



Proposed Report¹

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: Port of Nome Modifications, Nome, Alaska

1. I submit for transmission to Congress my report on navigation improvements for the Port of Nome, Nome, Alaska. It is accompanied by the report of the district and division engineer. These reports were prepared in partial response to Section 204 of the Flood Control Act of 1948, which provided that “[t]he 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.” These reports are also prepared utilizing authority provided by Section 2006 of the Water Resources Development Act (WRDA) of 2007, as amended, 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 cited. Additional authority under Section 1202(c)(3) Additional Studies, Arctic Deep Draft Port Development Partnerships of WRDA 2016, was utilized that allows for the consideration of national security benefits to communities located with the region served by a remote and subsistence harbor when evaluating navigation improvements for the harbor.

2. The Port of Nome is a regional port located on the Seward Peninsula and adjacent to the Norton Sound, which is centrally located along the Western Alaska coast. Nome has no access to the Alaska road system and is approximately 545 miles northwest of Anchorage. Nome is considered a hub city for 50 communities in western and northern Alaska, and is located in proximity to mining operations, offshore petroleum operations, shipping lanes, and native communities in the Bering Strait Native Corporation region (BSNC). The existing port facilities in the region are overcrowded and have insufficient draft to accommodate new, deeper drafting vessel traffic. Large vessels delivering fuel and cargo to Nome for transshipment to other vessels for delivery to surrounding villages are often forced to anchor offshore or lighter goods to the port.

¹ This report contains the proposed recommendation of the Chief of Engineers. The recommendation is subject to change to reflect Washington-level review and comments from federal and state agencies.

DAEN

SUBJECT: Port of Nome Modifications, Nome, Alaska

3. The reporting officers recommend a plan to improve navigation access to the Port of Nome, Alaska. Based on an economic evaluation of alternative plan costs and economic benefits, none of the alternatives were economically justified. In accordance with the implementation guidance for Section 2006 of WRDA 2007, as amended, a cost effectiveness/incremental cost analysis (CE/ICA) was undertaken to consider justification based on the contributions of the alternative plans to the long term viability of the region. The recommended plan results in a safe, reliable and efficient waterborne transportation system for the movement of commerce, national security, and recreation at the Port of Nome, that allows for economic opportunities in the region and supports the long term viability of surrounding villages. The plan creates a new Deep Water Basin and modifies the existing Outer Basin (Harbor) to make the basin larger with a wider entrance channel.

- a. The new Deep Water Basin is formed by extending the existing West Causeway by approximately 3,484 feet (ft) to a depth of approximately -40 ft Mean Lower Low Water (MLLW). This extension is "L" shaped with the north-south trending section 2,100 ft long and the west-east section 1,384 ft long. Two 450-ft and a 650-ft long dock are incorporated in the West Causeway extension. The basin is deepened to -40 ft MLLW.
- b. The Outer Basin modifications include removing the existing breakwater stub (spur) from the south end of the existing West Causeway, extending this causeway to deep water. The existing east breakwater is removed and replaced by a new East Causeway/Breakwater combination that extends to approximately -25 ft MLLW with a total length of 3,900 ft. The Outer Basin channel entrance width increases to approximately 670 ft and 400 ft long docks are added to the West and East Causeways. The Outer Basin is deepened from -22 ft MLLW to -28 ft MLLW.

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", and guidance for Section 2006 of WRDA 2007, as amended and guidance for Section 1202 (c)(3) of WRDA 2016. The study found that the Nome navigation project as a regional hub port has the unique opportunity in remote Alaska to improve the viability of numerous Alaska native communities, strengthen the resiliency of the region, and serve as a critical outpost for national security. The stemming effects from the regional port improvements include community viability factors that reduce costs to add or replace critical infrastructure, reduce the risk of relocation, reduce food insecurity, and increase access to resources for subsistence. In the Alaska statewide threat assessment, five of the top ten communities (as ranked for highest combined climate change risk including erosion, flooding, and thawing

DAEN

SUBJECT: Port of Nome Modifications, Nome, Alaska

permafrost) are in the Nome region. The villages in the Nome region are confronted with increasing risks associated with lack of critical infrastructure and deteriorating infrastructure that impacts their viability and needs replacement. Others are threatened by climate change impacts from thawing permafrost, rising sea levels, more frequent storms, and coastal erosion. High costs associated with improving these conditions include the expense of bringing building materials in these remote Alaska communities, which impedes necessary upgrades and leads to increased difficulties such as overtaxing existing infrastructure and, in some instances, an increased risk of failure. Critical infrastructure for these native communities include housing, water and sewer services, transportation facilities (airstrips, small harbors, barge landings), schools and medical clinics, bulk fuel facilities, and other public structures required for the health and welfare. The recommended regional hub port at Nome provides the opportunity to efficiently make those community viability improvements. There also exist opportunities for the nation's security to benefit incidental to the port's modification.

5. The recommended plan was developed in coordination and consultation with federal, state, and local agencies and Tribes, and has been determined to be environmentally acceptable. The recommended plan would not have any significant adverse effects; therefore, no compensatory mitigation measures would be required.

Pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended, USACE has completed informal consultation with the U.S. Fish and Wildlife Service. The USACE expects to continue coordination with the National Marine Fisheries Service regarding effects of ESA-listed marine mammals while its application is pending for Incidental Harassment Authorization under the Marine Mammal Protection Act during the Preconstruction Engineering and Design (PED) Phase. This concurrent coordination would be for anticipated confined underwater blasting required during the construction, which may reach level B harassment values for disturbance to marine mammals.

6. Project Cost Breakdown based on FY 2020 (October 2019) prices.

a. Project First Cost: The estimated project first cost of the recommended plan is \$490,919,000, which includes the cost of constructing the General Navigation Features (GNF) and the value of lands, easements, right-of-way, and relocations (LERR) estimated as follows: \$463,104,000 for GNF, \$22,000 for LERRs, \$9,342,000 for Planning, Engineering and Design, and \$18,451,000 for Construction Management.

b. Estimated Federal and Non-Federal Cost Shares: 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 \$368,173,000 and the non-federal share is \$122,724,000.

DAEN

SUBJECT: Port of Nome Modifications, Nome, Alaska

c. Additional 10 percent Payment: 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 \$49,089,700. The LERR cost will be credited against this 10 percent amount.

d. Operation and Maintenance Costs: Operation, maintenance, repair, replacement and rehabilitation (OMRR&R) for the recommended plan after construction will have average annual dredging costs of \$3,712,000.

e. Associated Costs: Estimated associated federal costs of \$96,000 include navigation aids, a U.S. Coast Guard expense.

f. Local Service Facilities: The associated costs for local service facilities is approximately \$127,906,000 for docks, mooring, causeway and berthing areas. These are a 100 percent non-federal cost and are not included in the project first costs of the recommended plan.

g. 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, includes estimates for GNF construction costs and the value of LERR. Accordingly, as set forth in paragraph 6.a above, based on FY 2020 price levels (October 2019), the estimated project first cost for these purposes is \$490,919,000 with an estimated federal share of \$368,173,000 and a non-federal share of \$122,724,000.

7. The recommended plan is supported by the city of Nome, which is the non-federal sponsor. No national economic development plan was identified with benefit to cost ratios ranging from 0 to 0.1, without considering national security benefits, and 0 to 0.3 with consideration of national security benefits. Consistent with Section 2006 of WRDA 2007, a CE/ICA was completed to support plan selection. Section 2006 benefit categories were identified that represent issues of importance to the Nation and to the region served by the port. To characterize the long-term community viability at Nome and other communities served in the region by the port, a set of variables that were perceived to impact community viability were identified and ranked, and collectively referred as community viability units (CVUs). The CE/ICA without national security benefits was used to support selection of the recommended plan (Alternative 8b), a cost-effective plan. This alternative was also selected because of maneuverability and safety concerns of the physically smaller plans, as expressed by the marine pilots that participated in the navigation simulation exercises.

The recommended plan provides average annual benefits of \$1,849,000. The average annual cost is \$28,460,000. The benefit cost ratio is 0.1. Economic analyses are

DAEN

SUBJECT: Port of Nome Modifications, Nome, Alaska

based on a 50-year period of analysis and the Fiscal Year 2020 federal discount rate of 2.75 percent. The recommended plan would produce 950 CVUs.

8. The goals and objectives included in the Campaign Plan of the Corps were fully integrated into the Port of Nome modification 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. Risk and uncertainty were addressed during the study by sensitivity analysis that evaluated the cost effective plan's performance. This evaluation included sensitivity to sea level change and potential national security benefits from the U.S Coast Guard and Navy vessels. In addition, the implementation risk was evaluated and established that the the Deep Water Basin is identified as a construction priority as it meets the objective of having a deep water basin at the Port of Nome to improve navigation efficiency with the intent of reducing transportation costs, especially for fuel and construction materials for community viability. It improves the harbor condition for existing facilities by adding wave protection from the predominant south, southwest and west wave conditions. The West Causeway extension should have the least impact to existing operations when compared to relocation of the east breakwater in the Outer Basin. After construction, the Deep Water Basin could protect and improve access to the existing Outer Basin and construction of Outer Basin improvements. Constructing the Outer Basin modifications (demolition of the east breakwater and relocation of a causeway/breakwater), combined with a construction delay of the Deep Water Basin could result in unacceptable wave and wind impacts in the Outer Basin. During construction, the existing East Breakwater would be deconstructed for materials for the new breakwater and causeway, leaving the Outer Basin exposed to east and southeast waves for a period of time. This condition could potentially influence operations during a short shipping season.

9. 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 two Agency Technical Reviews (ATR), and two Headquarters Corps policy and legal reviews. In addition, a Type I Independent External Peer Review (IEPR) was completed. All concerns identified during the ATRs and IEPR have been addressed and incorporated in the final report. The reviews have resulted in the improvement of the technical quality of the report.

10. 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

DAEN

SUBJECT: Port of Nome Modifications, Nome, Alaska

administrative and legislative policies and guidelines. Also, the views of interested parties, including federal, state, and local agencies have been considered.

11. I concur in the findings, conclusions, and recommendations of the reporting officers. I find that the recommended plan for navigation improvements at the Port of Nome, 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:

a. Provide, during the periods of design and construction, funds necessary to make its total contribution for commercial navigation equal to:

(1) 10 percent of the cost of design and construction of the general navigation features attributable to dredging to a depth not in excess of -20 ft mean lower low water (MLLW), plus

(2) 25 percent of the cost of design and construction of the general navigation features attributable to dredging to a depth in excess of -20 ft MLLW but not in excess of -50 ft MLLW, plus

(3) 50 percent of the cost of design and construction of the general navigation features attributable to dredging to a depth in excess of -50 ft 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 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

DAEN

SUBJECT: Port of Nome Modifications, Nome, Alaska

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. Provide 50 percent of the excess cost of operation and maintenance of the project over that cost which the Secretary determines would be incurred for operation and maintenance if the project had a depth of 50 ft;

e. 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;

f. 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;

g. 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;

h. 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;

i. 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,

DAEN

SUBJECT: Port of Nome Modifications, Nome, Alaska

easements, rights-of-way, relocations, and disposal areas required for the construction or operation and maintenance of the project;

j. 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;

12. 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 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