plant	Stamford	312	O&G Industries, Inc	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 1,000,000 tons. Material Requirements: Sand.
CT	Concrete Plant / Asphalt Plant	Waterbury	313	O&G Industries, Inc	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 1,000,000 tons. Material Requirements: Sand.
CT	Concrete Plant / Asphalt Plant	Beacon Falls	314	O&G Industries, Inc	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 1,000,000 tons. Material Requirements: Sand.
CT	Concrete Plant / Asphalt Plant	Danbury	315	O&G Industries, Inc	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 1,000,000 tons. Material Requirements: Sand.
CT	Beach (Municipal)	Madison	340	East Wharf Beach	16	Yes	
CT	Beach (Municipal)	Madison	341	West Wharf Beach	16	Yes	
CT	Beach (Municipal)	Madison	342	Surf Club Beach	16	Yes	
CT	Beach (Municipal)	Waterford	353	Jordan Cove Beach	02	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 1500 sq. ft beach front property, worst case scenario (large hurricane) whole area. Material Requirements: Clean as possible; analytical testing (state requirement), conservation commissions would review. Timeframe:
CT	Beach (Municipal)	Waterford	354	Kiddie Beach	16	Yes	
CT	Beach (Municipal)	Waterford	355	Pleasure Beach	16	Yes	
CT	Beach (Municipal)	Waterford	356	Waterford Beach Park	16	Yes	
RI	Beach (Municipal)	Westerly	379	Westerly Town Beach	16	Yes	
RI	Beach (Municipal)	Westerly	380	Wuskenau (New Town) Beach	16	Yes	
RI	Beach (Municipal)	Westerly	383	Atlantic Beach Park	02	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 5,000-10,000 tons every 20 years. Material Requirements: The RI Coastal Resource Management Council must approve the material. Timeframe: Anytime. Material is needed on an annual basis to maintain the public beaches, which are eroding due to nor'easters. He predicts maintenance every year and a dune planting initiative within 5-10 years.
RI	Beach (Municipal)	South Kingstown	389	Town Beach	16	Yes	
RI	Beach (Municipal)	Narragansett	390	Town Beach	01	No Response	Expressed a need for material during the Phase 1 (2009) study. Estimated Quantity Needed: 20,000-30,000 pounds of material would be needed. Material Requirements: Does not know. Town would ultimately need to get permits from the RI Coastal Resource Mgmt. Council for using the material for beach renourishment. Timeframe: Continue replenishment on a yearly basis. He estimated the beaches lose 6-8 inches of material every year and mentioned the importance of maintaining the sand dunes.
CT	Beach (Municipal)	Fairfield	435	Penfield Beach	16	No	Facility manager questioned whether site should be on this list; no need for dredged material.

Shaded cells indicate sites that do not have a need for dredged material.

Phone Call Outcome	Description
01	Called contact >3 times without reaching them
02	Called contact <3 times without reaching them
03	Have spoken to contact, but waiting on more information from them
16	Completed survey over the phone

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Table 5. Site Capacity Assumptions, Considerations, and Volumes for Municipal Beach Sites Indicating a Need for Dredged Material.

Site ID	Area (sq ft) from polygons	Potential additional area ¹	3-ft depth ² (CY)	5-ft Depth ^{2,3,4} (CY)	10-ft Depth ^{2,3,4} (CY)
62	238,700	108,000 sf tidal area	27,000	45,000	N/A
74	30,000	N/A	4,000	6,000	see note ⁵
75	78,600	N/A	9,000	15,000	see note ⁵
76	95,000	N/A	11,000	18,000	see note ⁵
90	189,400	N/A	22,000	36,000	n/a
148	78,600	N/A	9,000	15,000	see note ^{5,6}
165	195,000	N/A	22,000	37,000	n/a
166	560,500	N/A	63,000	104,000	208,000
167	74,000	32,000 sf dune area	9,000	14,000	see note ⁵
168	1,100,000 ⁷	1,000,000 sf dune area	123,000	204,000	407,000
169	14,000	19,000 sf extend from outcrop to inlet	2,000	3,000	N/A
340	31,900	N/A	4,000	N/A	N/A
341	11,100 ⁸	N/A	2,000	N/A	N/A
342	99,000	N/A	11,000	19,000	N/A
354	5,200	N/A	1,000	N/A	N/A
355	80,500	N/A	9,000	15,000	N/A
356	165,493	N/A	19,000	31,000	62,000
379	65,164	N/A	8,000	13,000	25,000
380	629,700	N/A	70,000	117,000	234,000
389	111,000	45,000 sf dune area	13,000	21,000	42,000

sf = square feet; lf = linear feet

¹Areas were calculated based on surface of subaerial beach.

²Since the profile of these beaches is unknown, an even "lift" distribution (e.g., 3', 5', and 10') was assumed along the subaerial beach (e.g., above mean high water).

³Not all beach sites will tolerate a 5' or 10' depth of subaerial beach renourishment due to natural or man-made restrictions (breakwalls, or natural land outcrops), tidal/wave activity, or proximity of beach to parking, structures, or mooring areas.

⁴If equipment is available to place added sand along the entire beach profile (e.g., below surface water level), wave action should be considered in calculating the required distance for sand placement.

⁵For these beach sites, the 10' lift assumes offshore placement along beach profile (e.g. below surface water level) only. See note 4 for distance calculations.

⁶Observed current to east of beach sites may preclude offshore material placement.

⁷Width varies with beach (recreation area) need vs. rebuilding entire dune area. Assumed 300 ft depth for recreation area only. Dune shown in "additional area"

⁸Calculations included only the east side of parking lot. The beach area was extended from west breakwall 480 lf east to natural beach out crop.

Table 6. Estimated Maximum Site Capacity and Assumptions for Non-Responding Municipal Beach Sites.

Site ID	Area (sq ft) from polygons	Estimated Potential Maximum Capacity (CY) ^{1,2}	Assumed Maximum Material Depth (feet) ^{3,4}
63	381,000	43,000	3-foot depth
64	1,250,000	463,000	10-foot depth
65	2,600	1,000	3-foot depth
66	294,000	109,000	10-foot depth
69	107,000	20,000	5-foot depth
70	47,000	18,000	10-foot depth
71	78,000	29,000	10-foot depth
72	35,000	7,000	5-foot depth
73	335,000	63,000	5-foot depth
87	185,000	35,000	5-foot depth
88	11,000	2,000	3-foot depth
93	190,000	36,000	5-foot depth
115	104,000	20,000	5-foot depth
116	122,000	14,000	3-foot depth
117	103,000	12,000	3-foot depth
118	385,000	143,000	10-foot depth
119	8,300	1,000	3-foot depth
120	462,000	172,000	10-foot depth
122	450,000	167,000	10-foot depth
123	18,500	4,000	5-foot depth
124	388,000	144,000	10-foot depth
125	1,882,000	698,000	10-foot depth
126	356,000	66,000	5-foot depth
127	345,000	64,000	5-foot depth
128	1,170,000	217,000	5-foot depth
129	389,000	73,000	5-foot depth
130	135,000	26,000	5-foot depth
131	283,000	53,000	5-foot depth
132	314,000	59,000	5-foot depth
133	460,000	86,000	5-foot depth
150	177,000	33,000	5-foot depth
151	154,000	29,000	5-foot depth
185	1,840,000	341,000	5-foot depth
186	253,000	29,000	3-foot depth
187	116,000	13,000	3-foot depth
188	37,500	5,000	3-foot depth
189	449,000	50,000	3-foot depth
190	272,000	31,000	3-foot depth
353	32,300	4,000	3-foot depth
383	58,600	11,000	5-foot depth
390	570,000	212,000	10-foot depth

¹Owners of these sites did not complete the phone interview; therefore, an assessment of the potential maximum capacity for these sites was performed using available data (i.e., Google Earth imagery). The site owners should be contacted to confirm actual need or available capacity.

²Areas were calculated based on surface of subaerial beach.

³Since the profile of these beaches is unknown, an even "lift" distribution (e.g., 3', 5', and 10') was assumed along the subaerial beach (e.g., above mean high water).

⁴Not all beach sites will tolerate a 5' or 10' depth of subaerial beach renourishment due to natural or man-made restrictions (breakwalls, or natural land outcrops), tidal/wave activity, or proximity of beach to parking, structures, or mooring areas.

4.2 De-watering Sites

The initial list of smaller, de-watering sites identified for evaluation in this study consisted of 84 sites which were less than 10 acres in size. The complete list of all 84 locations, along with site contact and owner information, is presented in Appendix D, and the location of these sites is presented in Figure 5. Of the 84 smaller, de-watering sites identified, 53 were located in Connecticut, 25 in New York, and 6 in Rhode Island.

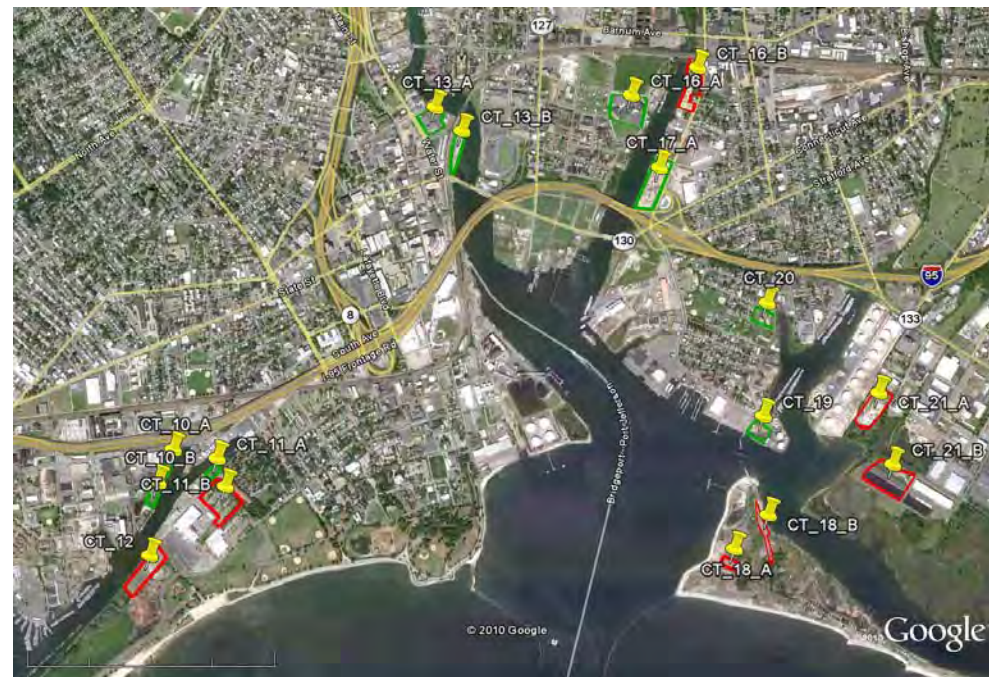
The initial screening process excluded 47 sites due to potential resource impacts and conflicting land uses, and resulted in an inventory of 37 potential sites for detailed evaluation (Appendix E). Most of the sites that were excluded during the initial screening were located in or adjacent to areas with significant or critical ecological habitats. Other sites were excluded because of conflicting land uses, mainly existing state, county, or municipal recreational or preserve land. Of the 37 sites retained after screening, 26 are located in Connecticut, 9 are located in New York, and 2 are located in Rhode Island. The locations of the retained sites are indicated by green symbols in Figure 5.

During review of municipal land records and on-line information to identify contact information for each site, two additional sites were excluded due to conflicting land uses. De-watering site CT-13-A is the current location of the Bridgeport Superior Court for Juvenile Matters and Detention Center, which opened in October 2008. De-watering site CT-16-A is the current location of the Waltersville Elementary School, which was completed in August 2008. De-watering site NY-20-B is the current location of a large warehouse and distribution facility for Anheuser Busch, and the parking lot is used for their fleet of freight trucks. Google Earth aerial imagery for most of the study area was updated during the summer of 2010, and this more recent information was used to confirm that these locations were no longer feasible. A comment was noted in the database, and these sites were removed from further consideration.

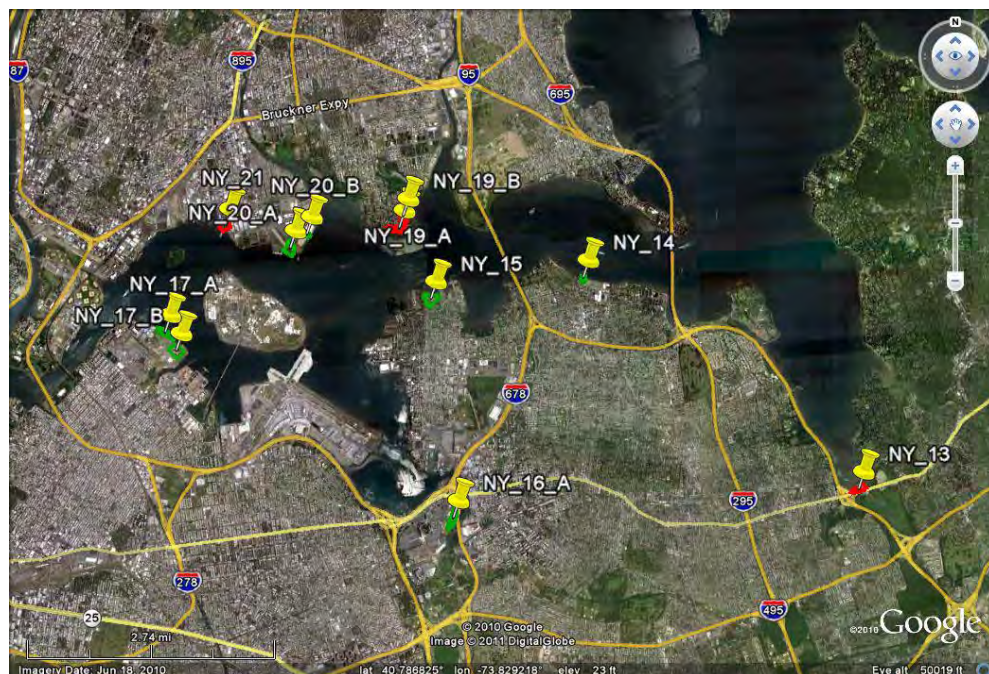
Phone interviews were completed for 71% of the 34 smaller de-watering sites retained after the initial screening (Table 7). Based on the results of the phone interviews, only 6 of the 24 sites interviewed were available for future de-watering operations (Figure 6; Table 7). A majority of the sites were not available due to future or on-going redevelopment or restoration activities at the site. In addition, because these sites are smaller in nature (less than 10 acres), there was inadequate space available at many of the sites to support de-watering operations in addition to the current site uses. These results demonstrate the high demand for coastal lands, and the limited availability of land to meet those needs.

An evaluation for each of the six available de-watering sites, as well as the 10 sites that did not complete the phone interview but may be available for de-watering operations, was then conducted to determine their potential capacity for dredged material de-watering. The assumptions, considerations, and projected site capacities for these sites are presented in Table 8. Many of the sites have a very limited capacity for dredged material storage given the small size of these sites. Fact sheets summarizing the information collected during the phone interviews for these six potential de-watering sites are included in Appendix F.

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Detailed view of potential de-watering sites near Bridgeport, CT.



Detailed view of potential de-watering sites within Bronx and Queens Counties.

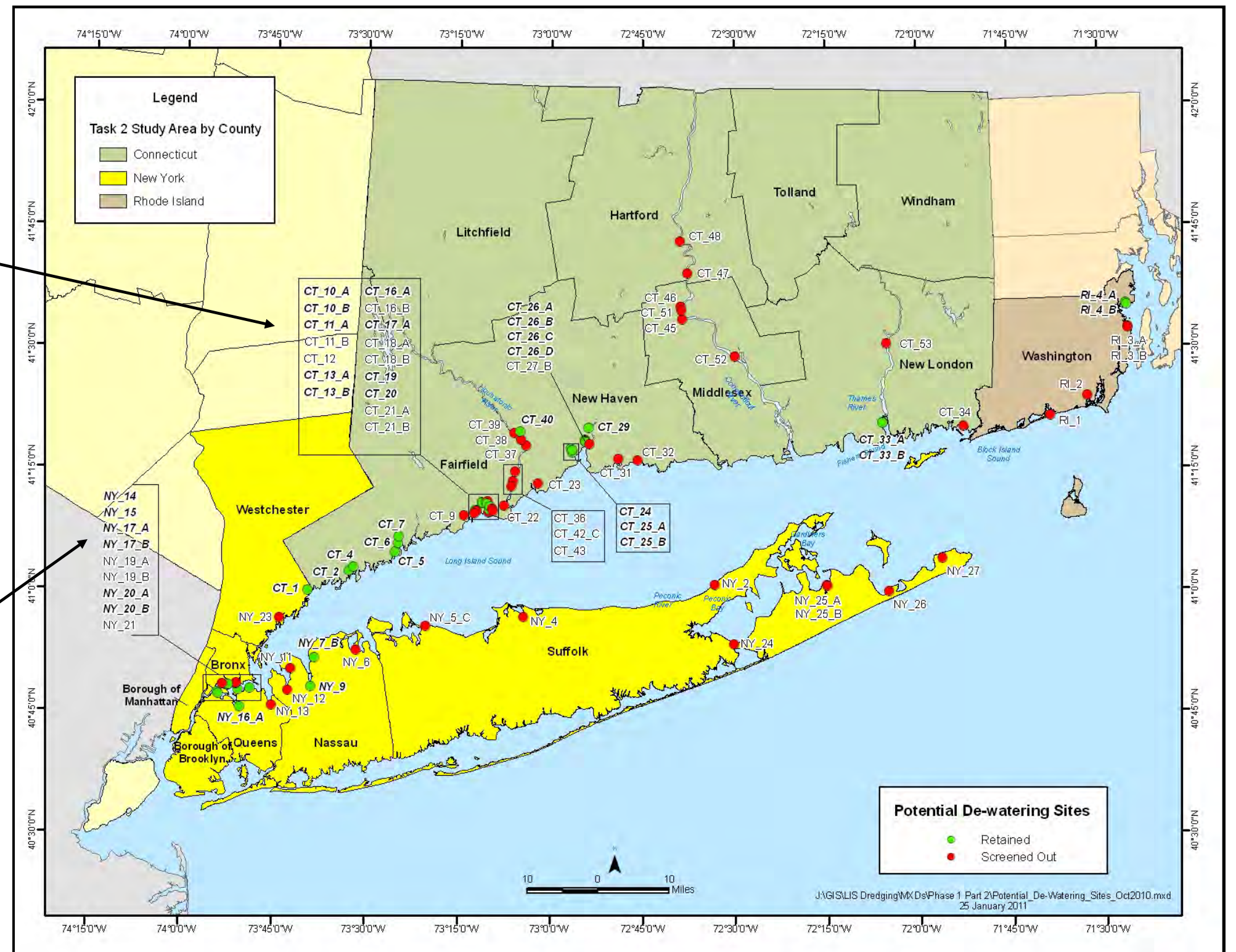


Figure 5. Location of Smaller Potential De-watering Sites and Results of Initial Screening.

Note: A red symbol indicates those sites that were eliminated during the initial screening and removed from consideration. Green symbols indicate potential de-watering sites that were retained. The labels for the retained sites are in bold italics.

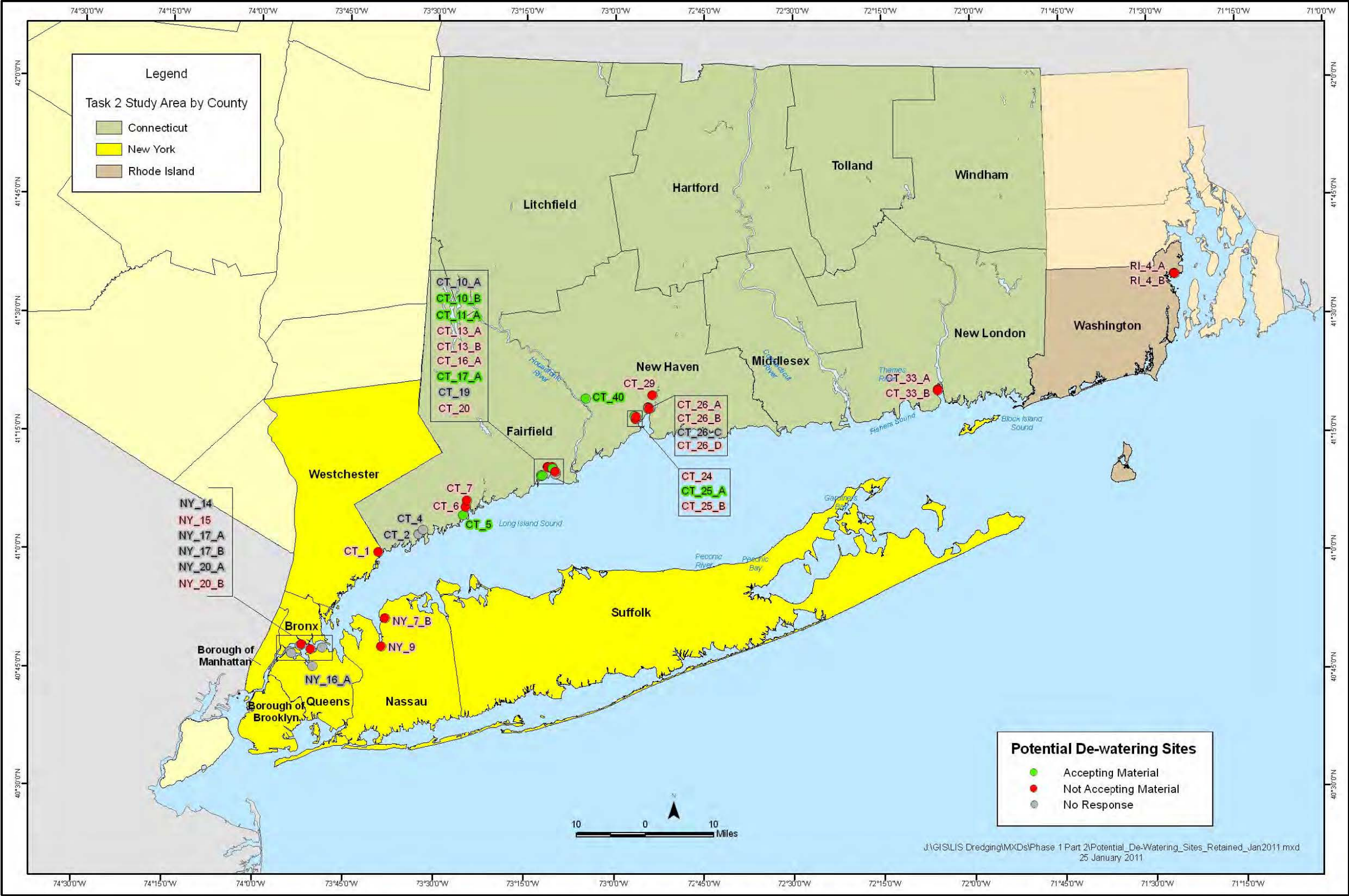


Figure 6. Smaller De-watering Sites and Their Availability to Accept Dredged Material Based on Phone Interviews.

Table 7. Response Status and Use Potential for Smaller De-watering Sites Retained After Initial Screening.

State	Town	Site ID	Site Address	Phone Call Outcome	Allow De-watering	Approx. Area (Acres)	Present Use	Comments on Use Potential of Site for De-watering
CT	Greenwich	CT-1	88 South Water Street	16	No	1.5		This property is currently being marketed to potential buyers. It is a residential development and there would be a substantial amount of additional development being done by the new buyer.
CT	Bridgeport	CT-10-A	450 Wordin Ave.	01	No Response	1.5	Vacant land	Michael Nidoh from City of Bridgeport Planning provided the following comments: this site has existing environmental conditions of unknown magnitude. Contaminated area.
CT	Bridgeport	CT-10-B	152 Howard Ave.	16	Yes	1.5	Vacant, available for rent. Looking for tenants.	Michael Nidoh of City of Bridgeport Planning provided the following comments: existing environmental conditions of unknown magnitude.
CT	Bridgeport	CT-11-A	1498 South Ave	16	Yes	1	No use - vacant land with a small building.	There would be an issue with trucking material out of this site. It is a very small site. Tilcon does not think it would be a feasible site for de-watering. Michael Nidoh of City of Bridgeport Planning provided the following comments: in residential neighborhood
CT	Bridgeport	CT-13-A	60 Housatonic Ave.		No	3.5		Current location of Bridgeport Superior Court for Juvenile Matters and Detention Center, opened October 2008. Not a suitable location.
CT	Bridgeport	CT-13-B	1 Stratford Ave.	16	No	2.5	Vacant land	In Downtown; flooding issues with 8' elevation; 345 kw power line across property; existing UI easement.
CT	Bridgeport	CT-16-A	150 Hallett St.		No	7		Current location of Waltersville Elementary School, completed in August 2008. Not a suitable location.
CT	Bridgeport	CT-17-A	1023, 1125, & 1225 Seaview Ave.	16	Yes	7	Process demolition concrete, asphalt, use for roadbase	O&G owns another site in Norwalk that is currently not operating, due to the economy. The Norwalk site would be promising as a de-watering site. It is on the water and has a crane. Michael Nidoh of City of Bridgeport Planning provided the following comments: in residential neighborhood. Another site in Stamford on Canal St. Does not operate in winter. April 1 – Nov. 30. Bulkheaded on water. Also Davenport Stamford on water. May be able to work out a deal for these sites.
CT	Bridgeport	CT-19	85 Seaview Ave.	03	No Response	2	Vacant land , unused, and available for rent	Michael Nidoh from City of Bridgeport Planning provided the following comments: site is comprised of two parcels (53 and 85 Seaview Ave.); it is located within a residential neighborhood; waterfront access is limited by pipelines.
CT	Stamford	CT-2	28 Southfield Ave	03	No Response	2.5		
CT	Bridgeport	CT-20	405 Central Ave.	16	No	2	Vacant land	This site has no waterfront access (it is on a mudflat), and is located in a residential neighborhood. Remediation activities are ongoing. The City of Bridgeport owns three sites at this location.
CT	West Haven	CT-24	Pent Road	16	No	7		This site was a de-watering site in 1991. It is a municipal site that is not available for other uses or by other parties. The city is building up the seawall to prepare the site for use as a municipal de-watering site.
CT	New Haven	CT-25-A	500 Ella T. Grasso Blvd.	16	Yes	5.5	Occupied with storage containers. Currently for sale.	The owner is currently in negotiations for contact with this property. The entire site may not be available in the future, but the new owner may be able to reserve part of the site for de-watering operations.
CT	New Haven	CT-25-B	808 Washington Ave	16	No	5.5	Laden-construction materials (9 year lease). Sims Material Mgmt (2018).	The property currently has two tenants: Laden (construction materials) has a 9 year lease, and Sims Metal Management has a lease until 2018. There is no space available for de-watering.
CT	New Haven	CT-26-A	409 East Street	16	No	3		This property is currently under contract.
CT	New Haven	CT-26-B	499 Grand Ave	16	No	0.5		This site is fully occupied; there is no available space for de-watering operations.
CT	New Haven	CT-26-C	510 Grand Ave	03	No Response	3		
CT	New Haven	CT-26-D	458 Grand Ave	16	No	1		This property was sold by the City of New Haven, and is being renovated by the new owner for lease for light industrial and commercial uses. There is not a lot of land on the site, and it will be needed for parking and loading for the prospective tenants. Property was sold by the City of New Haven to Erector Square LLC. The State of CT is paying for cleanup of site. Erector LLC will rehabilitate the building and use it as a commercial property.
CT	Hamden	CT-29	2061 State St.	16	No	5.5		The site was acquired for the construction of a bus facility and is not available. Construction is almost complete.
CT	New London	CT-33-A	Nameaug St.	16	No	7.5		This site is part of the Fort Trumbull Municipal Development area. It is under agreement and being redeveloped (designated hotel development). There is no water access at this site, there is a linear park with walkway along the entire coast of this area. The owner of this site does have another site that may be suitable on Howard Street if the material was trucked in. Another suggested site is the State Pier in New London. DOT- potential for material from west side of State Pier. Contact Maritime Division within DOT. Logistec is scheduling docking space.

Table 7. Response Status and Use Potential for Smaller De-watering Sites Retained After Initial Screening (cont.).

State	Town	Site ID	Site Address	Phone Call Outcome	Allow De-watering	Approx. Area (Acres)	Present Use	Comments on Use Potential of Site for De-watering
CT	New London	CT-33-B	Chelsea St.	16	No	2.5		This site is part of the Fort Trumbull Municipal Development area. It is under agreement and being redeveloped. The upland site is fully remediated and not suitable for dredged material. There is no water access at this site; there is a linear park with walkway along the entire coast of this area.
CT	Stamford	CT-4	Canal & Jefferson Streets	03	No Response	0.5		
CT	Derby	CT-40	Division Street	16	Yes	2	Process and fill operations (screening and crushing)	The City of Derby owns a small corner of land within the proposed de-watering site, which is part of a larger piece of land (30+ acres). The City would be excited to pursue a project to provide a location for LIS dredged material. However, there is some hesitation on the City’s part because Mayor Staffieri has spent the better part of 3 years securing funding for the construction of a road to open up badly needed land for development. The City is being cautious about the possibility of any disruption or interference in the construction of the road, but they could use the material on this parcel and their downtown piece. Sheila O’Malley, Economic Development, City of Derby, somalley@derbyct.gov
CT	Norwalk	CT-5	300 Wilson Ave	16	Yes	0.5	Waterfront building is rented to woodworkers, and potential lease for hockey rink with other building	314 Wilson Ave (15 Meadow Street) may be a more appropriate location for de-watering. The power plant on the point in Norwalk, CT may also be a suitable location for de-watering.
CT	Norwalk	CT-6	85 - 99 Water Street	16	No	0.5		This property is currently rented by a rowing club and is not available.
CT	Norwalk	CT-7	Jennings Place	16	No	1.5		FGB pavement currently rents this site for processing of rock and rubble. There is not enough space available on site for de-watering. Entire parcel owned by King Industries is filled by other businesses that lease the land.
NY	Queens	NY-14	151-17 Powells Cove Blvd.	02	No Response	2		
NY	Queens	NY-15	123-05 Lax Avenue	16	No	9		This site is under active construction of residential housing units (Powell Cove Estates). Construction will be completed in one or two years.
NY	Queens	NY-16-A	Roosevelt Avenue	03	No Response	6.5		
NY	Astoria	NY-17-A	3101 20th Avenue	03	No Response	6		
NY	Astoria	NY-17-B	3101 20th Avenue	03	No Response	9.5		
NY	Bronx	NY-20-A	800 Food Center Drive	03	No Response	8		
NY	Bronx	NY-20-B	510 Food Center Drive		No	2.5	Warehouse and distribution facility	This location is a large warehouse and distribution facility for Anheuser Busch. The parking lot is used for their fleet of large freight trucks and is not available for de-watering activities.
NY	Glen Cove	NY-7-B	63 Herb Hill Road	16	No	6	Superfund site- contaminated	A de-watering site would not work at this location. It is contaminated land being remediated and then flipped to a developer. They cannot use clean fill at this site either.
NY	North Hempstead	NY-9	1401 Old Northern Blvd	16	No	8		The owners of the site have been approved for a 78 unit condominium development but have been in litigation with the Village of Roslyn regarding the approval conditions. The approval conditions are to be overturned. The case should be resolved within the next six months, and the property will not be available after that time.
RI	North Kingstown	RI-4-A	61 Whitecap Drive	16	No	4		This parcel of land was purchased by Haywood Goldline for a 50,000 square foot building expansion and would not be available for other uses. The other half of the site is occupied by Hexagon building and parking. There is a field across Circuit Drive that may be suitable. It might be owned by Fuji Film or Hexagon.
RI	North Kingstown	RI-4-B	66 Whitecap Drive	16	No	2.5		This property is no longer vacant and is currently occupied by an office building. The owners of the land are working with Rhode Island Coastal Resource Management, and they have are investing money into the coastal buffer zone. There is no space available for de-watering operations.

Shaded cells indicate sites that are not available for de-watering

Phone Call Outcome	Description
01	Called contact >3 times without reaching them
02	Called contact <3 times without reaching them
03	Have spoken to contact, but waiting on more information from them
16	Completed survey over the phone

Table 8. Site Capacity Assumptions, Considerations, and Volumes for Smaller De-watering Sites Available to Receive Dredged Material.

Site ID	Approx. Area (Acres)	Present Use	Drainage or De-watering	Shore Stabilization	Paving or Impermeable Surface	Natural Resources	Navigation Access	Navigable Depth	Equipment Restrictions	Transfer Facilities	Considerations for Site’s Potential for Passive De-watering (Mechanical Dredging) ^{1,2}
CT-10-A*	1.5	Vacant	No	Yes	No	No	Yes	Unknown	Unknown	No	1) No on-site drainage (limits usable storage and requires permits to implement), 2) Site too narrow-limits equipment staging; 3) Navigation access -unknown draft, and 4) Existing shoreline stabilization. Potential capacity too limited.
CT-10-B	1.5	Vacant, available for rent. Looking for tenants.	No	Yes; no dock	No	No	Cedar Creek	17 ft, no bridge	None	Truck scale on site	1) No on-site drainage (limits usable storage and requires permits to implement), 2) Site too narrow – limits equipment staging; 3) Navigation access – unknown draft, and 4) Existing shoreline stabilization. Potential capacity too limited.
CT-11-A	1	No use - vacant land with a small building.	Catch basin that drains to Cedar Creek	Bulkhead in fair condition and steel sheathing	Partially paved	Not aware of any	Cedar Creek. No dock, but there is a bulkhead	Do not know	City of Bridgeport may have restrictions.	Truck scale on site. Built as a scale house.	1) No on-site drainage (limits usable storage and requires permits to implement), 2) Unknown draft for navigation, 3) Bulkhead available, and 4) parcel size may be insufficient for equipment/materials (existing scale house limits site use); and 5) dredged material storage very limited (approximately 1,000 cy) ³
CT-17-A	7	Process demolition concrete, asphalt, use for roadbase	Stormwater is contained on site; no discharge. Retention basin located on south end of site.	Bulkhead, no detention needed in last 5 years.	Partially paved (50%)	None. Need assurances that the material will not contaminate the site	On water, no docks. bulkhead at one end.	Do not know	Have brought in barges and cranes in the past. Need to double check with employee in charge of zoning issues.	Bulkhead	1) On-site drainage/retention (however condition is unknown; included a setback of 25’ from existing drainage system boundaries), 2) Site is reportedly navigable, 3) Bulkhead available, 4) Site capacity approximately 16,000 cy (3’); 20,700 cy (4’)
CT-19*	2	Vacant – overflow parking from neighboring site*	There does not appear to be any on-site storage*	Pipeline (maybe natural gas) adjacent to river boundary*	Grass*						1) No on-site drainage (limits usable storage and requires permits to implement), 2) Site too narrow – limits equipment staging; 3) Navigation access -unknown draft, and 4) Existing shoreline is lined with (natural gas) pipeline. Potential capacity too limited.
CT-2*	2.5	Construction stockpiling*	There does not appear to be any on-site drainage. Adjacent lots are paved*	Landlocked*	Partially paved*		No*				1) No on-site drainage (limits usable storage and requires permits to implement), 2) Site too narrow – limits equipment staging; 3) Navigation access - unknown draft and bridge clearance, and 4) Shoreline contains bulkhead. Potential capacity too limited.
CT-25-A	3	The owner is currently in negotiations on a contract for this property. The entire site may not be available in the future.	Do not know	No bulkhead	Partially paved/dirt	None		Do not know	No equipment on site.	No	1) No on-site drainage/retention (has not been confirmed [if installation of drains/retention is necessary, limits usable storage and requires permits to implement]), 2) Unknown if site is navigable, 3) No bulkhead, 4) Good highway access, 5) Site under negotiations for lease/sale; future availability unknown, and 5) Site capacity is approximately 8,000 cy (3’); 10,800 cy (4’)
CT-26-C*	3			Yes			Yes – either side of parcel*	Highway bridge is located 1/2 mile south of site*			1) On-site drainage/retention has not been confirmed (if installation of drains/retention is necessary, limits usable storage and requires permits to implement), 2) Bulkhead/water access west and east, 3) Site capacity approximately 4,000 to 5,000 cy ¹
CT-4*	0.5	Parking lot, bounded by roadway and river*	Yes*	Existing shoreline stabilization is in disrepair*	Paved*						Site is too small; insufficient space for equipment staging or de-watering activities. Potential capacity is too limited.

Table 8. Site Capacity Assumptions, Considerations, and Volumes for Smaller De-watering Sites Available to Receive Dredged Material (cont.).

Site ID	Approx. Area (Acres)	Present Use	Drainage or De-watering	Shore Stabilization	Paving or Impermeable Surface	Natural Resources	Navigation Access	Navigable Depth	Equipment Restrictions	Transfer Facilities	Considerations for Site’s Potential for Passive De-watering (Mechanical Dredging) ^{1,2}
CT-40	3	Process and fill operations (screening and crushing)	Catch basin and tanks for rain runoff - drain to river		Road to property is only paved surface		None	At low tide: 2 ft, at high tide: 9 to 10 ft	7 am to 3:30 or 4:00 pm. Can work 24 hours (no restrictions)	None, but there are some down river	1) On-site drainage - condition unknown (catch basin and tanks for rain runoff - drain to river), 2) Limited navigation (high tide), 3) Town-owned land, 4) Existing use is process and fill operations. 5) No shore stabilization , 6) Conservation land may abut property (walking path), 7) Parcel size may be insufficient for equipment/materials; and 8) Dredge material storage very limited (approximately 1,500 cy)
CT-5	0.5	Waterfront building is rented to woodworkers, and potential lease for hockey rink with other building		None, some seasonal flooding	Paved parking	Abuts salt marsh	Yes, they would like to have the channel dredged.	Vessels can get in at high tide. At low tide there are mudflats and some channels.	None	None	1) No on-site drainage & susceptible to seasonal flooding (limits usable storage and requires permits to implement), 2) Adjacent channel requires dredging for access at low tide, 3) No shoreline stabilization and 4) Parcel size may be insufficient for equipment/materials/handling. Potential capacity too limited.
NY-14*	2	Vacant land*	There does not appear to be any on-site drainage or on-site detention*	Bulkhead and breakwater*	No*		Pier adjacent to the site*				1) On-site drainage/retention has not been confirmed (if installation of drains/retention is necessary, limits usable storage and requires permits to implement), 2) Site too narrow – limits equipment staging; and 3) Navigation access -unknown draft. Potential capacity too limited.
NY-16-A*	6.5	Crushing/gravel operations*	There does not appear to be any on-site drainage or on-site detention*	Landlocked*	No*		No*		Existing gravel operation; there may be zoning setback requirements from I-678*	None*	1) On-site drainage/retention has not been confirmed (if installation of drains/retention is necessary, limits usable storage and requires permits to implement), 2) Existing use appears to be gravel crushing operations, 3) Good highway access, 4) Site capacity approximately 7,000 to 10,000 cy.
NY-17-A*	6	Vehicle parking/storage*	There does not appear to be any on-site drainage. Adjacent lots are partially paved-- tank farm*	None - breakwall, not bulkhead*	Partially paved*		Yes*				1) On-site drainage/retention has not been confirmed (if installation of drains/retention is necessary, limits usable storage and requires permits to implement), 2) Existing use appears to be vehicle storage, 3) Good highway access, 4) Site capacity approximately 6,000 to 9,000 cy.
NY-17-B*	9.5	Material/vehicle abandoned*	There does not appear to be any on-site drainage. Adjacent lots are partially paved-- tank farm*	Appears to be landlocked; gas pipeline (easement) along perimeter*					There may be zoning setback requirements from tank farm*		1) On-site drainage/retention has not been confirmed (if installation of drains/retention is necessary, limits usable storage and requires permits to implement), 2) Existing use appears to be gravel crushing operations, 3) Unknown setback for adjacent tank farm, 4) Site capacity approximately 7,000 to 9,000 cy (3’); 9,000 to 11,000 cy (4’).
NY-20-A*	8	Parking lot, bounded by roadway and river*	There does not appear to be any on-site drainage or on-site detention*	None - breakwall, not bulkhead*							1) On-site drainage/retention has not been confirmed (if installation of drains/retention is necessary, limits usable storage and requires permits to implement), 2) Existing use appears to be parking lot, 3) Unknown setback for adjacent tank farm, 4) Site capacity approximately 9,000 to 11,000 cy.

*Owners of these sites did not complete the phone interview; therefore, an assessment of the potential maximum capacity for these sites was performed using available data (i.e., Google Earth imagery). The site owners should be contacted to confirm whether these sites are actually available and suitable for de-watering operations.

¹Amount of time necessary for de-watering operations will decrease and site capacity will increase if material is mechanically dewatered.

²Site capacity increases with implementation of mechanical de-watering.

³Dredged material capacity is constrained to 1,000 cy to allow for material handling and construction of drains/detention system. Cost of constructing drainage/retention may preclude usage.

⁵Site capacity calculations included a setback of 25' from existing drainage system boundaries, as viewed from aerial photographs. Equipment storage to be located (center of parcel) as shown in aerial photograph of existing site use.

5.0 CONCLUSIONS

5.1 Upland and Beneficial Use Site Conclusions

Based on the phone interviews conducted for this study, many coastal communities within the Long Island Sound region voiced a strong demand for material to renourish their eroding beaches. Dredged material could be used for rebuilding beaches and dunes if it meets site specific requirements, such as chemical composition, grain size, and other characteristics compatible with the naturally occurring beach material. Twenty of the 35 beaches that completed the phone interview indicated a need for material, with potential capacities for these sites ranging from 1,000 to 407,000 cubic yards (cy). There is likely additional need at the 41 beaches that did not provide site specific information during this study. Dredging proponents interested in using their dredged material for beach nourishment should coordinate with the responsible parties for each beach (Appendix A) regarding specific needs and site requirements. In addition, beach nourishment projects must comply with state and local regulatory requirements, including application for state and local permits.

In addition to beach nourishment projects, concrete and asphalt plants were also evaluated as potential beneficial use sites for dredged material from smaller non-Federal dredging projects in the Long Island Sound region. Eleven of the 12 concrete and asphalt plants interviewed expressed an interest in receiving dredged material, particularly clean, sandy material. There is likely additional need at the 18 concrete/asphalt plants that did not provide site specific information for this study. Tipping and/or user fees are usually charged to accept the material, and vary based on the amount and quality of the material. Advantages to using these types of sites are the existing infrastructure for handling and transporting material and the potential to process large volumes of material. Site capacity estimates for these sites (provided during the Phase 1 study) ranged from 10,000 cy to millions of cy per year. Dredging proponents will need to coordinate directly with site operators (Appendix A) to assess current available capacity, material requirements, and tipping/user fees.

5.2 De-watering Site Conclusions

Of the 84 smaller, de-watering sites identified for evaluation in this study, 47 were excluded from consideration due to potential resource impacts and conflicting land uses. From the 37 potential sites retained for detailed evaluation, only 6 of the 24 site owners interviewed would allow de-watering operations to occur, and only three of the sites have an acreage of three acres or more, making them marginally feasible for de-watering operations. The estimated site capacities for these six sites ranged from 1,000 to 20,700 cy. However, some of the sites that did not respond to the phone interview are larger (6 to 9.5 acres) and may warrant further investigation to determine if they are feasible de-watering sites. Maximum potential capacity for the non-responding sites ranged from 6,000 to 11,000 cy.

It is important to note that a majority of the sites investigated were not available due to future or on-going redevelopment or restoration activities. In addition, several of the sites that indicated they would allow de-watering operations are currently being rented or are under contract, and their future availability is not certain. Dredging proponents should contact the site owner directly (Appendix A) to assess the current availability of the site, whether de-watering is still acceptable to the site owner, and any rental fees for the use of the property. State and local regulatory requirements, such as permits for the handling of dredged material, permits for the discharge of extracted water, and local zoning and planning policies need to be considered when siting a de-watering facility.

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