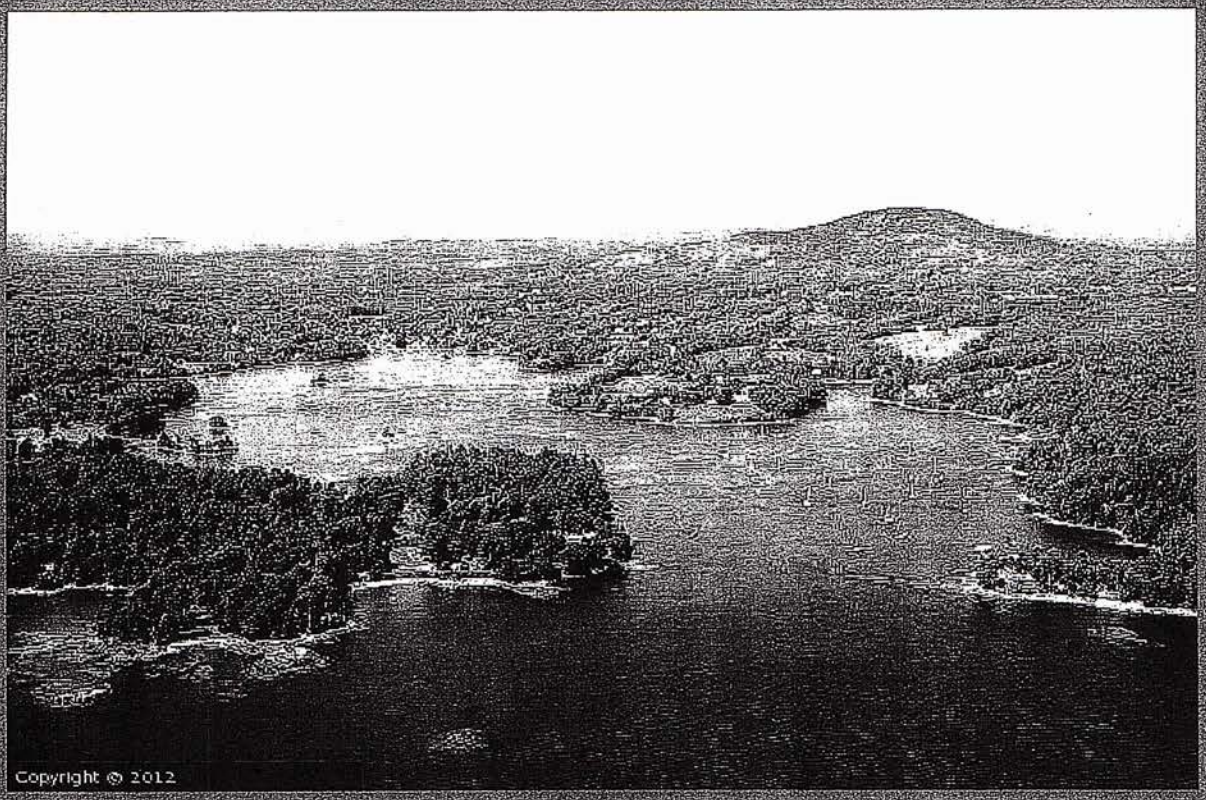
Initial Appraisal of Federal Interest
For Continuing Authority Feasibility Investigation
Section 107 Navigation Improvement Study

Blue Hill Harbor
Blue Hill, Maine



US ARMY CORPS
OF ENGINEERS
New England District

October 2013

DEPARTMENT OF THE ARMY
NORTH ATLANTIC DIVISION, CORPS OF ENGINEERS
FORT HAMILTON MILITARY COMMUNITY
GENERAL LEE AVENUE, BLDG 301
BROOKLYN, NY 11252

REPLY TO

CENAD-PD-CS

29 October 2013

MEMORANDUM FOR Commander, New England District, US Army Corps of Engineers, ATTN: CENAE-EP-PN

SUBJECT: Blue Hill Harbor, Maine, Continuing Authorities Program, Section 107, CWIS/P2#: 328230

1. Reference is made to the following:

   a. CENAE-EP-PN e-mail, dated 17 October 2013.

   b. CENAD-PSD-P memorandum, dated 24 October 2013.

2. The North Atlantic Division (Division) has reviewed the District's resubmission (Reference 1a) and has approved the initial appraisal (Reference 1b).

3. The District should mark the completion of this milestone in P2 and the CAP database of OFA. The Division will advise your staff once we receive a response from OASA (CW) concerning the policy fact sheet.

4. The point of contact for this action is Mr. Paul A. Sabalis, P.E., PMP. (NAD DST Manager). Mr. Sabalis may be reached at 347-370-4589.

Encl

PAUL A. SABALIS, P.E., PMP
District Support Team
Civil Works Integration Division

DEPARTMENT OF THE ARMY
NORTH ATLANTIC DIVISION, CORPS OF ENGINEERS
FORT HAMILTON MILITARY COMMUNITY
GENERAL LEE AVENUE, BLDG 301
BROOKLYN, NY 11252

REPLY TO

CENAD-PSD-P

24 October 2013

MEMORANDUM FOR Civil Works District Support Team (Sabalis)

SUBJECT: Blue Hill Harbor, ME – Initial Appraisal Report
Continuing Authorities Program, Section 107

1. Reference is made to the following:

a. CENAD-PD-CS memorandum, dated 17 October 2013, requesting review of NAE's revised Initial Appraisal Report, SAB.

b. CENAE-EP-PS e-mail, dated 17 October 2013, SAB.

c. CENAD-PSD-P memorandum, dated 23 September 2013, SAB.

2. CENAD-PD-CS has requested review (Reference 1a) of NAE's resubmission of the initial appraisal report and extent of compliance, SAB, for Division back-check review and approval (Reference 1b). Prior Division policy review comments are enclosed (Reference 1c).

3. At your request (Reference 1a), Planning staff has reviewed the NAE's revisions to their Initial Appraisal Report (Reference 1b) and has no remaining comments. The IAR is hereby approved.

4. The point of contact for this action is Ms. Naomi Fraenkel, AICP (NAE Planning Program Manager). Ms. Fraenkel may be reached at (917) 790-8615.

RECEIVED
10-25-13

JOSEPH R. VIETRI
Chief, Planning and Project Formulation
Programs Directorate

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

CENAE-EP-PN

13 August 2013

MEMORANDUM FOR Commander, U.S. Army Corps of Engineers, North Atlantic Division, ATTN: CENAD-PD-CID-P (Mr. Joseph Forcina), Fort Hamilton Military Community, 302 General Lee Avenue, Brooklyn, NY 11252-6700

SUBJECT: Continuing Authorities Initial Appraisal Report, Section 107, Blue Hill Harbor, Blue Hill, Maine (PWI # 328230)

1. Enclosed are four copies of the Initial Appraisal Report and Fact Sheet for the Blue Hill Harbor Navigation Improvement Project, Blue Hill, Maine, for your review and approval to proceed to the Feasibility Phase. The initial appraisal indicates that navigation improvements consisting of developing a Federal channel connecting the central Blue Harbor wharf with deep water are in the Federal interest, and provide the basis to prepare and negotiate a Feasibility Cost Sharing Agreement (FCSA). Execution of a FCSA with the Sponsor, the town of Blue Hill, Maine, is required to share the costs of the feasibility phase.

2. If you have any questions or require additional information, please contact me at (978) 318-8162, or Mr. Robert Russo, the Project Manager, at (978) 318- 8553.

FOR THE COMMANDER:

Scott E. Acone, P.E.
Chief, Engineering/Planning Division

Encls

Copy Furnished (w/o Encl):
Paul Sabalis, DST, NAD

NAVIGATION IMPROVEMENT STUDY
INITIAL APPRAISAL OF FEDERAL INTEREST

BLUE HILL HARBOR
BLUE HILL, MAINE

October 2013

Blue Hill Harbor
Blue Hill, Maine
Initial Appraisal of Federal Interest

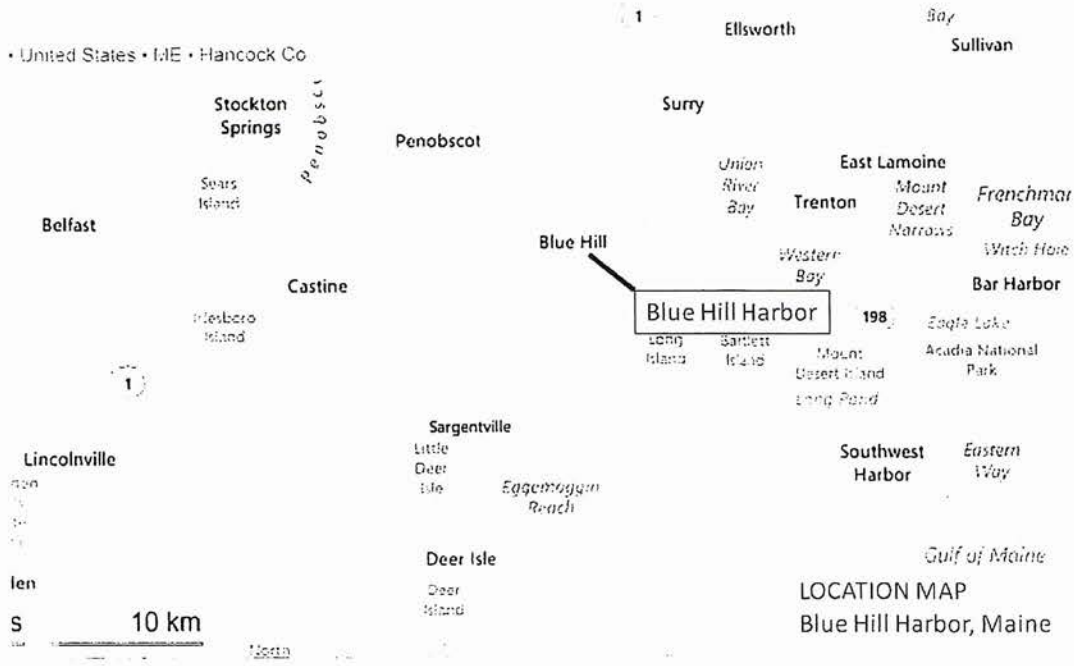
October 2013

1. **Project Name:** Blue Hill Harbor, Navigation Improvement Project, Blue Hill, Maine. Study Authorized under the Continuing Authority of Section 107 of the River and Harbor Act of 1960, as amended.

2. **Congressional District:** Maine – 2nd (Representative Michael Michaud)

3. **Project Purpose and Description:** The Town of Blue Hill, as part of its waterfront economic plan, requested the U.S. Army Corps of Engineers, New England District, to investigate the potential of establishing a federal channel and turning basin from the inner Blue Hill Harbor extending south-east into deep water. In partnership with the town of Blue Hill, this study investigated whether Federal participation in a feasibility study to provide navigation improvements for the harbor, was warranted.

   Blue Hill Harbor is the principal commercial fishing harbor of the Town of Blue Hill, located on the western shore of Blue Hill Bay in Hancock County, Maine. (See Blue Hill Harbor Location Map.) The harbor is located about 30 miles southeast of Bangor and 13 miles southwest of Ellsworth, Maine. Blue Hill Harbor is located off the northwest end of Blue Hill Bay just west-northwest of Long Island and due west of Union River Bay. The inner harbor contains the Town Wharf and docks which are dry at mean low water.



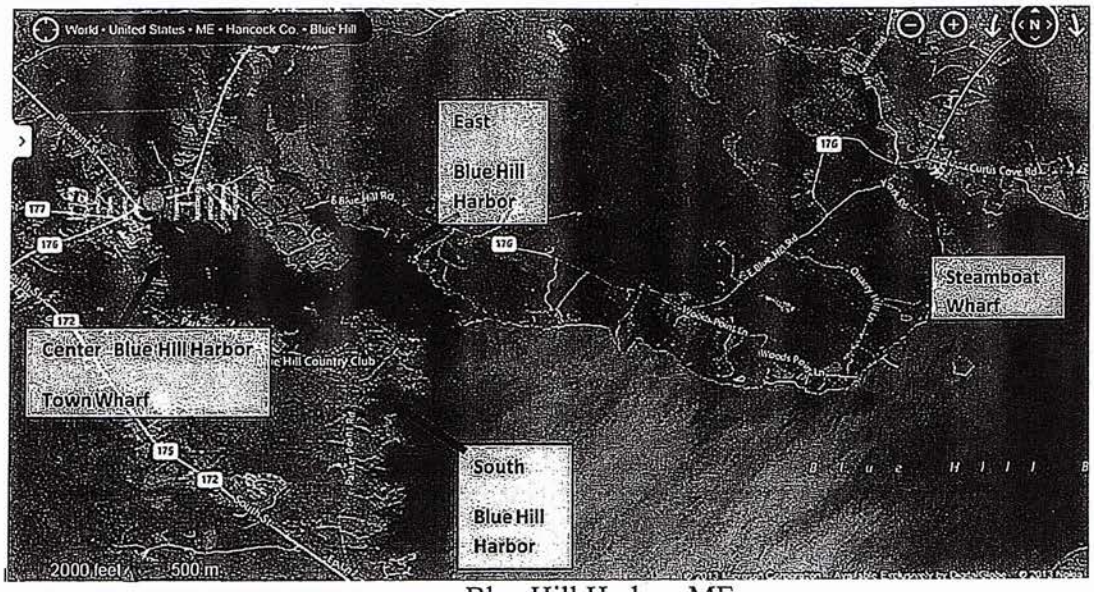
Blue Hill Harbor is home to a sizeable lobster fleet as well as numerous recreational craft and charter fishing boats, and other inshore and offshore commercial fishing craft, all served by two public landings, a fish pier, a marina, a boat club, and rental boat facilities.

4. **Existing Navigation Conditions, Problems and Opportunities:** The objective of this initial appraisal is to identify whether there is at least one potential solution to provide commercial fishermen with reliable and improved access to the facilities and berthing areas at Blue Hill Harbor.

Without improvement dredging to create a channel from central town wharf leading to deep water, fishermen scattered throughout Blue Hill Bay will continue to experience damaging winds and waves. The efficiency of fishing operations would continue to be hindered due to weather-related loading and offloading delays currently being experienced. The National Economic Development (NED) benefits to dredging a navigation channel for Blue Hill Harbor were estimated based on damages prevented to fishing vessels and the South Blue Hill wharf, as well as anticipated efficiencies gained by fishermen. The benefits assume that all commercial fishing loading and off-loading operations will relocate to the more protected wharf at the central Blue Hill Harbor. Three categories of benefits are estimated: damages prevented to commercial fishing vessels; reduced loading and off-loading delays; and reduced damages to the South Blue Hill Harbor infrastructure. NED benefits are defined as net changes in the value of the national output of goods and services. Since the Corps of Engineers is a Federal agency, navigational benefits are assessed from the national perspective. Only NED benefits are included in Corps benefit-cost analyses.

The wharf in central Blue Hill Harbor is rarely used since it is accessible at only the highest tides, generally only 3 hours per day. Currently, the primary commercial fishing area in the town is located in South Blue Hill Harbor, where most fishermen load supplies and sell their catch. In 2010, Blue Hill fishermen landed about 860,000 pounds of catch, including 788,000 pounds of live lobster. Other major species landed include crabs and scallops. In 2011, total landings were valued at nearly $3,000,000, please refer to Attachment 2, Economic Assessment.

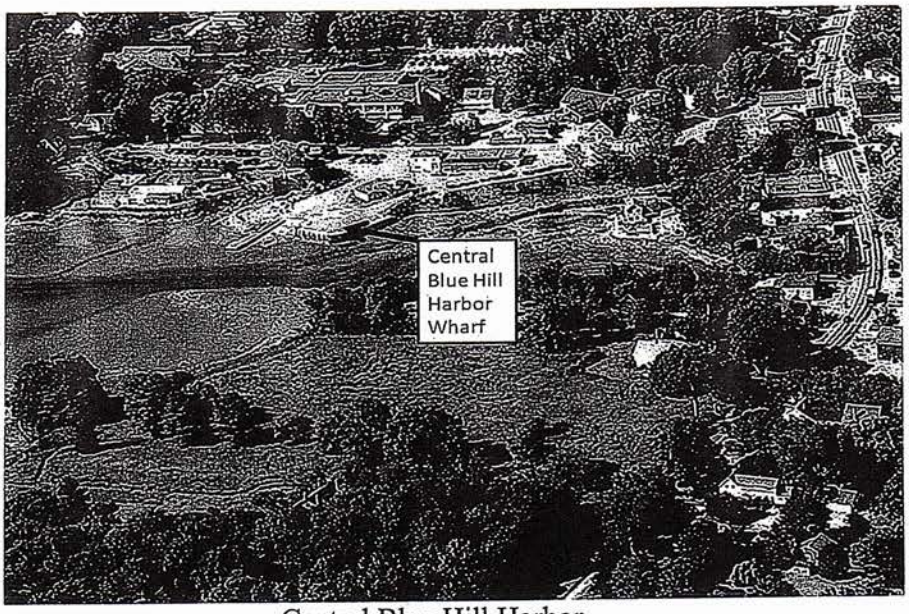
There are no slips or moorings in the area of the wharf in central Blue Hill Harbor. Commercial fishing vessels single-point moor primarily in South Blue Hill Harbor, East Blue Hill Harbor, and at various other locations around Blue Hill Bay. In total, there are 427 moorings in the bay, of which about 45 are commercial fishing vessels and the remainder is recreational vessels. All moorings are privately owned. There are 27 fishermen based at South Blue Hill Harbor, 6 at East Blue Hill Harbor, and 12 at an area known as Steamboat Wharf, refer to the below Vicinity Map. Due to seasonal harbor freeze over, Blue Hill full-time fishermen generally fish about 9 months a year, from March through late November. All commercial vessels moored in Blue Hill Harbor are lobster boats. The Harbormaster for Blue Hill indicated that the lobster boats moored throughout the various harbors of Blue Hill draw between 4 to 5 feet. Lobster boats lengths range from 22 to 42 feet in length. The majority of the fleet has an overall length of 40 feet.



Blue Hill Harbor, ME
Vicinity Map

Currently, without navigation improvements, full time access to the town wharf, fishermen who wish to fuel or offload must use the South Blue Hill Harbor wharf. South Blue Hill Harbor wharf offers no power or water service, nor does it have a fueling station. Fuel trucks deliver fuel directly to vessels pulled up at the dock. Supplies and catch are loaded and off-loaded while vessels are pulled up at either the dock or at barges moored nearby offshore. South Blue Hill Harbor is very exposed to winds and waves, particularly from the south. Vessels frequently incur damages while loading or offloading during high winds and high waves. Due to these conditions at the South Blue Hill Harbor wharf commercial vessels are often damaged by knocking against the pilings during periods of rough weather.

In comparison with the other harbors of Blue Hill, central Blue Hill Harbor is located near the town's downtown and is a much protected location within the inner bay. According to the Selectmen of Blue Hill, in 2012 the Town rehabilitated the central harbor wharf. The wharf improvements provide the facility with year-round support to the town's commercial fishing industry. Town officials anticipate that when funding is secured for a navigation channel, the town's commercial economic activity will increase. The town's $350,000 investment and long-term objective is for the relocation of commercial fishing on and off-loading operations to the more protected central Blue Hill Harbor. The central Blue Hill harbor wharf includes a new crane as well as water and electricity service. Commercial vessel mooring locations would not be changed, since there is no mooring space existing in central Blue Hill Harbor. Only the location of loading and off-loading operations would be changed. During the town's Marine Resources committee meetings fishermen have expressed a strong interest in an improved navigation channel to the central wharf that would allow for increased use of the wharf by the commercial fishing community. Some fishermen might be more likely to fish year-round if they could access the more protected wharf in the center of town, which could potentially increase their incomes. However, in some years the central harbor area freezes over, which would prohibit winter operations. The fishermen's continued interest in utilizing the central Blue Hill Harbor wharf for operations will be verified during the next detailed feasibility study phase.



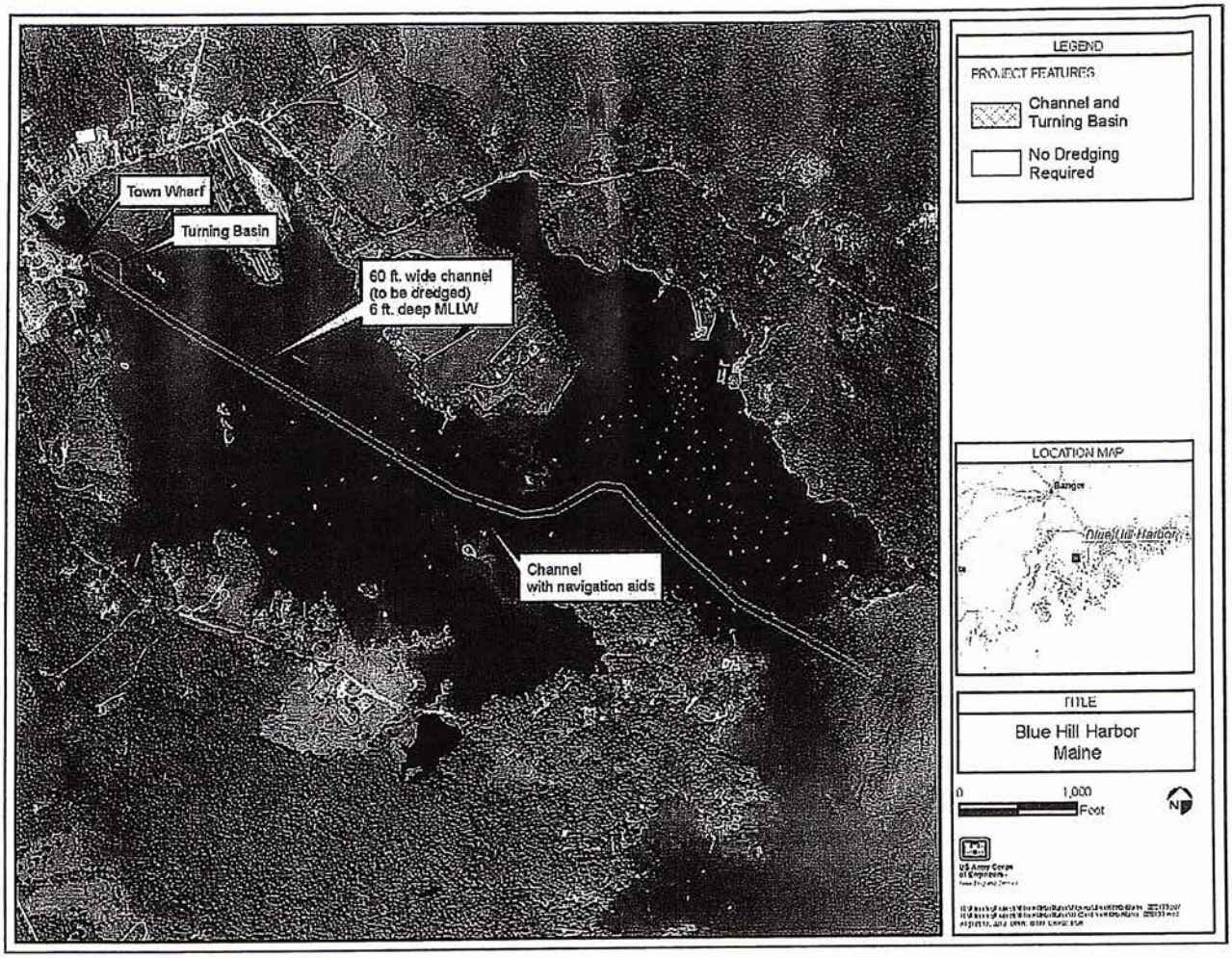
Central Blue Hill Harbor

Benefits are estimated based on information provided by town officials including the town's Selectmen and Harbormaster. This appraisal estimated that loading and offloading damages, due to wind and waves in South Blue Hill Harbor, would be prevented with relocation of commercial operations to central Blue Hill Harbor. Commercial fishing operation improvements would derive an average annual benefit (damages prevented) of $1,200 per vessel; if a channel is dredged to the central town wharf (refer to Attachment 2 Economic Assessment, for a detailed discussion of estimated damages prevented).

5. **Plan Formulation:** This study involved preliminary design needs, cost and benefit analyses of providing improvements for the commercial fleet of Blue Hill. Costs were estimated using a variety of information sources, including hydrographic surveys, sediment information, aerial photos, several site visits, and interviews with harbor users and local men knowledgeable about the site.

   Shoaling throughout Blue Hill Harbor as well as congestion delays of commercial vessels loading and off-loading from various locations during periods of high tide have created serious hazards to navigation. To alleviate these conditions, our investigation considered mechanical dredging by barge to remove bottom harbor sediment. The dredging would create a new navigation channel which would accommodate safe two-way vessel traffic for commercial vessels and recreational craft.

6. **Study Findings:** To accommodate full time vessel traffic the proposed project would create a 60-foot wide waterfront channel extending from the central town wharf and extending about 2,500 feet southeast into deep water. The new channel would be dredged to depth of -6 feet at MLLW. Quantity estimates include a 1-foot over depth allowance. The dredged material would be loaded onto scows and towed to an area near Dodge Island about 11 miles southeast from Blue Hill Harbor.



Dredging equipment would include tugs, mechanical dredge/barge and split hull scows that will be able to operate in shallow draft areas in the channel. It is anticipated that dredging would be conducted by 8 CY clamshell bucket dredge or excavator. Please see the Blue Hill Harbor Channel Figure above (note: disposal location not shown).

In 2012 the Corps completed a hydrograph survey of Blue Hill Harbor. Quantity dredging estimates were then calculated. Approximately 62,000 CY of silty-sandy material would need to be removed to create the new channel. A detailed cost estimate for the navigation channel project is provided in Attachment 1. Based upon dredging projects, beyond Mid-Coast Maine, most do not require maintenance dredging for 30 to 80 years. The comparison of harbor-bottom contours, by this study, would require only minimal maintenance dredging for Blue Hill Harbor. A summary of first costs and annual costs is shown in Table 1.

In 1948, The U.S. Army Corps of Engineers conducted a hydrograph and topography survey of Central Blue Hill Harbor, Attachment 1, Design and Cost Estimate presents a tabulated list of probing with their results and locations. The probings were conducted with a 1" diameter pipe driven with an 8 pound hammer. The probings indicate that the inner harbor material was made up mostly of sand, gravel, loose rock and rock. The outer harbor material was made up of mostly sand and mud.

This proposed channel improvement project is projected to have some short-term and localized environmental impacts to the Blue Hill Harbor ecosystem. Temporary impacts to ecological resources such as water quality and biological resource would occur during channel dredging. The improvement dredging and disposal activities would impact essential fish habitat by temporarily disturbing bottom habitat in the project area. Endangered species, specifically Atlantic sturgeon, are not anticipated to be significantly impacted. In Maine, dredging is normally restricted to the less biologically productive months of November to April to avoid impacts to natural resources. The project is anticipated to take 1 to 2 months to complete and would fit within these time frames if required. There are no known historic properties to be impacted by the project and this will be verified during the study. The dredged material from the project is anticipated to be suitable for open water disposal and for this IAR a site 11 miles from the Harbor was considered for dredged material placement. During the study dredged material will be tested in accordance wht Corps/EPA guidelines for open water disposal. The proposed disposal site falls under the Clean Water Act Section 404 testing requirements. Additional dredge material placement alternatives will also be considered during the feasibility study including beneficial use. It is planned that an Environmental Assessment (EA) will be the NEPA document prepared for the project. This assumption will be confirmed with the Federal and State resource agencies during the coordinated site visit.

In July 2012, Blue Hill's Harbormaster provided information on the commercial navigation use of Blue Hill Harbor along with estimated lost time associated with daily off and on-loading activities. With this information, NAE conducted a preliminary economic assessment to estimate annual benefits and compare these to estimated annual costs. The Preliminary Economic Assessment is attached to this report (Attachment 2). Annualized benefits are summarized in Table 2. Total annual benefits to providing a Federal channel to the town wharf in central Blue Hill Harbor are estimated at $110,500. These benefits are derived from increasing efficiency of operations by reducing damages and reducing loading and offloading delays. The benefits would be achieved by relocating loading and offloading operations to the more protected central Blue Hill Harbor from other areas which are less protected. Economic activity related to commercial fishing moorings in Blue Hill would be unchanged. Fishermen would likely still moor at their current mooring locations, since no new mooring areas would be created with the project. Only the location of loading and offloading operations would be changed, within Blue Hill Harbor. The benefits are derived from increased efficiencies to fishing operations within Blue Hill. These increased efficiencies are not a transfer of benefits from one area to another.

Table 1 Blue Hill Harbor MA – Navigation Improvement Study Initial Appraisal Project Costs Total and Annual			
	Channel Dredging	**MOB & DEMOB**	**Proposed Plan**
Construction Cost	$890,000	$188,000	$1,078,000
Contingencies (15%)			$162,000
Subtotal – Construction Estimate			$1,240,000
Engineering and Design			$111,000
Supervision and Administration			$156,000
Construction Cost including Contactor overhead and profit			$1,507,000
Interest During Construction			$2,000
Total Construction Cost			**$1,509,000**
Interest & Amortization (3.50%; 0.0350)			$64,300
Annualized O&M			$13,600
Total Annual Cost			**$77,900**

Table 2 Blue Hill Harbor MA – Navigation Improvement Study – Initial Appraisal Annual Benefits to Channel Improvements Commercial Benefits	
	Proposed Plan
Labor Cost Avoided Delays	$36,500
Reduced Damages to Commercial Fleet	$54,000
Reduced Infrastructure Damages (So. Blue Hill Wharf)	$20,000
Total Annual Benefits	**$110,500**

7. **Recommendations:** Benefit/Cost analysis (see Table 3) indicates a positive Benefit to Cost Ratio (BCR) for the proposed plan for dredging the Blue Hill Harbor channel. Channel improvements were found to have $32,600 of net annual benefits and a BCR of 1.42.

   Pursuing further Federal interest for both Blue Hill Harbor requires further study and design efforts, and if still warranted, project implementation, could be continued under Section 107 continuing authority, subject to further funding. The New England District recommends that providing navigation improvements to Blue Hill Harbor be further investigated, under the Section 107 continuing authority.

Table 3
Blue Hill Harbor MA – Navigation Improvement Study – Initial Appraisal
Benefit-Cost Comparison
For Channel Improvements with All Benefits Counted

	Proposed Plan
Total Annual Costs	77,900
Total Annual Benefits	$110,500
Net Annual Benefits (Benefits – Costs)	**32,600**
Benefit to Cost Ratio	**1.42**

8. **Views of the Non-Federal Sponsor:** The town of Blue Hill, the non-Federal sponsor supports the recommended plan and is willing to participate in a cost-shared feasibility study of improvements to Blue Hill Harbor.

9. **Views of Federal and State Agencies and Interested Organizations:** Representatives from the town of Blue Hill are supportive of the appraisal's findings, and have provided assistance in the study, including attending several reconnaissance site visits, providing useful data, providing detailed information on the site, and assisting in boating transportation. The views of Federal and other State agencies will be solicited upon initiation of feasibility study efforts.

10. **Conclusion:** On the basis of this initial appraisal, it appears that sufficient benefits may exist to warrant continuation into the Feasibility Study. In order to proceed to that phase, the Government and the non-Federal Sponsor, the town of Blue Hill will need to execute Feasibility Cost-Sharing Agreement (FCSA) setting forth responsibility for completing that study.

    The costs of the Feasibility phase above the first $100,000 would be cost-shared 50/50 between the Government and the non-Federal Sponsor. Completion of the study would take about two years subject to funding. If the final analysis indicates that Federal participation in construction is feasible and in the Federal Government's interest, the Government will seek to enter into a Project Partnership Agreement (PPA) with the non-Federal sponsor and seek cost-shared funds for project design and implementation.

11. Attachments:

Attachment 1 – Design and Cost Estimates
Attachment 2 – Economic Analysis
Attachment 3 – Pertinent Correspondence

BLUE HILL HARBOR

BLUE HILL, MAINE

INITIAL APPRAISAL OF FEDERAL INTEREST

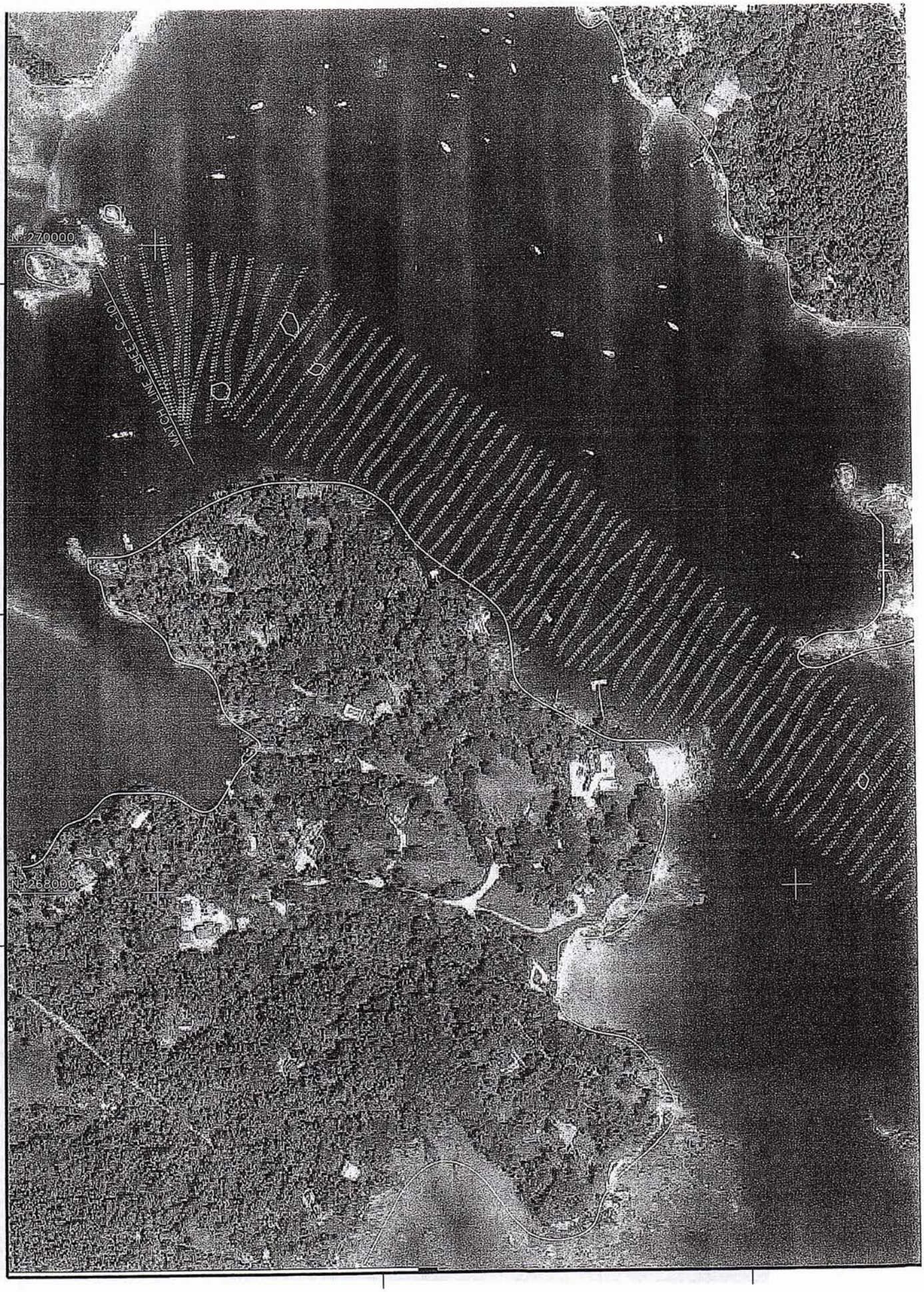
SECTION 107 NAVIGATION IMPROVEMENT STUDY

ATTACHMENT 1

DESIGN AND COST ESTIMATE

GENERAL NOTES:

1. Soundings are in feet and feet and refer to the plane of Mean Lower Low Water (MLLW) 1983-2001 Tidal Epoch
2. Topography shown is from 2012 aerial photography and NOAA Chart No. 13316. All topography, including shoreline, bridges, piers, etc. is located approximate unless otherwise noted and should be used as a general reference only.
3. Bench Mark Data: BM KYC (2012) is a 1/4" drill hole in the concrete base for the flagpole at the Kollegewidgwok Yacht Club located along the NE shore of Blue Hill Harbor, KYC Lane is located [illegible] miles [illegible] on Rt 172 when heading SE along Rt 176 and once on Lane bear right at the Y-junction and take 1st turn left. Elevation is 16.45 feet above MLLW.
4. Coordinates shown are based on the Transverse Mercator Grid System for the State of Maine (East Zone 1801) & NAD 1983.
5. Survey was performed using an Odom MK2 hydrographic echosounder. Horizontal positioning was obtained utilizing Leica 1200 GPS System. An RTK base station was set up on BM KYC (2012).
6. The sounding information shown on this map represents the SHOALEST soundings of those obtained from hydrographic surveys conducted during July 2012.
7. The sounding information depicted on this map should NOT be used to determine volumes. Volumes are determined from more sounding information than shown. Additional sounding information is available upon request.
8. The information depicted on this map represents the results of surveys made on the dates indicated, and can only be considered as indicating the general conditions existing at that time.
9. Field Book: R&H 2980.
10. Survey by: Paul K. O'Brien and crew
11. Survey No. 12-167 Rep.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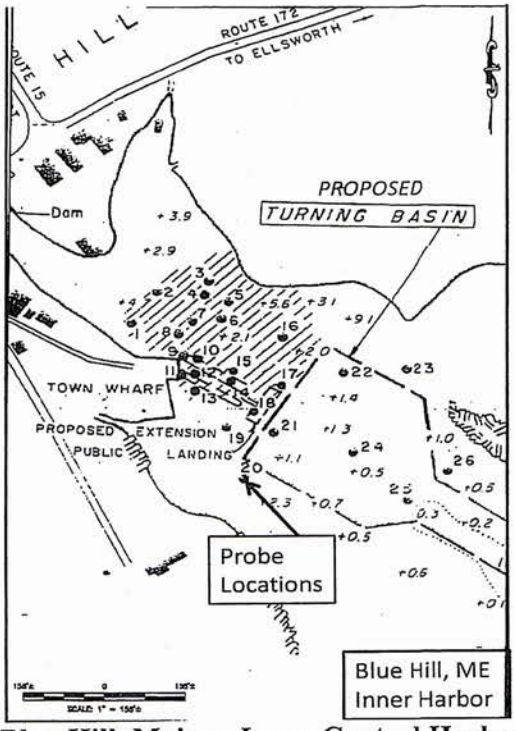
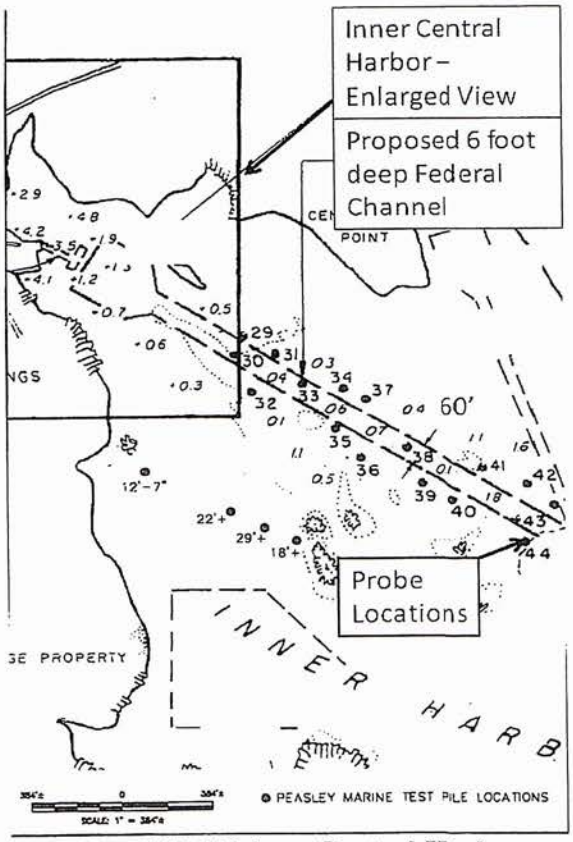


Blue Hill, Maine - Inner Central Harbor
Enlarged View – Figure A-1



Blue Hill, Maine - Central Harbor
Figure A-2

List of Probings

#98025

Number	Ground Elevation	Limit of Probing Elevation	Overburden Feet	Material
1	+2.6	+1.9	0.7	Sand, Gravel, Loose Rocks, Rock
2	+2.7	-0.4	3.1	Same as Above
3	+2.6	+0.3	2.3	Same as Above
4	+2.5	+0.3	2.2	Same as Above
5	+2.9	+1.4	1.5	Same as Above
6	+2.0	-2.5	4.5	Same as Above
7	+2.3	-0.7	3.0	Same as Above
8	+2.4	-0.1	2.5	Same as Above
9	+2.3	+0.7	1.6	Same as Above
10	+2.1	+0.6	1.5	Same as Above
11	+2.9	-5.6	8.5	Same as Above
12	+2.2	-0.3	2.5	Same as Above
13	+1.8	-4.8	6.6	Same as Above
14	+1.6	-4.3	5.9	Same as Above
15	+1.6	-4.1	5.7	Same as Above
16	+3.0	-3.1	6.1	Gravel, Stones, Rock
17	+1.2	-0.9	2.1	Same as Above
18	+1.5	-6.1	7.6	Sand, Gravel, Stones
19	+0.6	-6.8	7.4	Gravel, Stones, Rock
20	+1.5	-7.8	9.3	Med. Packed Sand, Clay, Gravel
21	+1.4	-5.4	6.8	Same as Above
22	+1.2	-8.1	9.3	Hard Packed Sand, Clay, Gravel
23	+1.8	-7.8	9.6	Hard Packed Sand and Clay

List of Probings
(continued)

24	+1.4	-8.0	9.4	Medium Packed Sandy Clay
25	+0.7	-8.3	9.0	Sand, Clay, Mud
26	+0.8	-8.1	8.9	Sand, Clay, Light Gravel, Hard Packed
27	+0.4	-4.1	4.5	Sand, Clay, Gravel, Rock
28	-0.0	-8.0	8.0	Sand, Clay, Mud
29	-0.2	-8.5	8.3	Same as Above
30	-0.1	-8.1	8.0	Same as Above
31	-0.0	-9.8	9.8	Mud
32	-0.2	-9.5	9.3	Same as Above
33	-0.2	-9.2	9.0	Same as Above
34	-0.6	-9.4	8.8	Same as Above
35	-0.6	-9.2	8.6	Same as Above
36	-1.0	-9.3	8.3	Same as Above
37	-0.5	-9.2	8.7	Same as Above
38	-0.4	-8.6	8.2	Same as Above
39	-1.4	-8.7	7.3	Same as Above
40	-0.3	-8.5	8.2	Same as Above
41	+0.1	-8.6	8.7	Same as Above
42	-2.0	-8.2	6.2	Same as Above
43	-2.6	-8.5	5.9	Same as Above
44	-5.4	-8.5	3.1	Same as Above
45	-1.9	-8.6	6.7	Same as Above

Quantity Estimates - Channel to Town Wharf with Turning Basin									
Entrance Channel	5 Feet	6 Feet	6 Feet	6 Feet	6 Feet	7 Feet	8 Feet	9 Feet	10 Feet
Channel Design Depth	80-Foot	40-Foot	60-Foot	70-Foot	80-Foot	80-Foot	80-Foot	80-Foot	80-Foot
Cut to Design Depth	49,500	41,100	51,300	56,300	61,200	73,500	86,400	100,100	114,500
1-Foot Allowable Overdepth	11,700	8,800	10,700	11,500	12,300	12,900	13,700	14,300	15,200
Total Channel	61,200	49,900	62,000	67,800	73,500	86,400	100,100	114,400	129,700

MOBIL & DEMOB COST: $187,518

BLUE HILL HARBOR -6'MLLW - Maint 60ft wide

CHECKLIST FOR INPUT DATA.

BID QUANTITY	61,948 C.Y.
UNIT COST...	$14.38 PER C.Y.
EXCAV. COST.	$890,812
TIME.....	0.77 MONTHS

PG 1.....PROJECT -	BLUE HILL HARBOR -6'MLLW - Maint 60ft w
LOCATION -	Blue Hill, ME
INVIT # -	DACW17-98-B-0000
DATE OF EST. -	7Aug2013
EST. BY -	William McIntyre
MOB. BID ITEM # -	1
EXCAV. BID ITEM # -	2

PG 2.....TYPE OF EST. -	Planning Estimate
CONTRACTOR'S O.H. -	20.0%
CONTRACTOR'S PROFIT -	10.0%
CONTRACTOR'S BOND -	2.0%

PG 3...DREDGING AREA -	227,004	sf
REQ'D EXCAVATION -	51,286	cyds
PAY OVERDEPTH -	10,662	cyds
CONTRACT AMOUNT -	61,948	cyds
NOT DREDGED -	0	cyds
NET PAY -	61,948	cyds
NONPAY YARDAGE -	0	cyds
GROSS YARDAGE -	61,948	cyds
NONPAY HEIGHT -	0.0	ft overdig
TOTAL BANK HEIGHT -	7.4	ft

PG 4.....DREDGE SEL. -	8 CY CLAMSHELL
TYPE OF MATERIAL -	SAND
BUCKET SIZE -	5
BUCKET FILL FACTOR -	1.70
OPTIMUM BANK -	6.5
BANK FACTOR -	1.00

PG 5.....BUCKET CYCLE -	50	Seconds
OTHER FACTOR -	0.80	shallow water
CLEANUP -	20%	More Time
TIME EFFICIENCY -	55.0%	of EWT

PG 6...TUG DESCRIPT. -	1000	HP Diesel--Twin Screw
PREPARE SCOW TOW -	15	min
HAUL DIST -	13	mi
SPEED TO D/A -	4	mph (195 min)
SPEED FROM D/A -	5	mph (156 min)
DUMP OR PUMPOUT -	10	min
DISENGAGE TOW -	10	min
TOW EFFICIENCY -	45	%
SCOW DESCRIPTION -	1,500	CY Split Hull Scow
USEABLE VOLUME -	70	%
% SOLIDS -	75	% (788 cy/load)

PG 7.....DREDGES -	1
SCOWS @ DREDGE -	1
TOWING VESSELS -	2
SCOWS PER TOW -	1
ADDITIONAL SCOWS -	0
TOT SCOWS ON JOB -	3

PG 8....QTRS ON DREDGE? -	YES
SURVEY BOAT? -	YES
CREW BOAT? -	YES

PG 9...SP COST/MO (1ST) -	$0	Turtle Monitoring
SP COST/MO (2ND-14TH) -	$0	From Sheet D\4
SPECIAL COST LS (1ST) -	$10,000	Permit
SP COST LS (2ND-14TH) -	$0	From Sheet E

PG 10....PRESENT YEAR -	2013	
ECONOMIC INDEX -	8339	
LAF -	1.120	
INTEREST RATE -	2.500%	/yr
TIME PERIOD -	January - June 2013	
PIPELINE AVAILABILITY -	9	mos/yr
BUCKET AVAILABILITY -	10	mos/yr
HOPPER AVAILABILITY -	10	mos/yr
FUEL PRICE -	$3.81	/gal

EXCAVATION PRODUCTION	-	406	cy/hr (gross)
EXCAVATION EWT	-	55.0%	(402 hrs/mo)
EXCAVATION TIME	-	0.38	months
HAULING PRODUCTION	-	244	cy/hr (gross)
HAULING EWT	-	45.0%	(329 hrs/mo)
HAULING TIME	-	0.77	months
DREDGING TIME	-	0.77	months
EXCAVAT EWT (ADJUSTED)	-	198	hrs/mo (27.1% EWT)
HAULING EWT (ADJUSTED)	-	329	hrs/mo (45.1% EWT)
PRODUCTION (GROSS)	-	80,276	cy per month
PRODUCTION (CONTRACT)	-	80,276	pay cy per month

BLUE HILL HARBOR

BLUE HILL, MAINE

INITIAL APPRAISAL OF FEDERAL INTEREST

SECTION 107 NAVIGATION IMPROVEMENT STUDY

ATTACHMENT 2

FEDERAL NAVIGATION PROJECT

ECONOMIC ASSESSMENT

Blue Hill Harbor, Blue Hill, Maine
Section 107 Reconnaissance Study
Preliminary Economic Assessment
September, 2012
(revised based on NAD Review comments September 2013)

This preliminary economic assessment examines the potential economic benefits of providing a Federal channel into the town wharf in Blue Hill Harbor, Blue Hill, Maine. The proposed channel would provide 24-hour access to the town wharf located in the center of the town. A turning basin would also be required. This economic assessment was conducted at a preliminary level of detail using data provided by Blue Hill Selectmen and the Harbormaster. A more detailed analysis would be conducted if the proposed project proceeds to the Feasibility phase of study. This assessment follows Corps guidance for estimating National Economic Development benefits as contained in ER 1105-2-100, April 2000, Appendix E, Section II - Navigation. All benefits are estimated in annual terms.

Blue Hill is located in northeastern Maine in Hancock County. In 2010, the town had a population of 2,686 and contained 1,936 housing units (Maine State Planning Office, State Data Center, 2010 US Census data). Blue Hill is located 28 miles southeast of Bangor, Maine and 98 miles northeast of Portland, Maine. In the summer months the population of the town swells to 6,000, with tourists and seasonal residents drawn to the recreational and tourism opportunities of the coast, nearby Acadia National Park, and cultural amenities in the town including art galleries and a chamber music center. Blue Hill Harbor is located within the main retail district in the center of town, in upper Blue Hill Bay. It is one of several harbor areas in the town, with others located around the bay including South Blue Hill and East Blue Hill harbors. Currently, the wharf in central Blue Hill Harbor is rarely used since it is accessible at only the highest tides, generally only 3 hours per day. At this time the primary commercial fishing area in the town is located in South Blue Hill Harbor, where most fishermen load supplies and sell their catch. In 2010, Blue Hill fishermen landed about 860,000 pounds of catch, including 788,000 pounds of live lobster valued at over $2,554,000 (Maine DOT SHIP grant application, 2012). Other major species landed include crabs and scallops. In 2011, total landings were valued at nearly $3,000,000.

There are no slips or moorings in the area of the wharf in central Blue Hill Harbor. Vessels moor primarily in South Blue Hill Harbor, East Blue Hill Harbor, and at various other locations around Blue Hill Bay. In total, there are 427 moorings in the bay, of which about 45 are commercial fishing vessels and the remainder are recreational vessels. All moorings are privately owned. There are 27 fishermen based at South Blue Hill Harbor, 6 at East Blue Hill Harbor, and 12 at an area known as Steamboat Wharf, for a total of 45 commercial vessels. Blue Hill fishermen generally fish about 9 months a year, from March through late November, and are typically full-time fishermen. Lobster boats predominate, with generally 2 fishermen per boat.

Although South Blue Hill is currently the primary commercial fishing harbor in the town, the wharf there has no power or water service, nor does it have a fueling station. Fuel trucks deliver fuel directly to vessels pulled up at the dock. Supplies and catch are loaded and off-loaded while vessels are pulled up at either the dock or at barges moored nearby. However, South Blue Hill Harbor is very exposed to winds and waves, particularly from the south. Vessels frequently incur damages while loading or offloading during high winds and high waves. In

addition, the wharf at South Blue Hill Harbor is often damaged, as vessels knock against it during rough weather.

In comparison, central Blue Hill Harbor is very protected due to its location within the inner bay. In 2012, the town completely rebuilt the wharf in the center of town, a $300,000 to $400,000 investment, with the long-term goal of relocating commercial operations to the more protected central harbor. The wharf in central Blue Hill Harbor includes a new crane as well as water service and electricity. If fishermen relocate their loading and offloading operations to the central harbor, damages to vessels and to town infrastructure from wind and waves would be greatly reduced. If a channel is dredged to the wharf, relocation of loading and offloading operations would be possible. Mooring locations, however, would not be changed, since there is no mooring space in central Blue Hill Harbor. Only the location of loading and off-loading operations would be changed. Some fishermen might be more likely to fish year-round if they could access the more protected wharf in the center of town, which could potentially increase their incomes. However, in some years the central harbor area freezes over, which would prohibit winter operations.

The National Economic Development (NED) benefits to dredging a channel into Blue Hill Harbor are estimated based on damages prevented to fishing vessels and town infrastructure, and efficiencies gained by fishermen. The benefits assume that commercial fishing loading and off-loading operations are relocated to the more protected wharf in central Blue Hill Harbor. Three categories of benefits are estimated: damages prevented to commercial fishing vessels; reduced loading and off-loading delays; and reduced damages to town infrastructure. National Economic Development benefits are benefits which are net changes in the value of the national output of goods and services. Since the Corps of Engineers is a Federal agency, Corps analyses take the national perspective. Other benefits which could occur in central Blue Hill with channel dredging could include increased business to the shops and restaurants in the downtown area. However, this increased business would most likely be a shift of business activity from one area to another, and so are considered Regional Economic Development benefits, not NED benefits. Only NED benefits are included in Corps benefit-cost analyses.

Benefits are estimated based on information provided by town officials including selectmen and the Harbormaster. It is estimated that loading and offloading damages due to wind and waves in South Blue Hill Harbor that would be prevented with relocation of commercial operations to central Blue Hill Harbor average $1,200 per vessel. These damages would be prevented if a channel is dredged to the town wharf in the center of town.

The efficiency of fishing operations would also be improved with channel dredging, since the more protected location of central Blue Hill Harbor would prevent weather-related loading and offloading delays currently experienced. For the purpose of this analysis, it is estimated that such delays occur on 1/3 of the days fished, and last an estimated 1 hour. It is assumed that the fishermen make 180 fishing trips per year, and that there are 2 crewmen per boat. Time savings for fishermen are valued using 1/3 of the average wage of production workers in manufacturing in Maine. In June 2012, the average wage was $20.27 (US Bureau of Labor Statistics, State and Metro Area Employment, House & Earnings, Table D-4, Average hours and earnings of production employees on manufacturing payrolls, by State, www.bls.gov.sae/tables.htm) one-third of which is $6.76.

Damages to town infrastructure, primarily to the town wharf at South Blue Hill Harbor, due to vessels colliding with the dock in rough weather, are estimated at $20,000 per year. These damages would be prevented if commercial fishing operations are relocated to the central harbor.

Estimated benefits are calculated as shown below.

1. Reduced damages to commercial fishing vessels
   45 boats X $1,200 damages prevented/boat = $54,000

2. Time Savings from reduced loading and offloading delays
   45 boats X 180 trips/year X 2 men/boat X 1 hour typical delay X ⅓ of fishing trips delayed X $6.76/hour = $36,500

3. Reduced infrastructure damages (South Blue Hill Wharf)
   $20,000/year

Total annual benefits to providing a Federal channel to the town wharf in central Blue Hill Harbor are estimated at $110,500 ($54,000 + $36,500 + $20,000). These benefits are derived from increasing efficiency of operations by reducing damages and reducing loading and offloading delays. The benefits would be achieved by relocating loading and offloading operations to the more protected central Blue Hill Harbor from other areas which are less protected. These benefits are NED benefits, as described in Corps regulation ER-1105-2-100, Appendix E, p. E-61, "changes in net income to fish harvesters or boat operators is the appropriate measure of NED benefits...Reduction of damage to boats and facilities is frequently a component of commercial fishing benefits." Reduced damages may be a part of the net income analysis or it may proceed as a separate analysis (e.g. damage reduced to public facilities not included in fish harvester's net income)." It is assumed that time savings from reduced loading and offloading delays are increases to fishermen's net income.

Economic activity related to commercial fishing operations in Blue Hill would be unchanged, and fishermen would likely still moor at their current mooring location, since no new mooring areas would be created with the project. Only the location of loading and offloading operations would be changed, within Blue Hill. The benefits are derived from increased efficiencies to fishing operations within Blue Hill, and are not a transfer of benefits from one area to another.

This benefit estimate would be refined during the Feasibility study phase. In the Feasibility phase, additional data collection and analysis would be conducted, and the data collection effort would include a survey of Blue Hill fishermen. The survey would be used to determine the extent of delays and damages experienced by fishermen and the likelihood that they would relocate their loading and unloading operations to central Blue Hill Harbor if a channel were dredged. The resulting benefits after additional data collection and analysis may be higher or lower than those estimated here. If the survey results indicate that fewer boats are damaged than estimated here, or that fewer boats would relocate to central Blue Hill Harbor than estimated here, then the benefits would be lower than estimated.

BLUE HILL HARBOR

BLUE HILL, MAINE

INITIAL APPRAISAL OF FEDERAL INTEREST

SECTION 107 NAVIGATION IMPROVEMENT STUDY

ATTACHMENT 3

PERTINENT CORRESPONDENCE

DEPARTMENT OF THE ARMY
NORTH ATLANTIC DIVISION, CORPS OF ENGINEERS
FORT HAMILTON MILITARY COMMUNITY
GENERAL LEE AVENUE, BLDG 301
BROOKLYN, NY 11252

REPLY TO

CENAD-PD-CS

29 October 2013

MEMORANDUM FOR Commander, New England District, US Army Corps of Engineers, ATTN: CENAE-EP-PN

SUBJECT: Blue Hill Harbor, Maine, Continuing Authorities Program, Section 107, CWIS/P2#: 328230

1. Reference is made to the following:

   a. CENAE-EP-PN e-mail, dated 17 October 2013.

   b. CENAD-PSD-P memorandum, dated 24 October 2013.

2. The North Atlantic Division (Division) has reviewed the District's resubmission (Reference 1a) and has approved the initial appraisal (Reference 1b).

3. The District should mark the completion of this milestone in P2 and the CAP database of OFA. The Division will advise your staff once we receive a response from OASA (CW) concerning the policy fact sheet.

4. The point of contact for this action is Mr. Paul A. Sabalis, P.E., PMP. (NAD DST Manager). Mr. Sabalis may be reached at 347-370-4589.

Encl

PAUL A. SABALIS, P.E., PMP
District Support Team
Civil Works Integration Division

DEPARTMENT OF THE ARMY
NORTH ATLANTIC DIVISION, CORPS OF ENGINEERS
FORT HAMILTON MILITARY COMMUNITY
GENERAL LEE AVENUE, BLDG 301
BROOKLYN, NY 11252

REPLY TO

CENAD-PSD-P

24 October 2013

MEMORANDUM FOR Civil Works District Support Team (Sabalis)

SUBJECT: Blue Hill Harbor, ME – Initial Appraisal Report
Continuing Authorities Program, Section 107

1. Reference is made to the following:

a. CENAD-PD-CS memorandum, dated 17 October 2013, requesting review of NAE's revised Initial Appraisal Report, SAB.

b. CENAE-EP-PS e-mail, dated 17 October 2013, SAB.

c. CENAD-PSD-P memorandum, dated 23 September 2013, SAB.

2. CENAD-PD-CS has requested review (Reference 1a) of NAE's resubmission of the initial appraisal report and extent of compliance, SAB, for Division back-check review and approval (Reference 1b). Prior Division policy review comments are enclosed (Reference 1c).

3. At your request (Reference 1a), Planning staff has reviewed the NAE's revisions to their Initial Appraisal Report (Reference 1b) and has no remaining comments. The IAR is hereby approved.

4. The point of contact for this action is Ms. Naomi Fraenkel, AICP (NAE Planning Program Manager). Ms. Fraenkel may be reached at (917) 790-8615.

JOSEPH R. VIETRI
Chief, Planning and Project Formulation
Programs Directorate

October 2013

SECTION 107 PROJECT FACT SHEET

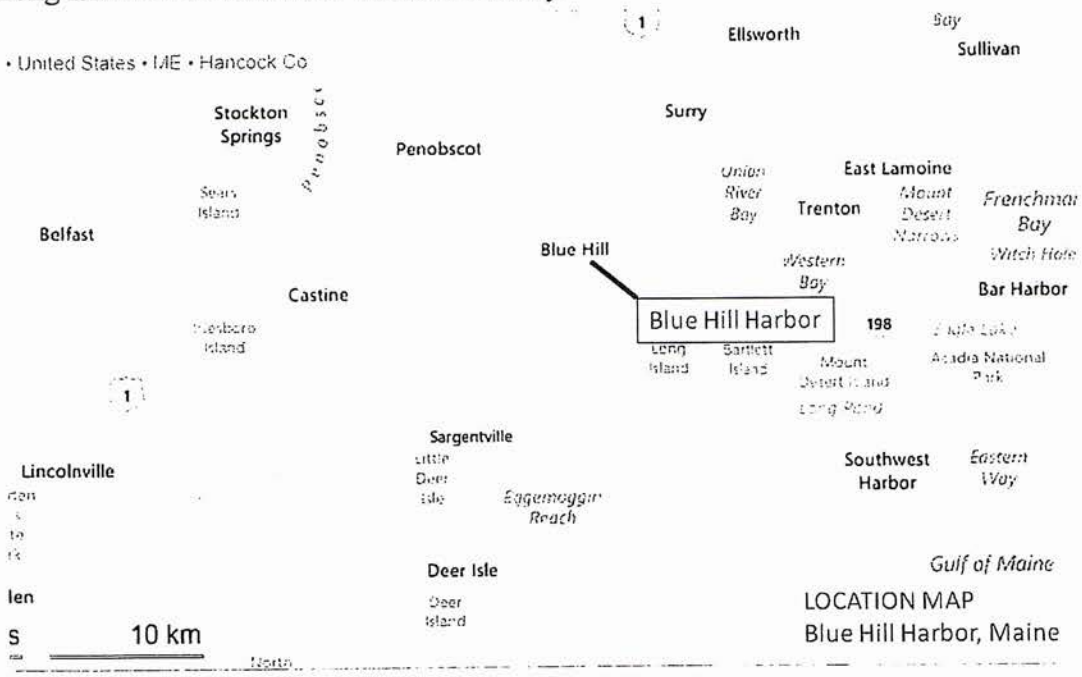
1. **Project Name:** Official Name of Project: Blue Hill Harbor, Blue Hill, Maine, Navigation Improvement Project, Section 107 of the River and Harbor Act of 1960 (PL 86-645).

2. **a. Corps District:** New England (NAE)

   b. Sponsor: The Town of Blue Hill, Office of the Selectmen

3. **Congressional Delegation:** Representative: Michaud (ME-2)
   Senators: Collins and King (ME)

4. **Location:** Blue Hill Harbor is the principal commercial fishing harbor of the Town of Blue Hill, located on the western shore of Blue Hill Bay in Hancock County, Maine. The harbor is located about 30 miles southeast of Bangor and 13 miles southwest of Ellsworth, Maine. Blue Hill Harbor is located off the northwest end of Blue Hill Bay just west-northwest of Long Island and due west of Union River Bay.



5. **Problem:** The inner harbor contains the Town Wharf and docks which are dry at mean low water. Blue Hill Harbor is home to a sizeable lobster fleet as well as numerous recreational craft and charter fishing boats, and other inshore and offshore commercial fishing craft, all served by two public landings, a fish pier, a marina, a boat club, and rental boat facilities. Currently, the wharf in central Blue Hill Harbor is rarely used since it is accessible at only the highest tides, generally only 3 hours per day.

Currently, without the proposed navigation improvements, full time access to the town wharf, fishermen who wish to fuel or offload must use the South Blue Hill harbor wharf. The wharf offers no power or water service, nor does it have a fueling station. Fuel trucks deliver fuel directly to vessels pulled up at the dock. Supplies and catch are loaded and off-loaded while vessels are pulled up at either the dock or at barges moored nearby. The harbor is very exposed to winds and waves, particularly from the south. Vessels frequently incur damages while loading or offloading during high winds and high waves. Due to these conditions at the South Blue Hill Harbor wharf, commercial vessels are often damaged by knocking against the pilings during periods of rough weather.

6. **Alternative Plans Considered:** The Initial Appraisal considered plans to create a Federal channel and extend it southwesterly from the center town wharf to deepwater. The Feasibility Study will develop and assess all practical alternatives to achieve improved access for the harbor's commercial fleet.

7. **Description of Likely Recommended Plan:** The improvement considered in the Initial Appraisal calls for creating an existing 60-foot wide by -6 foot MLLW deep channel, extending southeast 2,500 feet to deep water. Dredging would require the removal of about 62,000 cubic yards of sandy material. Dredging estimates include a 1-foot over depth allowance. The dredged material would be loaded in scows and towed to an area near Dodge Island about 11 miles southeast from Blue Hill Harbor. These improvements would relieve tidal and congestion delays for commercial vessels arriving and departing from the town wharf. It's the sponsor's responsibility to construct local service facilities which consist of the berth area at the town wharf.

Annual Cost (IAR Plan)	$77,900
Annual Benefits - Commercial	$110,500
Benefit-Cost Ratio	1.42
Net Annual Benefits	$32,600

Annual Cost is estimated at the Initial Appraisal level of detail and is based on recent O&M dredging at Bass Harbor, ME and includes seasonal windows. Environmental considerations and NEPA compliance will be fully developed and documented during the feasibility phase.

8. As of the date of this fact sheet, are there any policy waivers required, including a waiver for deviation from the NED Plan? If so, provide rationale for waiver and highlight waiver request in transmittal: No waivers required.

9. Scheduled Initial Construction Award (FY): The Feasibility Study will develop award date.

10. Authorization, appropriations act, or report language: Cite specific provisions, and attach copies of language: Study Authorized under the Continuing Authority of Section 107 of the River and Harbor Act of 1960, as amended.

11. Financial Information:

a. **Feasibility Study Cost:** $160,000 (Federal Share $80,000)

b. **GNF Costs:**
Total: $1,509,000 (Federal share: $1,358,100)
(Plans and Specifications: $111,000)
Construction: $1,398,000)

c. LEERD Costs: $0

d. **Local Service Facilities (LSF) Costs:** $0
Existing facilities adequate for prospective commerce.

e. **Ultimate Federal Cost:**
$1,208,200 1,358,100 less 10% non-Federal reimbursement of $150,900, excludes feasibility cost of $200,000)

f. **Benefit/Cost Ratio:** 1.42

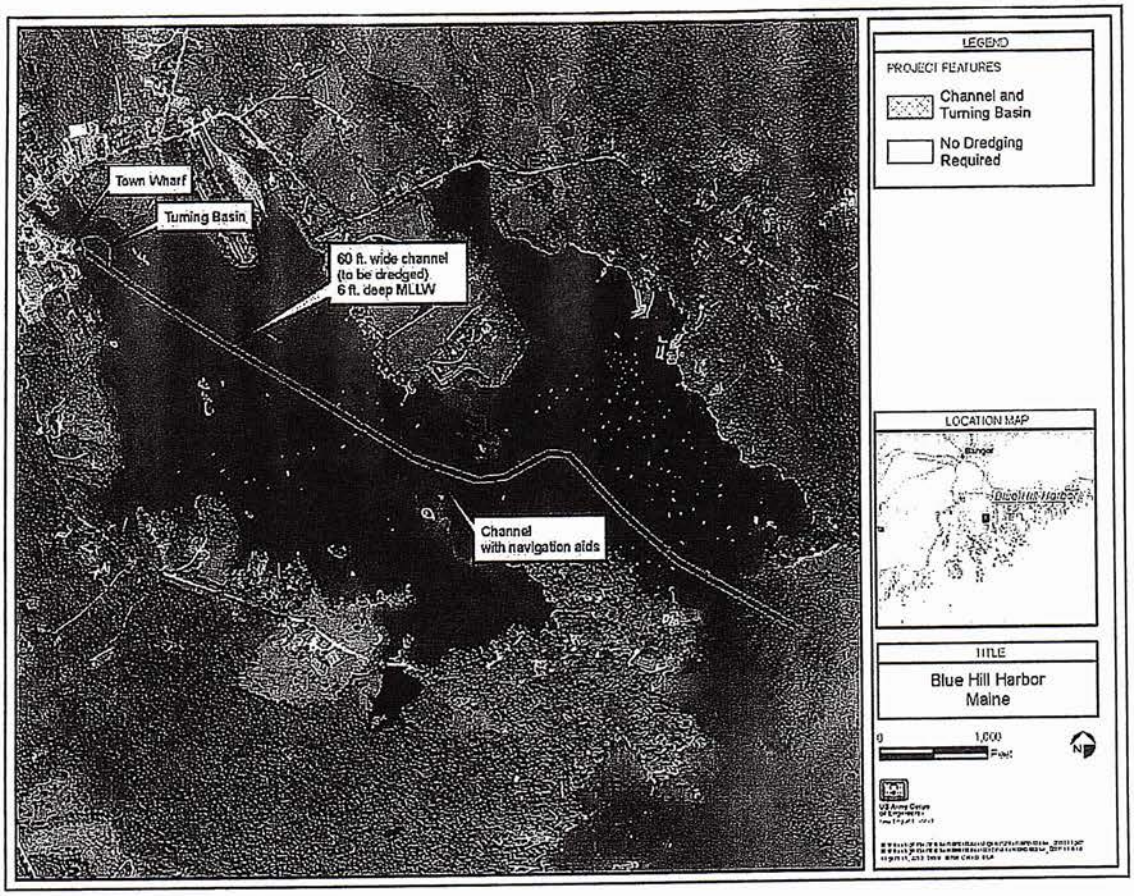
g. **Average Annual O&M Costs:** $13,600

12. Complete Funding History by FY (Include one line for each additional FY):

	AMOUNTS SPECIFIED ("NAMED") BY CONGRESS	NET ALLOCATIONS FOR FISCAL YEAR
FY12	$0	$50,000
FY13	$0	$50,000

13. Supplemental Information: None

14. Project Map:
Blue Hill Harbor, Blue Hill, Maine Proposed Project Location Map


Town Wharf
Turning Basin
60 ft. wide channel
(to be dredged)
6 ft. deep MLLW
Channel
with navigation aids
LEGEND
PROJECT FEATURES
Channel and
Turning Basin
No Dredging
Required
LOCATION MAP
Bangor
Blue Hill Harbor
TITLE
Blue Hill Harbor
Maine
0
1,000
Feet
N

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

CENAE-EP-PN

13 August 2013

MEMORANDUM FOR Commander, U.S. Army Corps of Engineers, North Atlantic Division, ATTN: CENAD-PD-CID-P (Mr. Joseph Forcina), Fort Hamilton Military Community, 302 General Lee Avenue, Brooklyn, NY 11252-6700

SUBJECT: Continuing Authorities Initial Appraisal Report, Section 107, Blue Hill Harbor, Blue Hill, Maine (PWI # 328230)

1. Enclosed are four copies of the Initial Appraisal Report and Fact Sheet for the Blue Hill Harbor Navigation Improvement Project, Blue Hill, Maine, for your review and approval to proceed to the Feasibility Phase. The initial appraisal indicates that navigation improvements consisting of developing a Federal channel connecting the central Blue Harbor wharf with deep water are in the Federal interest, and provide the basis to prepare and negotiate a Feasibility Cost Sharing Agreement (FCSA). Execution of a FCSA with the Sponsor, the town of Blue Hill, Maine, is required to share the costs of the feasibility phase.

2. If you have any questions or require additional information, please contact me at (978) 318-8162, or Mr. Robert Russo, the Project Manager, at (978) 318- 8553.

FOR THE COMMANDER:

Scott E. Acone, P.E.
Chief, Engineering/Planning Division

Encls

Copy Furnished (w/o Encl):
Paul Sabalis, DST, NAD

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Paul R. LePage
GOVERNOR

David Bernhardt
COMMISSIONER

March 20, 2013

The Honorable Susan M. Collins
United States Senate
188 Russell Senate Office Building
Washington, DC 20510

The Honorable Angus S. King, Jr
United States Senate
413 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Michael H. Michaud
United State House of Representatives
1318 Longworth HOB
Washington, DC 20515

The Honorable Chellie M. Pingree
United State House of Representatives
1724 Longworth HOB
Washington, DC 20515

Dear Senator Collins, Senator King, Congressman Michaud and Congresswoman Pingree:

In response to previous requests from our Congressional Delegation staff, this letter is to provide information for your consideration in addressing the State's interests and concerns regarding federal funding for maintenance and improving dredging and related matters.

The Army Corps of Engineers' ("ACOE") policy for prioritizing among projects that qualify for and need federal funds for maintenance dredging is based primarily on the tonnage of commercial freight that passes through a port. With few exceptions, the federal navigation projects which the ACOE maintains along Maine's coast serve primarily commercial fishing and recreational boating-related small businesses as well as many water-dependent public uses. Most of Maine's ports have little or no commercial shipping traffic yet provides critical infrastructure and supports small businesses vital to the economy of our coastal communities and in turn our state economy as a whole. As a consequence, many Maine projects do not rank highly among the ACOE's funding priorities. For example the Kennebec River project, which provides access for Navy vessels built and repaired at Bath Iron Works, one of the few naval shipyards of its kind in the country, does not rank highly in the ACOE's maintenance dredging ranking scheme, illustrates the narrowness of the ACOE's focus, even in addressing strategic national interests.

In recent years, Congress has considered legislation, such as the Renew America's Maritime Promise ("RAMP") bill, which would provide additional funding to the ACOE from the Harbor Maintenance Trust Fund, to meet the maintenance dredging-related needs of the nation's ports and harbors. We urge that you give thoughtful consideration to any such legislation that may facilitate maintenance and improvement of Maine's ports and harbors.

The federal navigation projects in Maine require maintenance at varying intervals and in varying degrees over time, depending on shoaling rates, weather, and other natural factors. Likewise, the local, state, federal processes to determine dredging needs and ensure the necessary environmental review and approval of dredging activities may vary. As a result, the State's priorities regarding federal funding for dredging in a given year focuses on projects that are ready, are anticipated to be ready, or are in a position to move forward in the project planning and assessment process if federal funds were available.

The State has identified the following as current needs for federal funding for maintenance dredging, navigation improvement, and navigation project planning: [1]

Maintenance dredging

- Portland Harbor project - $13 million
- Wells Harbor project - $3.5 million
- Beals Island/Pig Island Gut project - $4 million (The ACOE has advised that, for efficiency's sake, it would undertake these two projects together when funded.)
- Royal River project - $3 million

We note that funding for the Portland Harbor project is in the President's budget for this year and that funding for the Wells Harbor project is provided by legislation to address the effects of Hurricane Sandy. We appreciate and encourage your continuing support for the anticipated federal appropriations needed to complete these projects.

Please be advised that the ACOE has also identified the Scarborough River, Biddeford Pool, Saco River, Kennebunk River, and York Harbor projects as other federal navigation projects which the ACOE is evaluating and which may be ready for maintenance dredging funding in a subsequent, near-term fiscal year.

Navigation improvement

It is our understanding that there is potential that Congress may consider and enact a Water Resources Development Act ("WRDA") bill this year. The ACOE has advised that it needs authorization in WRDA as well as an appropriation in the amount indicated to complete the following navigation improvement-related projects:

---

[1] The approximate project cost estimates indicated are based on information provided by the ACOE at its annual meeting with Maine congressional delegation staff, state and federal agencies, local officials, and other stakeholders to discuss the status, funding needs, and related issues regarding ACOE navigation projects in Maine.

- Searsport Project - $8.6 million (design & construction)

- Piscataqua River/turning Basin Project - $5.3 million (Dredging for this New Hampshire-sponsored project would occur in Maine. The Towns of Wells and Kittery are among those which have expressed interest in using the dredged materials, sand and blasted ledge, for beach nourishment or other beneficial uses.)

- Saco/Camp Ellis Project

Disposal of dredged materials

In 2010, due to a deadline under the federal process for formally designating it as a disposal site, the Cape Arundel Disposal Site ("CADS") ceased to be open for disposal of dredged materials. For decades, CADS was used as a site for deposition of dredged materials suitable for ocean disposal and has the capacity for such use in the future. The York Harbor project, for example, would be about $1.2 million less if CADS were available for disposal of dredged materials according to the ACOE.

Project planning and development

The ACOE works with communities to help plan and design navigation improvement projects. The State has identified the following current funding needs to continue to advance these efforts in the following Maine coastal communities:

- Blue Hill - $200,000

- Chebeague Island - $216,000

Thank you for your consideration and work on behalf of our State.

Sincerely,

David Bernhardt
Commissioner

Town of Blue Hill, Maine

BLUE HILL, MAINE

August 30, 2012

To: Karen Umbrell

From: Selectmen-Town of Blue hill

Re: Additional Info/Benefits of Dredging in Blue Hill Harbor

- Dredging would tend to lengthen the period boats can be in the water. It extends the commercial fishing season and allows for additional income.
- The size of the (fishing) fleet should increase since all-tides burden will now be spread between two wharves.
- We estimate that the savings to the Town by being able to remove the South Blue Hill floats before rough weather will be up to $20,000 per year in float and infra-structure repairs.
- We estimate that the fishing fleet will experience a savings of up to $100,000 per year in repair costs that will be avoided by having the all-tides option at the Town wharf.
- There will probably be purchases of larger craft once there is an all-tides facility in the village.
- "Catch" figures will increase because of easier and quicker access to bait and seafood dealers.
- Boat building and repair businesses will experience an increase in activity-more jobs/more income. It is hard to put a number on this.
- Bottom lines for individuals depending on products, services, and revenues from commercial fishing will experience an increase in their gains and a decrease in costs. Some estimate the increases at 10% and reduced costs at 10%. This may be too optimistic but some see it as realistic.

Town of Blue Hill, Maine

FIRST SETTLED 1762

INCORPORATED JAN. 30, 1789

SELECTMEN IN OFFFICE
FRIDAY AFTERNOONS
P.O. Box 412
Blue Hill, Maine 04614

BLUE HILL, MAINE

September 4, 2009

John Kennelly
Chief, Planning Branch
U.S. Army Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

Dear Mr. Kennelly:

The Town of Blue Hill, Maine requests that the Corps of Engineers initiate the necessary steps for the dredging of channels and associated navigation features in Blue Hill Harbor under the continuing authority of Section 107 of the River and Harbor Act of 1960. The channels would include all-tide access to the Blue Hill Municipal Wharf and Cemetery Cove areas. The Town of Blue Hill is currently facing the possible loss of a right of way to Steamboat Wharf which would eliminate public all-tide access to the inner harbor.

Regarding the location at the Blue Hill Municipal Wharf, there are several reasons for our request:

- Currently the Blue Hill Municipal Wharf is accessible only at high tide, a great inconvenience to our growing fishing community and a deterrent to marine research and the development of marine-related industry in the area.
- Dredging a channel to this location would provide access to emergency services including a helipad and Blue Hill Memorial Hospital. It would also provide a launching point for the Harbormaster's rescue boat which is currently moored approximately five miles away from his office and emergency services.
- The shorefront location of the town's waste treatment facility offers the opportunity of a pump-out station for commercial and other vessels.
- Blue Hill Harbor is an ideal location for a number of storm moorings which are sorely needed in the area.

Nearby Cemetery Cove provides many opportunities for mariners as well:

- Facilities and equipment necessary for maintenance and repair of vessels exists on site.
- Access to haul-out trailers and storage for large vessels is available. Commercial fishermen greatly benefit from these amenities but can currently use them only at high tide.
- With the expected donation to the town of private land at this location, should the dredging project proceed, public in-town water access could be maximized.

The Town of Blue Hill looks forward to working with the Army Corps of Engineers to improve Blue Hill Harbor for the benefit of our commercial fishing fleet and all navigation interests. Please contact me should you have any questions about this request.

Sincerely,

John R Bannister Duane B Gray

The Blue Hill Board of Selectmen

BLUE HILL HARBOR

BLUE HILL, MAINE

INITIAL APPRAISAL OF FEDERAL INTEREST

SECTION 107 NAVIGATION IMPROVEMENT STUDY

ATTACHMENT 4

TRIP REPORT – ECOLOGICAL SITE VISIT

US ARMY CORPS
OF ENGINEERS
New England District

Blue Hill Harbor
Blue Hill, Maine

Section 107 Investigation

Trip Report

Location: Blue Hill Harbor
Blue Hill, Maine

Date: August 4, 2012

PARTICIPANTS

Todd Randall USACE

BACKGROUND

Blue Hill Harbor is the principal commercial fishing harbor of the Town of Blue Hill, located on the western shore of Blue Hill Bay in Hancock County, Maine. The harbor is located about 30 miles south-southeast of Bangor and 103 miles east of Portland, Maine (Figure 1). Blue Hill Harbor is comprised of several small coves hosting a mix of inshore commercial fishing and lobstering boats and seasonal recreational craft. Much of the commercial fleet works year-round and shifts operations with the seasons due to available mooring space, active offloading and servicing facilities, and icing of portions of the harbor. A 1972 Survey Report recommended adopting a Federal project for Blue Hill Harbor consisting of a 6-foot channel and turning basin accessing the Town Landing in the western basin of the harbor (Figure 1). However the Town declined to provide the cost-sharing needed to construct that project. The Town now wishes to re-visit that proposed improvement as well as examine improving access to other areas of the harbor.

SITE VISIT

A site visit to Blue Hill Harbor was conducted on August 4, 2012 by the undersigned to assess the need for physical, chemical, and ecological sampling in the proposed project area as well as provide a description of observable ecological resources in the harbor. The site visit was conducted via land-side observation at low tide on the afternoon of August 4, 2012 between 1700-1900 hrs. The predicted low tide in Blue Hill Harbor on August 4, 2012 was at 1928 hrs with sunset at 1955 hrs.

OBSERVATIONS

General

The majority of the inner harbor area of Blue Hill Bay was entirely intertidal flat. The channel leading from the middle harbor to the inner harbor was observed as having water at low tide (Figure 8) and a small rivulet channel was observed in the inner harbor during low tide (Figures 3-5). The town wharf was functional with electrical service, running water, and a power winch & davit. The concrete boat ramp adjacent to the wharf was a well maintained and functional. One discharge pipe located to the north of the town wharf (Figure 4) was noted.

Sediments

The sediments in the inner harbor were predominately silt with many areas of silt/sand/gravel/cobble.

The areas from the town wharf north to the dam near Main Street (Figures 3-5) were a heterogeneous mix of silty patches and patches of silt/sand/gravel/cobble. The banks of the embayment were generally exposed silty-sandy areas. However, some rip-rap was present adjacent to the town wharf and along the embayment banks near houses abutting the water.

The sediments in the areas to the southeast of the town wharf appeared to be mainly silt (Figures 6-8). Some gravel/cobble patches were observed, however they were not as prevalent as in the northern portion of the inner harbor. Two rock outcrops were also noted to the southeast of the town wharf (Figure 8).

Ecological Resources

The habitats in the inner harbor of Blue Hill Harbor are representative of typical New England intertidal mudflats as described by Whitlatch (1982). Intertidal mudflats are biologically productive environments that support important recreational and commercial fisheries for softshell clams, jackknife clams, quahogs, bloodworms, and sandworms. Muddy habitats play a role in sustaining the valuable fishery for winter flounder (Whitlatch 1982), as they are prime feeding grounds for these fish as well as seasonal aggregations of migrating birds.

Species noted on/in the mudflat during the site visit include the gastropods *Nassarius* and *Littorina*, soft-shell clams (*Mya arenaria*), and sandworms (*Neanthes*). Laughing gulls, herring gulls, mallard ducks, mergansers, cormorants, and several unidentified shorebird species were also identified in the area during the site visit.

The embayment banks contained little to no *Spartina* salt marsh. The majority of the banks transitioned from the intertidal flat to upland vegetation, rocky outcroppings, or rip-rap.

No observable eelgrass beds were noted in the intertidal areas or in the shallow subtidal areas that were accessible. No eelgrass wrack was observed in the high tide wrack line.

TODD RANDALL

_____ 27 August 2012

TODD RANDALL DATE
MARINE ECOLOGIST

References

Whitlatch, R.B. 1982. The Ecology of New England Tidal Flats: A Community Profile. US Fish and Wildlife Service, Biological Services Program, Washington.

Figure 1. Location of Blue Hill Harbor and potential project area.

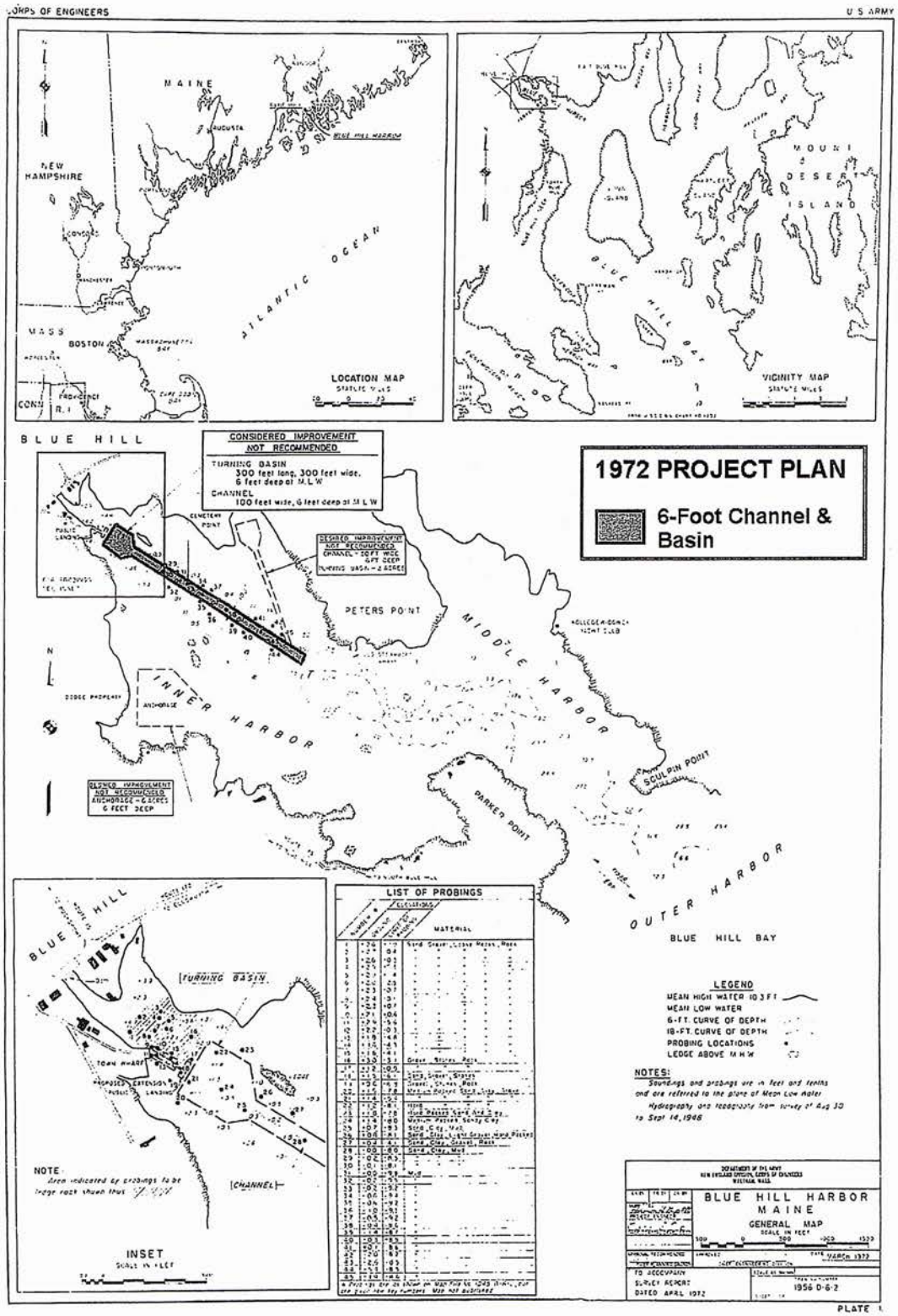


Figure 2. Bulkhead and boat ramp of the Blue Hill Harbor town wharf.

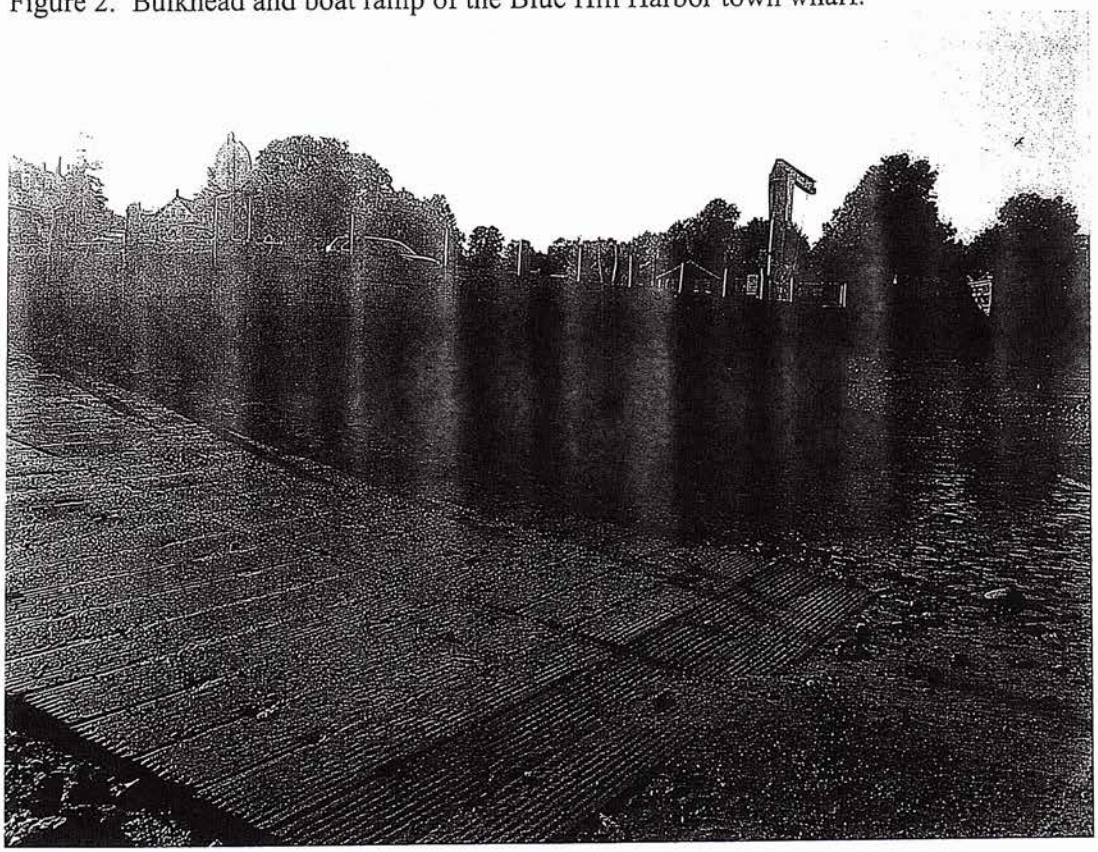


Figure 3. View to the north-northwest of the Blue Hill Harbor town wharf.

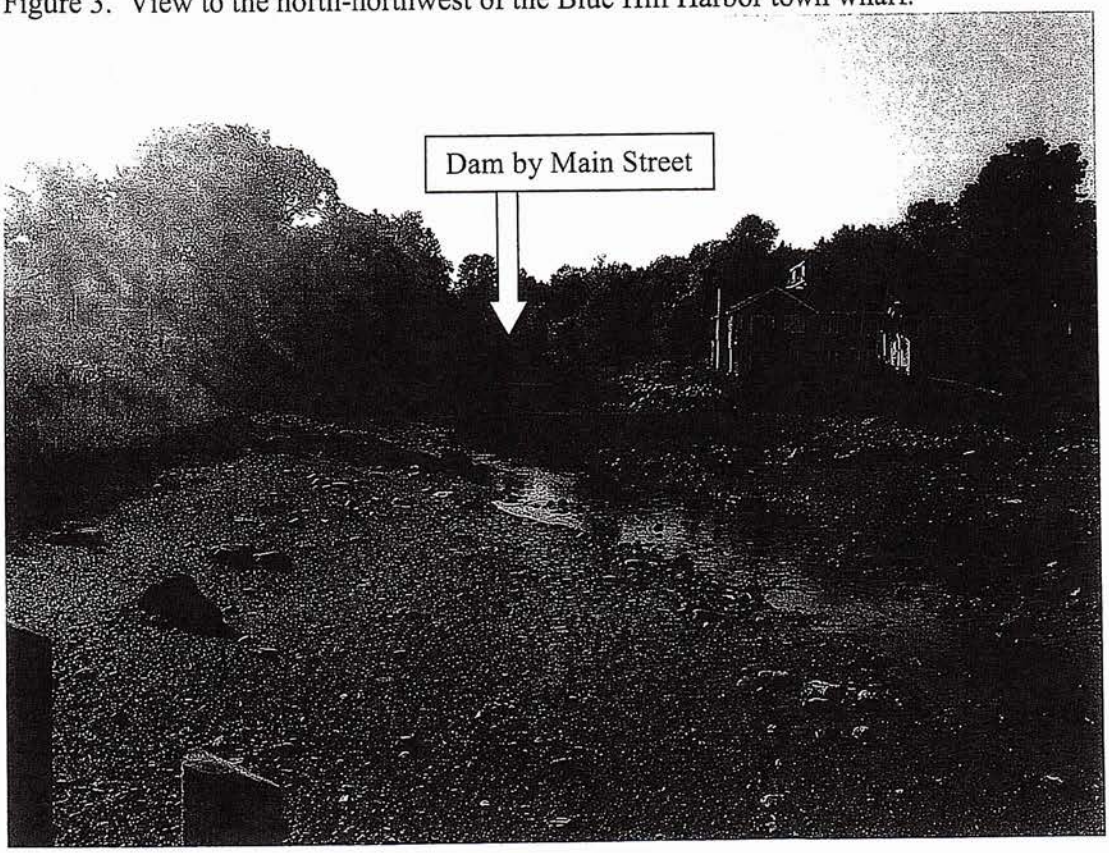


Figure 4. View to the north of the Blue Hill Harbor town wharf.

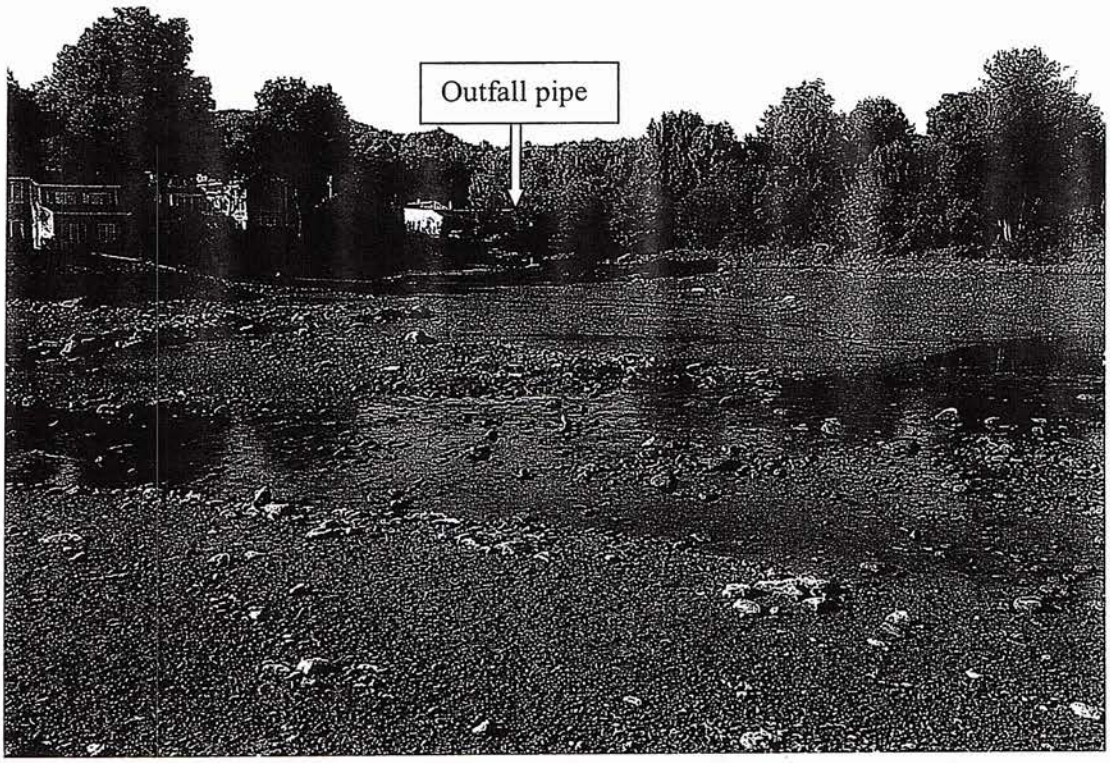


Figure 5. View to the east of the Blue Hill Harbor town wharf.

Figure 6. View to the east-southeast of the Blue Hill Harbor town wharf with view of the town boat ramp and floating dock.

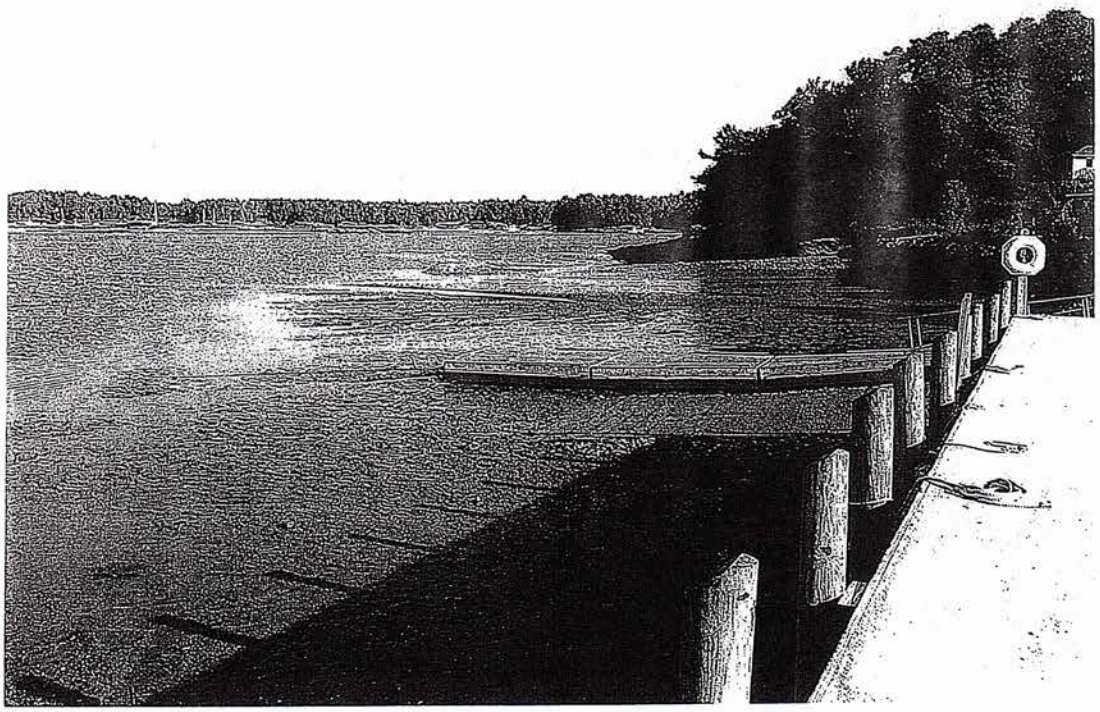


Figure 7. View of intertidal flat and foraging megafauna at the end of the Blue Hill Harbor town boat ramp.

Figure 8. View to the east-southeast of the Blue Hill Harbor town wharf.