

**SACO RIVER AND CAMP ELLIS BEACH**  
**SECTION 111 SHORE DAMAGE MITIGATION STUDY**

**APPENDIX I**

**PROJECT CONSTRUCTION AND  
MAINTENANCE HISTORY**



**SACO RIVER, SACO & BIDDEFORD**  
**PROJECT CONSTRUCTION & MAINTENANCE HISTORY**

<b><u>Work Dates</u></b>	<b><u>Work Accomplished</u></b>	<b><u>Quantities</u></b>
1824 - 1830	Initial Improvement with First Timber Crib Piers and Jetties	Unknown
1836	Construction of 12 Stone and Timber Crib Jetties in the River, Including Two Jetties at the River Mouth with Stone Beacons	Unknown
June 1867 – Oct 1868	Begin Reconstruction and Extension of the North Jetty	51,224 Tons Stone
FY 1867 – Sept 1867	Removal of Sunken Rock from Channel at Little Island	41 cy Rock
July 1868 – Aug 1868	Removal of Additional Sunken Rocks from the Channel at Little Island	Unknown
Aug 1869 – Nov 1869	Continue Construction of the North Jetty with Increased Length	11,705 Long Tons Stone
July 1870 – Oct 1870	Continue Construction of the North Jetty	4,652 Tons Stone
May 1871 – Aug 1871	Continue Construction of the North Jetty	7,273 Tons Stone
FY 1872	Placement of an Iron Spindle Daymarker on the Stone Dike at Cow Island	NA
Oct 1871 – Dec 1871	Improvement Dredging of the 5-Foot MLW Channel through the Bars at the Wharves at Biddeford	4,000 cy
Sept 1872 – Nov 1872	Rebuild the Old Training Pier at Ferry Narrows	Unknown
Nov 1872 – June 1873 (1874???)	Continue Construction of the North Jetty to Increase the Section at the Outer End	4,352 Long Tons Stone +9,725 Tons
May 1873 – July 1873	Rebuild the Old Training Pier at Jordans Point to 155 LF at +12 Feet MLW	Unknown
Aug 1873 – Sept 1873	Rebuild the Old Training Pier at Wards Point to 130 LF	Unknown
October 1873	Rebuild the Old Timber/Stone Training Pier #2	Unknown
May 1885 – Sept 1885	Begin Work to Raise and Tighten the North Jetty	10,775 Tons Stone

May 1887 – Oct 1887	Continue Work to Raise and Tighten the North Jetty	4,475 Tons Stone 6,484
Aug 1887 – Nov 1887	Improvement Dredging and Removal of Ledge to form 6-Foot Channel at Little Island	19,408 cy Plus 214 cy Rock
Nov 1887 – Dec 1887	Improvement Dredging in the 6-Foot Basin at the Head of Navigation	16,987 cy
June 1889 – July 1890	Continue Work to Raise and Tighten the North Jetty	12,084 Tons Stone
May 1889 – Aug 1890	Construction of Stone Dikes at Little Island and Cow Island	9,007 Tons Stone
April 1891 – Nov 1892	Begin Construction of Stone South Jetty	58,087 Tons Stone
Jan 1893 – Nov 1893	Construction of Two Stone Jetties above and below Cow Island	17,065 Tons Stone Plus 804 Brush Facines
Spring 1893 – Aug 1893	Continue Construction of Stone South Jetty (Now 4,500 LF)	3,327 Tons Stone
July 1894 – Aug 1894	Improvement Dredging of the 6-Foot Channel and Basin at Cow Island and Factory Island	44,175 cy
April 1895 – Nov 1895	Continue Construction of Stone South Jetty to Increase Elevation of Settled Sections	12,561 Tons Stone (N & S)
April 1895 – Nov 1895	Continue Work to Increase Elevation of 1,160 LF of Shore End of North Jetty (Breakwater)	Included in Above Total
Aug 1897 – Dec 1897	Continue Work to Increase Elevation of Shore End of North Jetty (Breakwater)	5,200 Tons Stone
June 1900 – July 1900	Repairs to the South Jetty	1,985 Tons Stone
FY 1910 & FY 1911	Repairs to Stone Beacons on the Ends of Jetties	Unknown
FY 1911 – Dec 1911	Repairs to Stone Dike at Cow Island	616 Tons Stone
FY 1911 – Dec 1911	Extension of Stone South Jetty by 600 LF	11,452 Tons Stone
FY 1912 – Dec 1911	Repairs to the North Jetty	2,748 Tons Stone
Oct 1911 – Aug 1912	Improvement Dredging of 7-Foot MLW River Channel and across the Entrance Bars	27,729 cy
FY 1912 – Oct 1912	Construction of Stone Spur Jetty 400 LF from	3,024 Tons Stone

	North Face of North Breakwater to Prevent Flanking	
July 1912 – Oct 1912	Construction of a Concrete Beacon on the South Jetty	Unknown
October 1912	Improvement Dredging of 7-Foot Channel through Entrance Bars	1,840 cy
July 1913 – Oct 1913	Removal of Ledge from the 7-Foot Channel at Little Island	192 cy Ledge
Sept 1913 – Oct 1913	Improvement Dredging of Hard Material from the 7-Foot Entrance Channel	1,200 cy
FY 1914	Placement of more Stone at Head of South Jetty	Unknown
August 1916	Maintenance Dredging of 7-Foot Channel across Entrance Bars	2,000 cy
Aug 1927 – Aug 1928	Improvement Dredging of 8-Foot Channel	56,000 cy Estimated
Oct 1927 – June 1930	Begin Work to Extend the North Jetty by 1,600 LF	28,168 Tons Stone Estimated
June 1930 – Sept 1930	Repairs to the Outer End of the South Jetty	1,500 Tons Stone Estimated
1933?????	Removal of Ledge from 8-Foot Channel at Twin Islands	487 cy Ledge Estimated
June 1935 – Sept 1935	Maintenance Dredging of 8-Foot Channel	88,429 cy
Oct 1935 – Nov 1935	Repairs to Raise the Inner End of the North Jetty to +15 Feet MLW where Storms Exposed Old Sections (R&H Act of 1884)	1,105 Tons Stone
Nov 1936 – April 1938	Work to Extend the North Jetty by 860 LF	6,875 Tons Stone
May 1938 – June 1938	Maintenance Dredging of 8-Foot Channel	92,464 cy
Sept 1938 – Nov 1938	Continue and Complete the 860 LF Extension of the North Jetty	6,750 Tons Stone
June 1939 – July 1939	Maintenance Dredging of 8-Foot Bar Entrance Channel by US Hopper Dredge	65,861 cy
March 1958 – June 1958	Repairs to Top of North Jetty Shore End to +15 Feet MLW where Erosion had Exposed Old Sections of the Structure buried by Beach	5,070 Tons Stone

Sept 1968 – March 1969	Repairs to the North and South Jetties and Raising of South Jetty and Revetment of Shore behind Jetties to Arrest Sand Movement	19,025 Tons Stone
July 1969 – Oct 1969	Improvement Dredging of the Two 6-Foot Lower Harbor Anchorage Areas	73,130 cy
July 1969 – Oct 1969	Maintenance Dredging of the 8-Foot Channel	87,354
Fall 1969	Additional Repairs and Backshore Revetment to the North & South Jetties	810 Tons Stone
April 1970 – March 1970	Removal of Unclassified Hard Material from the 8-Foot Channel to –10 Feet MLW	Unknown
Jan 1971 – March 1971	Repairs to the South Jetty	7,100 Tons Stone
June 1978 – Oct 1978	Maintenance Dredging of the 8-Foot Channel and 6-Foot Anchorage Areas	69,300 cy
Dec 1982 – Feb 1983	Improvement Dredging of Northeast (Outer) 6-Foot Anchorage and Construction of Steel Pile Icebreakers	7,300 cy
FY 1986	Replacement of Four Stone Daybeacon Markers on the Ends of the North and South Jetties. Future Maintenance to be by USCG.	Unknown
July 1992 – Aug 1992	Maintenance Dredging of the Upper 8-Foot Channel below Half-Tide Island by US Hopper Dredge <i>Currituck</i> and Disposal In-river	15,785 cy
Oct 1992 – March 1993	Maintenance Dredging of the 8-Foot Channel and Three Lower 6-Foot Anchorage Areas (Contract Terminated for Default)	26,464 cy
Oct 1993 – Dec 1993	Complete Maintenance Dredging of the 8-Foot Channel and Three Lower 6-Foot Anchorage Areas	19,378 cy