



DEPARTMENT OF THE ARMY
CHIEF OF ENGINEERS
2600 ARMY PENTAGON
WASHINGTON, DC 20310-2600

AUG 10 2015

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SUBJECT: Navigation Improvements, Diomedes, Alaska Final Interim Feasibility Report, Environmental Assessment and Finding of No Significant Impact

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on navigation improvements in the vicinity of Little Diomedes, Alaska. It is accompanied by the reports of the district and division engineers. These reports were prepared in partial response to a resolution by the Committee on Public Works of the House of Representatives, adopted 2 December 1970. The study resolution requested a review of the report of the Chief of Engineers on Rivers and Harbors in Alaska, published as House Document 414, 83rd Congress, and other pertinent reports, with a view to determine whether any modifications of the recommendations contained therein are advisable. These reports are also in response to Section 2006 of the Water Resources Development Act (WRDA) of 2007, Remote and Subsistence Harbors, which provides that in conducting a study of harbor and navigation improvements the Secretary may recommend a project without demonstrating that the improvements are justified solely by national economic development (NED) benefits, if the Secretary determines that the improvements meet certain criteria. Preconstruction engineering and design activities, if funded, would be continued under the authority provided by the resolution cited above.
2. The reporting officers recommend authorizing a project to improve navigation access at Little Diomedes, Alaska. Based on an economic evaluation of alternative plan costs and economic benefits, none of the alternatives was economically justified. In accordance with the implementation guidance for Section 2006, WRDA 2007, a cost effectiveness/incremental cost analysis was undertaken to consider justification based on the contributions of the alternative plans to the accounts for environmental quality (EQ) and other social effects. Based on that analysis the optimum plan was alternative S3. The project consists of an improved launch area for subsistence hunting and fishing craft protected by stone breakwaters to the north and south.
 - a) The northern breakwater ties into the existing helipad structure. The breakwater south of the launch area is an elongated structure parallel to the shoreline which protects both the launch area and local service facilities (LSF). The breakwaters are constructed of rock fill with armor stones that average about 16 tons. The breakwaters would have side slopes of 1V

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on 1.5H and a crest width of 20 feet at elevations of 20 feet Mean Lower Low Water (MLLW) for the northern breakwater and 25 feet MLLW for the southern breakwater.

b) Construction of the recommended plan includes placement of 78,400 cubic yards of associated rock for the breakwaters with excavation of a small near-shore launch area dredged to -10 feet MLLW, requiring removal of about 3,000 cubic yards of material. The side slopes for the basin would be 1V on 3H transitioning to a 1V on 10H ramp. Excavated material from the launch area will be incorporated into the breakwater structures as fill material to the extent practicable.

c) Determination has been made that no compensatory mitigation is needed as there are no impacts to significant resources.

3. Project Costs Breakdown based on October 2014 Prices.

a) Project First Cost: The estimated project first cost is \$28,960,000, which includes the cost of constructing the General Navigation Features (GNF) and the lands, easements, rights-of-way, and relocations (LERR) estimated as follows: \$28,906,000 for the breakwater structures and excavation including Planning Engineering and Design and Construction Management, and \$54,000 for the LERR. Non-federal sponsor support for implementation of the project includes the city of Diomedes and the Native Village of Diomedes, with financial assistance from Kawerak, Inc. as the current cost sharing sponsors for the study effort.

b) Estimated Federal and Non-Federal Shares: The estimated federal and non-federal shares of the project first cost are \$26,015,000 and \$2,945,000 respectively, as apportioned in accordance with cost sharing provisions of Section 101 of WRDA 1986, as amended (33 U.S.C. 2211), as follows:

(1) The cost of GNFs less than 20 feet MLLW will be shared at a rate of 90 percent by the government and 10 percent by the non-federal sponsors.

(2) \$54,000, all of which is eligible for LERR credit.

c) Additional 10 Percent Payment. In addition to the non-federal sponsors' estimated share of the total first cost of construction the project in the amount of \$2,945,000 pursuant to Section 101 of WRDA 1986, as amended, the non-federal sponsors must pay an additional 10 percent of the costs for GNFs of the project, \$2,891,000, in cash over a period not to exceed 30 years, with interest. The value of LERR will be credited toward this payment.

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d) Operations and Maintenance Costs. Operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) of the project after construction will be a federal cost currently estimated at about \$1,888,000 at 10-year frequency, or an average annual cost of \$162,000. There are not anticipated to be any federal costs for maintaining the launch area or non-federal O&M costs associated with the LSF.

e) Local Service Facilities. The associated cost for LSF is approximately \$1,406,000, which consists of constructing an additional flat land area along the shoreline protected by the southern breakwater for increased subsistence purposes. These costs are 100 percent non-federal and are not included in the project first costs, although they are considered in the total construction costs of \$30,366,000 for purposes of economic analysis.

f) Authorized Project Cost and Section 902 Calculation. The project first cost, for the purposes of authorization and calculating the maximum cost of the project pursuant to Section 902 of WRDA 1986, as amended, should include estimates for GNF construction costs, the value of lands, easements, right-of-way, and the value of relocations provided under Section 101(a)(3) of WRDA 1986, as amended. Accordingly, as set forth in paragraph 3.a) above, based on an October 2014 price level, the estimated project first cost for these purposes is \$28,960,000 with a federal share of \$26,015,000 and a non-federal share of \$2,945,000.

4. Based on October 2014 price levels, a 3.375-percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be \$1,424,000, including OMRR&R. Equivalent annual NED benefits are estimated at \$324,000, for a benefit to cost ratio of 0.23 to 1 with average annual benefits amounting to - \$1,100,000. Similarly, no alternatives were found that result in positive net NED benefits. As previously discussed, Section 2006 of WRDA 2007 allows for recommendation of a project not solely justified by NED. Results of the use of subsistence variables and cost effectiveness, incremental cost analysis in accordance with implementation guidance specific to Section 2006 justifies the outputs of increased subsistence vessel days (SVD). The project provides a total of an additional 247 SVD at an average annualized cost of \$5,765 each.

5. Risk and uncertainty were evaluated for economic costs and sea level rise. In accordance with the Corps Engineering Circular on sea level change the study analyzed three sea level rise rates; low (baseline), intermediate, and high. The baseline, intermediate, and high sea level rise values at the end of the 50-year period of analysis were projected to be 0.54 ft, 1.2 ft, and 2.5 ft, respectively. In general, regional sea level rise (baseline, intermediate, and high) will not affect the number of future launch days or the function of the project which is designed for overtopping.

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6. In accordance with the Corps Engineering Circular on review of decision documents, all technical, engineering and scientific work underwent an open, dynamic and vigorous review process to ensure technical quality. This included District Quality Control, Agency Technical Review, Policy and Legal Compliance Review, and Cost Engineering Directory of Expertise Review and Certification. Overall the reviews resulted in improvements to the technical quality of the report.

7. Washington level review indicates that the plan recommended by the reporting officers is technically sound, environmentally and socially acceptable, and complies with the requirements of Section 2006 of WRDA 2007. Results of the cost effectiveness, incremental cost analysis in accordance with implementation guidance specific to Section 2006 identifies the outputs of the project. The project is not economically justified in accordance with the 1983 U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Land Related Resources Implementation Studies. The views of interested parties, including federal, state and local agencies have been considered. State and Agency comments received during review of the final report and EA included concerns raised by the National Oceanic and Atmospheric Administration (NOAA) and the Alaska Department of Transportation and Public Facilities (AKDOT&PF). NOAA concerns included the documentation of Endangered Species Act (ESA) coordination, as well as the need for an analysis of how the navigation improvements might change whaling practices, opportunities, harvest levels, and flensing and disposal practices within the village. The USACE response dated October 20, 2014 stated that the EA was revised to better document the ESA effect determinations specifically on bowhead, fin and humpback whales, and ringed and bearded seals and to further discuss marine mammal species under the jurisdiction of NMFS. The EA has been also been revised to better reflect the analysis and conclusion relative to subsistence harvesting. AKDOT&PF expressed concerns over the planning and engineering design of the proposed breakwater project and its potential to impact operations of the helipad at Little Diomedes. These concerns were addressed through coordination with the AKDOT&PF and the U.S. Department of Transportation, Federal Aviation Administration. The USACE response to AKDOT&PF dated 23 June 2015 indicated that the elevation of the northern breakwater attached to the helipad would match its top elevation of 20 feet, while the southern breakwater would have a top elevation of 25 feet.

8. I concur in the findings, conclusions, and recommendations of the reporting officers, which identify the cost effective plan in response to the authority of Section 2006 of WRDA 2007. Accordingly, I recommend that the cost effective plan for improved navigation access to Diomedes, Alaska in response to Section 2006 of WRDA 2007 be authorized in accordance with the reporting officers' recommended plan at an estimated cost of \$28,960,000 with such modifications as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to cost sharing, financing, and other applicable requirements of

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federal and state laws and policies, including Section 103 of WRDA 1986, as amended by Section 201 of WRDA 1996, and WRDA 1986, as amended by Section 210 of WRDA 1996. The non-federal sponsors would provide the non-federal cost share and all LERR. This recommendation is subject to the non-federal sponsors agreeing to comply with all applicable federal laws and policies including that the non-federal sponsors must agree with the following requirements prior to project implementation.

a) Provide, during the periods of design and construction, funds necessary to make its total contribution for commercial navigation equal to 10 percent of the cost of design and construction of the GNFs attributable to dredging to a depth in less than -20 feet MLLW.

b) Provide all LER, 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, all as determined by the government to be necessary for the construction or operation and maintenance of the GNFs.

c) Pay with interest, over a period not to exceed 30 years following completion of the period of construction of the GNFs, an additional amount equal to 10 percent of the total cost of construction of the GNFs less the amount of credit afforded by the government for the value of the LERR, including utility relocations, provided by the non-federal sponsors for the GNFs. If the amount of credit afforded by the government for the value of LERR, including utility relocations, provided by the non-federal sponsors equals or exceeds 10 percent of the total cost of construction of the GNFs, the non-federal sponsors shall not be required to make any contribution under this paragraph, nor shall it be entitled to any refund for the value of LERR, including utility relocations, in excess of 10 percent of the total costs of construction of the GNFs.

d) Provide, operate, and maintain, at no cost to the 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 government.

e) Accomplish all removals determined necessary by the federal government other than those removals specifically assigned to the federal government.

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.

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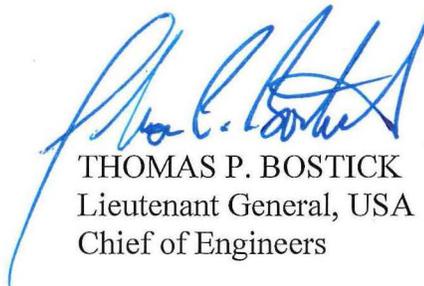
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g) Perform, or ensure performance of, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 9601–9675, that may exist in, on, or under LER that the government determines to be necessary for the construction or operation and maintenance of the GNFs. However, for LER that the government determines to be subject to the navigation servitude, only the government shall perform such investigation unless the government provides the non-federal sponsors with prior specific written direction, in which case the non-federal sponsors shall perform such investigations in accordance with such written direction.

h) Assume complete financial responsibility, as between the government and the non-federal sponsors, for all necessary cleanup and response costs of any hazardous substances regulated under CERCLA that are located in, on, or under LER that the government determines to be necessary for the construction or operation and maintenance of the project.

i) To the maximum extent practicable, perform its obligations in a manner that will not cause liability to arise under CERCLA.

9. 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. 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 sponsors, the state, interested federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.



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