

**SECTION 404(b)(1) GUIDELINES EVALUATION
FOR
DISPOSAL SITES FOR DREDGED OR FILL MATERIAL
40 CFR PART 230**

I. Project Description

The proposed action (harbor alternative 4) would construct the Haines harbor expansion to accommodate approximately 279 commercial and recreational vessels. Harbor construction includes 704 meters of new breakwaters creating two separate moorage basins. The north breakwater would also be surfaced for a causeway for access to a future dock. The breakwaters would require approximately 268,700 m³ of rock discharged at the site. Approximately 2,600 m³ of rock in the existing breakwater would be removed and used as additional core rock. The approximately 7-hectare mooring basin and the entrance and maneuvering channels would require dredging 163,200 m³ of material. The dredged material would be disposed of in a deep-water site 1.2 kilometers offshore of the harbor. Fill from a local quarry potentially would be placed into tidelands to create staging areas necessary for the harbor functions such as gangway access, equipment storage, harbor house facilities, and vehicle parking. This aspect of the project would be further evaluated once the locals finalize details and apply for a Department of the Army 404 permit. The harbor improvements would benefit local economic development and provide for transient and permanent moorage. Further details on the project are contained in the attached environmental assessment.

II. Factual Determinations

A. Physical Substrate Determinations

The beach surface at the harbor site has a mild sloping profile that consists primarily of coarse sand and cobble with scattered boulders. Test pits were excavated along the beach to examine the subsurface conditions. To the limits of excavation, the test pits indicate the site to be composed of coarse material grading into thick clay lenses. No subsurface bedrock was encountered

B. Water Circulation, Fluctuations, and Salinity Determinations

Tidal action and currents influence water circulation patterns in the project area. Circulation within the proposed harbor would be influenced by the tidal prism, water depth, and flow through the detached breakwaters, and the entrance channel. Lower wave energy, increased water depths, and altered current patterns behind the breakwaters could result in minor salinity and temperature fluctuations.

C. Suspended Particulate/Turbidity Determinations

An increase in suspended sediment load and turbidity would be expected during and immediately following periods of work. Suspended sediment plumes would be localized and short-lived. Containment of the dredged material would either be by the constructed breakwaters or sediment curtains. Disposal of the dredged material would cause some sediment plumes; however, the cohesiveness of the clay material would quickly descend to the sea bottom.

D. Contaminant Determinations

The proposed dredged materials are not associated with any contaminant source. Marine sediments along the beach at the harbor site were collected and classified by the Corps of Engineers Geotechnical Branch. Sediment samples were chemically characterized and found to be suitable for water disposal.

E. Aquatic Ecosystems and Organism Determinations

The proposed work would destroy or displace organisms at the harbor site (11.82 hectares) and at the deep-water disposal site (2.3 hectares). Intertidal fill (2.37 hectares) for the creations of upland staging would be lost. The toe of the fill would reach approximately 1.75 meters MLLW. The upper tidal beach fringe was determined to be of low productivity, having minimal species abundance or diversity. Organisms would be expected to colonize the harbor area after construction is completed; however, species composition and density would not be expected to mirror pre-construction conditions since substrate type and water depth would be altered. At the disposal site, dredged material would smother non-motile and most slow moving organisms (e.g. crab, shrimp, and other invertebrates). Most groundfish and other highly motile organisms would be expected to avoid the area until turbidity levels returned to near normal conditions. Benthic organisms, crustaceans, groundfish, and other life forms would be expected to colonize the disposal site over time. Further discussion of the aquatic resources and anticipated impacts is contained in the environmental assessment (section 4).

F. Proposed Disposal Site Determinations

The proposed action would comply with applicable water quality standards and would have no appreciable detrimental effects on any of the following:

- Municipal and private water supplies;
- Recreational and commercial fisheries;
- Water-related recreation; or
- Aesthetics.

The dredge and fill operations would have only a temporary effect on the water column. The breakwater would create rock-reef habitat suitable for colonization. The majority of the dredged materials would be discharged at an inland-water site in Portage Cove approximately 1.2 kilometers offshore of the harbor site. Mitigative measures are contained in Section 4.9 of the EA.

G. Determination of Cumulative and Secondary Effects on the Aquatic Ecosystem

Increased vessel activity and incidental release of pollutants such as paints, fuel, grease, oils from boats, and from discarded debris would degrade water quality within the proposed harbor. The degree of degradation would depend upon water exchange behind the breakwater and the proper handling of sewage, refuse, wastes, and other pollutants. A harbor management plan is recommended to include best management practices. The breakwaters would partially replace an area of unconsolidated sandy bottom habitat with rocks suitable for attachment organisms.

III. Findings of Compliance or Non-Compliance with the Restrictions on Discharge

A. Adaptation of the Section 404 (b)(1) Guidelines to this Evaluation

The proposed project complies with the requirements set forth in the Environmental Protection Agency's Guidelines for Specification of Disposal Sites for Dredged or Fill Material.

B. Evaluation of Availability of Practicable Alternatives to the Proposed Discharge Site Which Would Have Less Adverse Impact on the Aquatic Ecosystem

A number of alternative sites and designs have been rejected as being impracticable and/or not fulfilling the project purpose and need. These include use of alternative harbor sites and designs. The expansion of the existing harbor satisfied the planning criteria and concentrated development into one area. The breakwater design takes into account future growth while minimizing the amount of fill. The action as proposed, including the deep-water disposal of the dredged materials 1.2 kilometers of shore, is the least damaging practicable alternative after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. More details on the alternative analysis are contained in the environmental assessment section 4.

C. Compliance with Applicable State Water Quality Standards

The proposed project would not be expected to have an appreciable adverse effect on water supplies, recreation, growth and propagation of fish, shellfish and other aquatic life, or wildlife. It would not be expected to introduce petroleum hydrocarbons, radioactive materials, residues, or other pollutants into the waters of Portage Cove. A temporary increase in turbidity would result from construction activities. The project would comply with State water quality standards.

D. Compliance with Applicable Toxic Effluent Standards or Prohibition Under Section 307 of the Clean Water Act

No toxic effluents that would affect water quality parameters are associated with the proposed project. Therefore, the project complies with toxic effluent standards of Section 307 of the Clean Water Act.

E. Compliance with Endangered Species Act of 1973

The proposed project would not have an adverse effect on Steller sea lions, listed whale species, or other threatened and endangered species or their critical habitat. This determination has been coordinated with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, agencies responsible for management of protected species.

F. Evaluation of Extent of Degradation of the Waters of the United States

There are no municipal or private water supplies in the area that could be negatively affected by the proposed project. Commercial interests would benefit from harbor improvements. There would be no significant adverse impacts to plankton, fish, shellfish, wildlife, and/or special aquatic sites.