



**DEPARTMENT OF THE ARMY**  
**U.S. ARMY CORPS OF ENGINEERS**  
441 G STREET, NW  
WASHINGTON, DC 20314-1000

DAEN

MEMORANDUM FOR THE SECRETARY OF THE ARMY

SUBJECT: Unalaska (Dutch Harbor) Channels, Alaska

1. I submit for transmission to Congress my report on navigation improvements for Unalaska, Dutch Harbor, Alaska. It is accompanied by the report of the district and division engineer. This General Investigations (GI) study evaluates federal interest in and the feasibility of constructing deep draft navigation improvements, and proposes a recommended plan to improve access to Unalaska. The non-federal sponsor for this study, the city of Unalaska, Alaska, is supportive of the recommended plan.
2. This GI study is being conducted under authority granted by Section 204 of the Flood Control Act of 1948, which states in part:

*"The Secretary of the Army is hereby authorized and directed to cause preliminary examinations and surveys for flood controls and allied purposes ... to be made under the direction of the Chief of Engineers, in drainage areas of the United States and Territorial possessions, which include the following named localities: ... Harbors and Rivers in Alaska, with a view to determining the advisability of improvements in the interest of navigation, flood control, hydroelectric power, and related water uses."*

Preconstruction Engineering and Design (PED) activities, if funded, would be continued under this same authority.

3. The city of Unalaska is located in the Aleutian Islands, some 800 air miles from Anchorage. Dutch Harbor is a port facility on Amaknak Island within the city. Dutch Harbor is the only deep draft, year-round ice-free port along the 1,200-mile Aleutian Island chain. It provides vital services to vessels operating in both the North Pacific and the Bering Sea and serves as the operations center for the Bering Sea commercial fishing fleet. It has the western-most container terminal in the United States and provides ground and warehouse storage and transshipment opportunities for the thousands of vessels that fish in the region or pass through while in transit between North America and Asia.

A bar shallower than the surrounding bathymetry located at the entrance to Iliuliuk Bay currently limits access to Dutch Harbor. Based on the most recent bathymetry, the depth at the bar is -42 feet Mean Lower Low Water (MLLW) within the area that most vessels cross. This depth prevents deeper draft vessels from safely passing over the

DAEN

SUBJECT: Unalaska (Dutch Harbor) Channels, Alaska

bar. Vessels often must take precautionary measures to safely cross the bar. These measures include light loading, waiting outside the bar for wave conditions to improve, waiting outside the bar for adequate tidal stages, foregoing fueling to capacity to reduce draft, lightering fuel outside the bar, and discharging ballast water to reduce draft. Additionally, vessels that can cross the bar during calm sea conditions may not be able to safely cross the bar during inclement conditions and must wait for calmer conditions. The surrounding natural depth of Iliuliuk Bay is -100 feet MLLW. The bar is the only constraint preventing access for the current and anticipated future fleet. The bar causes inefficiencies in the delivery of fuel, durable goods, and exports to/from Dutch Harbor.

4. This study evaluates a number of alternatives in accordance with the goals and procedures for water resource planning as contained in Engineer Regulation (ER) 1105-2-100, "Planning Guidance Notebook," and Institute for Water Resources Report 10-R-4, "Deep Draft Navigation" . The ER 200-2-2, "Procedures for Implementing National Environmental Policy Act (NEPA)" directs the contents of environmental assessments and environmental impact statements. No compensatory mitigation measures have been identified for impacts associated with the implementation of the preferred alternative.

Based upon the National Economic Development (NED) analysis, the recommended plan is a dredged channel to a depth of -58 feet MLLW, including 14 feet of under keel clearance, providing one-way access for vessels with a draft up to 44 feet with waves up to 5.6 feet over the bar with tides above 0 feet MLLW. The channel will be approximately 600 feet in length and 600 feet in width. Initial dredging is estimated to consist of 182,000 cubic yards (cy) and maintenance dredging, to be performed at year 25, will comprise of 16,000 cy. Disposal will be a site on the east side of the mouth of Iliuliuk Bay with a 110 foot-depth.

A plan differing from the recommended plan was identified as the Tentatively Selected Plan (TSP) in the Draft Interim Feasibility Report distributed for review in May 2018. The TSP was for a dredged channel to a depth of only -48 feet MLLW. This depth was based upon the current practice for vessels to light load from point of origin to maintain an under keel clearance of 4 feet while drifting over the bar while not under power. Calculations were based on calm sea conditions with no ship motion due to waves. To maintain maneuverability within a dredged channel, however, vessels must transit under power at greater speeds than under current conditions as well as transiting during wave conditions. Accordingly, the under keel clearance was revised to accommodate these future practices. The recommended plan dredged channel depth of -58 feet MLLW incorporates all required U.S. Army Corps of Engineers (Corps) deep draft safety guidelines as confirmed through a ship simulation study.

DAEN

SUBJECT: Unalaska (Dutch Harbor) Channels, Alaska

Ongoing coordination with federal and state resource agencies shall seek to ensure that all practical means to avoid or minimize adverse environmental effects will be analyzed and incorporated into the recommended plan. Pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended, the Corps expects to concurrently coordinate with National Marine Fisheries Service (NMFS) and United States Fish and Wildlife Service (USFWS) regarding effects of ESA-listed marine mammals while its application is pending for Incidental Harassment Authorization under the Marine Mammal Protection Act (MMPA) during PED. This concurrent coordination would be for anticipated confined underwater blasting required during the construction and implementation of the preferred alternative, which may reach level B harassment values for disturbance to marine mammals. To date, formal mitigation measures have not been identified. As project coordination continues and further project information becomes available, mitigation commitments will be identified and implemented.

While incorporation of reasonable and prudent measures under the ESA will likely be required by NMFS and USFWS to mitigate potential short-term environmental impacts, over the longer term, the project may reduce the requirement for fuel lightering and at-sea repair efforts, resulting in a reduction of the potential for inadvertent release of petroleum, oils, and lubricants, and other locally persistent contaminants into the local marine environment. Over the long-term, this potential reduction in the introduction of environmental contaminants could outweigh the short-term impacts of project construction.

5. This plan has a certified project first cost of \$34,937,000 (Fiscal Year 2020 dollars). This plan maximizes total net benefits and has a Benefit-to-Cost Ratio (BCR) of 1.9. The recommended plan is supported by the city of Unalaska, which is the non-federal sponsor. The construction executed in support of channel depths of between 20 feet and 50 feet is cost shared 75 percent federal and 25 percent non-federal. The federal share of the project first cost is estimated to be \$26,202,750 and the non-federal share is \$8,734,250. The non-federal sponsor is also required to pay an additional 10 percent of the project cost over 30-years that is estimated to be \$3,493,700. The recommended plan provides average annual benefits of \$2,801,000. The average annual cost is \$1,460,000, with net annual benefits of \$1,342,000. Economic analyses are based on a 50-year period of analysis and the Fiscal Year 2020 federal discount rate of 2.75 percent.

6. The goals and objectives included in the Campaign Plan of the Corps were fully integrated into the Unalaska (Dutch Harbor) Channels study process. The study report fully describes the potential risks and opportunities associated with the recommended plan. These risks have been communicated to the non-federal sponsor.

DAEN

SUBJECT: Unalaska (Dutch Harbor) Channels, Alaska

The proposed plan has been designed to avoid or minimize environmental impacts and increase navigational safety and improve economic efficiencies into and out of Dutch Harbor via Iliuliuk Bay. The study team organized and participated in stakeholder meetings and public workshops throughout the process and worked with local groups to achieve a balance of project goals and public concerns.

The Corps proposed navigational improvements are not expected to impact any known cultural resources or historic properties and is compliant with the Clean Water Act of 1972. Based on this report, the reviews by other federal, state and local agencies, tribes, and input of the public, it is determined that the recommended plan would not cause significant adverse effects on the quality of the human environment; therefore, preparation of an Environmental Impact Statement (EIS) is not required.

7. In accordance with Engineering Circular (EC) 1165-2-217, Civil Works Review, all technical, engineering and scientific work underwent an open, dynamic and vigorous review process to ensure technical quality. This included an Agency Technical Review (ATR), and a Headquarters Corps policy and legal review. An exclusion from a Type I Independent External Peer Review (IEPR) was granted. All concerns of the ATR have been addressed and incorporated in the final report. The reviews, have resulted in the improvement of the technical quality of the report.

8. Washington level review indicates that the project recommended by the reporting officers is technically sound, environmentally and socially acceptable, cost effective, and economically justified. The plan complies with all essential elements of the U.S. Water Resources Council's *Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies* and complies with other administrative and legislative policies and guidelines. Also, the views of interested parties, including federal, state, and local agencies have been considered.

9. I concur in the findings, conclusions, and recommendations of the reporting officers. I find that the recommended plan for navigation improvements at Unalaska (Dutch Harbor), Alaska is technically sound and environmentally sustainable, justified based on the monetary and non-monetary benefits it provides, and is socially acceptable. Budgeting for this project based on the final feasibility report and environmental assessment is recommended. My recommendation is subject to cost sharing, financing, and other applicable requirements of federal laws and policies, including Section 101 of Water Resources Development Act (WRDA) 1986 as amended (33 U.S.C. 2211), and to the non-federal sponsor agreeing, prior to project implementation, to perform the required items of local cooperation, including but not limited to the following:

DAEN

SUBJECT: Unalaska (Dutch Harbor) Channels, Alaska

a. Provide, during the periods of design and construction, funds necessary to make its total contribution for commercial navigation equal to 25 percent of the cost of design and construction of the general navigation features attributable to dredging to a depth in excess of -20 feet MLLW but not in excess of -50 feet MLLW.

b. Provide all lands, easements, rights-of-way, and relocations, including those necessary for the borrowing of material and placement of dredged or excavated material, and perform or assure performance of all relocations, including utility relocations, as determined by the federal government to be necessary for the construction or operation and maintenance of the general navigation features, all in compliance with applicable provisions of the Uniform Relocation and Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. 4601-4655) and the regulations contained in 49 C.F.R. Part 24;

c. Pay with interest, over a period not to exceed 30 years following completion of the period of construction of the general navigation features, an additional amount equal to 10 percent of the total cost of construction of the NED Plan general navigation features less the amount of credit afforded by the federal government for the value of the lands, easements, rights-of-way, and relocations, including utility relocations, provided by the non-federal sponsor for the general navigation features. If the amount of credit afforded by the federal government for the value of lands, easements, rights-of-way, and relocations, including utility relocations, provided by the non-federal sponsor equals or exceeds 10 percent of the total cost of construction of the general navigation features, the non-federal sponsor shall not be required to make any contribution under this paragraph, nor shall it be entitled to any refund for the value of lands, easements, rights-of-way, and relocations, including utility relocations, in excess of 10 percent of the total costs of construction of the general navigation features;

d. Prevent obstructions or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) such as any new developments on project lands, easements, and rights-of-way or the addition of facilities which might reduce the outputs produced by the project, hinder operation and maintenance of the project, or interfere with the project's proper function;

e. Provide, operate, and maintain, at no cost to the federal government, the local service facilities in a manner compatible with the project's authorized purposes and in accordance with applicable federal and state laws and regulations and any specific directions prescribed by the federal government;

DAEN

SUBJECT: Unalaska (Dutch Harbor) Channels, Alaska

f. Hold and save the United States free from all damages arising from the construction or operation and maintenance of the project, any betterments, and the local service facilities, except for damages due to the fault or negligence of the United States or its contractors;

g. Perform, or ensure performance of, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC 9601-9675, that may exist in, on, or under lands, easements, rights-of-way, relocations, and disposal areas that the federal government determines to be necessary for the construction or operation and maintenance of the general navigation features. However, for lands, easements, or rights-of-way that the federal government determines to be subject to the navigation servitude, only the federal government shall perform such investigation unless the federal government provides the non-federal sponsor with prior specific written direction, in which case the non-federal sponsor shall perform such investigations in accordance with such written direction;

h. Assume complete financial responsibility, as between the federal government and the non-federal sponsor, for all necessary cleanup and response costs of any hazardous substances regulated under CERCLA that are located in, on, or under lands, easements, rights-of-way, relocations, and disposal areas required for the construction or operation and maintenance of the project;

i. Agree, as between the federal government and the non-federal sponsor, that the non-federal sponsor shall be considered the operator of the local service facilities for the purpose of CERCLA liability, and, to the maximum extent practicable, perform its obligations related to the project in a manner that will not cause liability to arise under CERCLA.

10. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the Executive Branch.

DAEN

SUBJECT: Unalaska (Dutch Harbor) Channels, Alaska

Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding. However, prior to transmittal to Congress, the sponsor, the state, interested federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.

TODD T. SEMONITE  
Lieutenant General, USA  
Chief of Engineers