



U.S. ARMY



US Army Corps
of Engineers®
New England District

PUBLIC NOTICE

In Reply Refer to: Olivia Beaulieu
Email: nae-pn-nav@usace.army.mil

Phone: (978) 318-8968

Programs and Project Management Division

Date: January 30, 2025

Comment Period Closes: March 1, 2025

30-DAY PUBLIC NOTICE MAINTENANCE REPAIR OF BAR HARBOR BREAKWATER FEDERAL NAVIGATION PROJECT BAR HARBOR, MAINE

Interested parties are hereby notified that the U.S. Army Corps of Engineers (USACE), New England District plans to perform work in the navigable waters of this District, subject to the provisions of Section 404 of the Clean Water Act of 1977 (P.L. 95-217) and subject to the requirements of the National Environmental Policy Act (P.L. 91-190).

The work involves maintenance and repairs to the Bar Harbor Breakwater Federal Navigation Project (FNP) in Bar Harbor, Maine. The breakwater was authorized in the River & Harbor Act of 11 August 1888. The 1889 Chief's report called for a rubble stone breakwater up to 30 feet wide at Mean High Water (MHW) with a masonry or heavy stone superstructure extending up to +16 ft Mean Low Water (MLW). The project was modified in 1890 to reduce the width of the top of the structure from 30 to 20 feet and the side slopes to 1:1 on both sides. The 1904 chief's report notes that to meet the requirements for protection during spring tides, the structure should be raised to an elevation of 6 feet above mean high tide consistent with the elevation of the superstructure from the original authorization; however, that work was never conducted. By November 1916, breakwater construction was complete. The design cross section used a 20-foot crest at 11 feet MLW and 1:1 side slope. Stone size used for construction was not documented. An area of dry ledge approximately 895 linear feet (LF) off the island connects two portions of the breakwater. This area of ledge is approximately 195 LF. Attachment 1 lists pertinent laws, regulations, and directives.

Project Description: The Bar Harbor Breakwater FNP is in Northeast Maine, approximately 40 miles east-southeast of Bangor, Maine (Attachment 2). The Bar Harbor Breakwater lies in a southwesterly direction originating from Bald Porcupine Island and extending for 2,400 LF towards the mainland. The breakwater protects a general anchorage in the harbor of Bar Harbor, Maine from easterly and southeasterly swells. The local economy is heavily dependent on its harbor whose major enterprises include lobstering, commercial and recreational fishing, whale watching, sightseeing, pleasure boating, and aquaculture. Bar Harbor has also recently begun receiving cruise ships and is projected to maintain around 180 ports of call per calendar year through the foreseeable future. Public facilities in the area include beaches, marinas, boatyards, and wharves.

Purpose of Work: The purpose of the proposed project is to restore full functionality of the Bar Harbor FNP breakwater to meet its authorized purpose and to enhance the durability of the structure using modern construction methods and practices. The project will address damages to the structure that have occurred since construction of the breakwater in 1916.

Coastal storms and sea level rise have damaged the structure and diminished its capacity to protect the port of Bar Harbor. Continued deterioration of the structure will contribute to increasingly unsafe conditions within these areas negatively impacting Bar Harbor's commercial and recreational interests.

Alternatives: The following alternatives were considered to address the purpose and need for the project.

No Action: Under a no action alternative, USACE would not repair the Bar Harbor FNP breakwater, and any associated environmental impacts would be avoided. The no action alternative would allow the structure to continue to deteriorate and not perform to its authorized and intended purpose. The Bar Harbor FNP breakwater provides protection for the anchorage and navigation channel leading into Bar Harbor. Continued deterioration of the structure will contribute to unsafe conditions within these areas negatively impacting Bar Harbor's commercial and recreational interests. Therefore, this alternative is not recommended.

Reconstruction to the Pre-Existing Dimensions: This alternative would return the Bar Harbor FNP Breakwater to its pre-existing dimensions. The proposed work would consist of disassembling the existing fitted stone breakwater and rebuilding it in a more stable configuration, using the existing and new stone, in the same location. The disadvantage of this alternative is that it does not address the underlying problem of the original structures' failings which can be corrected by design adjustments. Rebuilding the FNP breakwater to its preexisting dimensions would provide some protection of the navigation channel and local harbor; however, this will not provide the originally intended level of protection and has been proven, over the last 100 years, to be inadequate. Therefore, this alternative is not considered optimal from an engineering perspective.

Adaptive Reconstruction: The adaptive reconstruction alternative would repair the Bar Harbor FNP breakwater and increase its wave energy mitigation, as well as its durability and longevity. Sea level rise projections, and the area's storm history and predicted future climate as well as the USACE's prior experience with repairs to the structures have informed the engineering plan with the goal of reducing the need, frequency, and cost of future repairs.

Under this alternative, the adaptive changes to the structure include:

- (1) The current crest width of 20 feet would be narrowed to 10 feet in the adaptive design. The crest elevation would be increased from 11 feet MLLW to 11.4 feet MLLW to account for sea level rise projections. The higher crest is intended to match the wave attenuation function of the originally authorized structure.

- (2) The seaward facing side slope of the structure would be changed to 1V:1.5H, from its current 1V:1H (only in the repair zones of this contract work). The shallower side slope is intended to provide greater stability and longevity of the structure.
- (3) The disheveled state of the structure has created a non-linear center-of-mass alignment. Non-linear features of breakwaters can be subjected to greater ocean forces than linear ones, increasing the risk of future damages and maintenance needs. The intent is to straighten out these areas to the maximum extent feasible without extensive stone rework and expansion of the current footprint.
- (4) The precise size of existing stones are estimated to be in the 3-7 ton range (possible higher at the head/beacon end of the structure). The size of new armor stone is proposed to be roughly 6-10 tons to improve structure resilience and longevity against coastal forces using modern calculation methods.

Additional Information: Additional information may be obtained from the project manager, Ms. Olivia Beaulieu, Civil Works/IIS Project Management Branch, Programs and Project Management Division, at the return address shown, or by email at nae-pn-nav@usace.army.mil or telephone at (978) 318-8968.

Coordination: The proposed work has been or will be coordinated with the following agencies:

Federal:

U.S. Environmental Protection Agency – Region 1
U.S. Fish and Wildlife Service – Maine Field Office
National Marine Fisheries Service – Greater Atlantic Regional Fisheries Office
National Park Service

State:

Maine Department of Environmental Protection
Maine Department of Marine Resources
Maine Historic Preservation Commission
Maine Coastal Program

Recognized Tribes:

Houlton Band of Maliseets
Mi'kmaq Nation
Narragansett Indian Tribe
Passamaquoddy Tribe, Pleasant Point
Passamaquoddy Tribe, Indian Township
Penobscot Indian Nation
Wampanoag Tribe of Gay Head (Aquinnah)

Municipal Officials:

Town of Bar Harbor

Environmental Impacts: An Environmental Assessment is in preparation and available for review upon request. I have made a preliminary determination that an Environmental Impact Statement for the proposed maintenance and repair is not required under the provisions of the National Environmental Policy Act of 1969. This determination will be reviewed considering facts submitted in response to this notice.

Other Information:

- a. Local Sponsor: Town of Bar Harbor, Maine
- b. Endangered Species: It is our determination that the project may affect, but is not likely to adversely affect, threatened or endangered species. USACE is in consultation with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service to ensure that the proposed activity will not significantly affect any species or critical habitat designated as endangered or threatened pursuant to the Endangered Species Act of 1973 (87 Stat. 844).
- c. Cultural Resources:

USACE is coordinating with the Maine State Historic Preservation Officer (SHPO), the National Park Service (NPS) at Acadia National Park, and the following Tribes in accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended:

Houlton Band of Maliseets
Mi'kmaq Nation
Narragansett Indian Tribe
Passamaquoddy Tribe, Indian Township Reservation
Passamaquoddy Tribe, Pleasant Point Reservation
Penobscot Indian Nation
Wampanoag Tribe of Gay Head (Aquinnah).

The Bar Harbor breakwater was constructed in 1917 and has undergone significant damage from coastal storms and sea level rise since its construction. Even though the structure is more than 50 years old, its integrity of design, materials and workmanship have been severely compromised by storm damage and sea level rise. As a result, the breakwater is not eligible for listing on the National Register of Historic Places.

USACE has determined that the project will have no effect upon historic properties in accordance with Section 106 of the NHPA and implementing regulations 36 CFR 800. The adaptive reconstruction alternative will repair the structure within its current footprint while improving its long-term durability and longevity. There are no known or recorded shipwrecks or submerged sites in the vicinity and side scan sonar survey of the subtidal areas surrounding the breakwater are dominated by sandy sediments with patches of boulder, cobble, and bed rock ledge. We expect the ME SHPO, NPS, and Tribes to concur with this determination.

d. Essential Fish Habitat Assessment: USACE has determined that the project may have a temporary adverse effect on Essential Fish Habitat (EFH). The project site is contained within areas designated as EFH as defined by the Magnuson-Stevens Fishery Conservation and Management Act as amended by the Sustainable Fisheries Act of 1996 for federally managed fish species. USACE assessed the effects that the project is likely to have on EFH and determined that they will be short-term and localized, and that there will be no significant impacts on the designated habitat of fisheries resources. USACE is in consultation with the National Marine Fisheries Service to ensure that any potential impacts will be minimized.

e. Floodplain Management: In accordance with Executive Order 11988, USACE has determined that the proposed work will not contribute to negative impacts or damages caused by floods.

f. Additional Requirements: USACE will request a 401 Water Quality Certificate from the Maine Department of Environmental Protection and Coastal Zone Management Consistency Determination Concurrence from the Maine Coastal Program. The work will be conducted in a manner that is consistent to the maximum extent practicable with the approved Maine coastal management programs established in accordance with the Coastal Zone Management Act of 1972.

The decision whether to perform the proposed work will be based on an evaluation of the probable impact, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits that reasonably may be expected to accrue from the proposal will be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

Any person who has an interest which may be affected by this work, may request a public hearing. The request must be submitted in writing to the District Engineer within the comment period of this notice and must clearly set forth the interest which may be affected and the manner in which the interest may be affected by this activity. Please bring this notice to the attention of anyone you know to be interested in this project. Comments are invited from all interested parties and should be directed to the U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, MA 01742-2751, ATTN: Olivia Beaulieu; or emailed to nae-pn-nav@usace.army.mil within 30 days of this notice.

29 January 2025
DATE

Scott E. Acone
Deputy District Engineer
USACE, New England District

Attachments

Attachment 1

PERTINENT LAWS, REGULATIONS, AND DIRECTIVES

American Indian Religious Freedom Act of 1978, 42 U.S.C. 1996.

Archaeological Resources Protection Act of 1979, 16 USC 470aa et seq.

Clean Air Act, as amended (42 U.S.C. 7401 et seq.)

Clean Water Act, as amended (33 U.S.C. 1251 et seq.)

National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.)

Fish and Wildlife Coordination Act (16 U.S.C. 661-677e)

Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1456)

Coastal Barrier Resources Act, 16 U.S.C. 3501 et seq.

Rivers and Harbors Act of 1899, 33 U.S.C. 401 et seq.

Marine Mammal Protection Act of 1972, 16 U.S.C. 1361-1407.

Marine Protection, Research, and Sanctuaries Act of 1971, 33 U.S.C. 1401 et seq.

National Historic Preservation Act of 1966, as amended (54 U.S.C. 300101 et seq.)

Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3001-3013, 18 U.S.C. 1170

Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)

Preservation of Historic and Archeological Data Act of 1974, 54 USC 312501 et seq.

Estuarine Areas Act (16 U.S.C. 1221 et seq.)

Watershed Protection and Flood Prevention Act, 16 U.S.C 1001 et seq.

Wild and Scenic Rivers Act, 16 U.S.C 1271 et seq.

Federal Water Project Recreation Act, as amended (16 U.S.C. 4601L-12 et seq.)

Bald and Golden Eagle Protection Act, 16 U.S.C. 688 et seq.

Land and Water Conservation Fund Act of 1965, as amended (54 U.S.C. 200302 et seq.)

Migratory Bird Treaty Act, 16 U.S.C. 703-712 et seq.

Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (16 U.S.C. 1801 et seq.)

Executive Order 11593, Protection and Enhancement of the Cultural Environment, 13 May 1971

Executive Order 11988, Floodplain Management, 24 May 1977

Executive Order 11990, Protection of Wetlands, 24 May 1977

Executive Order 12114, Environmental Effects Abroad of Major Federal Actions, 4 January 1979.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 11 February 1994

Executive Order 13007, Accommodation of Sacred Sites, 24 May 1996

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks, 21 April 1997

Executive Order 13061, and Amendments – Federal Support of Community Efforts Along American Heritage Rivers, 11 September 1997

Executive Order 13112 - Invasive Species, 3 February 1999, as amended by Executive Order 13751, Safeguarding the Nation from the Impacts of Invasive Species, 8 December 2016

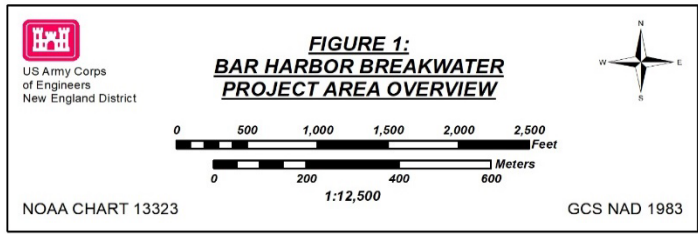
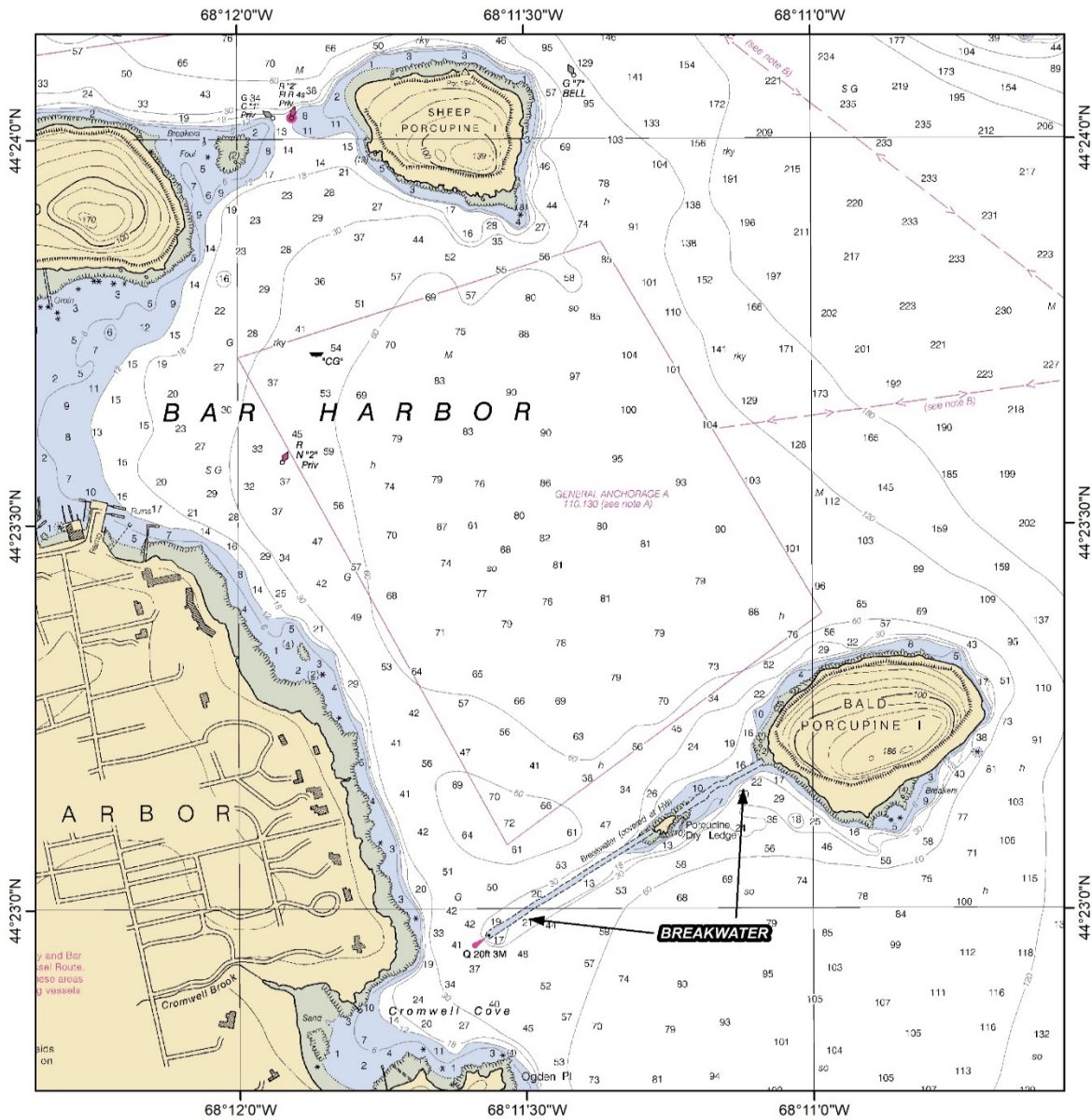
Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, 6 November 2000.

Executive Order 14008, Tackling the Climate Crisis at Home and Abroad 27 January 2021

Executive Order 14096, Revitalizing Our Nation's Commitment to Environmental Justice for All, 26 April 2023

Attachment 2

Bar Harbor Breakwater Federal Navigation Project.



Attachment 3

Bar Harbor Breakwater Repair Zones 1 and 2

