

TERMINATION LETTER REPORT

SUBJECT: Kotzebue Harbor Feasibility Study, Navigation Improvements at Cape Blossom, Kotzebue, Alaska (0130789)

1. Purpose: To provide information concerning termination of the subject study.

2. Authority: This study was conducted under authority granted by Section 204 of the Flood Control Act of 1948, which authorizes a study of the feasibility for the development of navigation improvements in various harbors and rivers in Alaska. It also utilized the authority of Section 2006 of WRDA, 2007, Remote and Subsistence Harbors, as modified by Section 2104 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) and further modified by Section 1105 of WRDA 2016. The economic justification for the improvements was insufficient for a National Economic Development plan to be identified. As a result, plan selection was supported by a Cost-Effectiveness/Incremental Cost Analysis under the implementation guidance for Section 2006, Remote and Subsistence Harbors Act, as amended, with the region of concern being the entire Northwest Arctic Borough. However, for the reasons presented in Paragraph 6 below, this study was terminated because an implementable plan was not identified during the study.

3. Congressional Delegation: Senator Lisa Murkowski (R), Senator Dan Sullivan (R), and Representative Don Young (R) all have an interest in the subject project.

4. Project Purpose and Need: The purpose of this study was to identify a feasible solution that provides safe, reliable, and efficient navigation and mooring for ocean-going barges serving the hub community of Kotzebue, Alaska, and to provide for the safe and efficient transfer of goods to riverine barges that serve the outlying villages in the region. The project is needed to alleviate existing vessel restrictions that are imposed by insufficient channel depths.

5. Project Location: The project site is an undeveloped area with no road access located approximately 10 miles south of Kotzebue near Cape Blossom (Enclosure A., Kotzebue, Alaska Harbor Study Location and Vicinity). Previous studies going back to at least 1973 by the United States Army Corps of Engineers (USACE) and others selected Cape Blossom for this study because of its relatively deep near-shore bathymetry and its proximity to Kotzebue. Although there is no road access to the project site, construction of an all-season access road from Kotzebue to the project site was in the final design phase when the USACE terminated this General Investigation study.

6. Reasons for Study Termination: This General Investigation study was terminated because it did not result in an implementable plan. Historical aerial photographs available after the release of the draft Integrated Feasibility Report and Environmental Assessment (the draft IFR/EA) identified a changed site condition (accelerating coastal bluff erosion) and a significant increase in associated project costs. The project appears

to be unsustainable because significant ongoing coastal bluff erosion poses a risk of an unsustainable deferred construction cost to maintain access to the dock after project implementation.

7. Coastal Erosion Rate: The coastal erosion rate was assumed minimal based on the reviewed data prior to the release of the draft IFR/EA. The coastal erosion rate evaluation indicates that the bluff is now receding from 12 to 30.4 feet per year (ft/yr). The coastal erosion rate was 0 to 1.7 ft/yr before 2012; however, it accelerated to approximately 30.4 ft/yr during the period from 2014 to 2018. During this later 4-year period, the average land loss in the project area was approximately 121 ft. Assuming this rate continues, approximately 600 to 1,520 ft of land loss could occur over a 50-yr period. The major mechanisms that are likely causing the erosion are thawing of ice-rich permafrost soils (predominantly consisting of silt, organic silt, and peat), storm events, and potential sea-level rise (Figure 1).



Figure 1. The coastal bluff in the project area (2016) showing ice lenses and active erosion.

8. Project Cost Allocation Summary: The project cost would have been allocated mostly to the non-Federal sponsors at approximately \$268M to as high as \$393M (in round numbers) versus \$36.4M of Federal cost. Plus, there are additional estimated deferred construction costs of \$50M to \$125M depending on the actual rate the coastal

bluffs recede inland, to maintain access to the dock. These deferred construction costs would be the sole responsibility of the non-Federal sponsors and would increase their total potential cost liability to \$318M to over \$392M during the 50-year period of economic analysis. The non-Federal sponsors expressed concern that the project is unsustainable and that they could not provide the necessary local cooperation.

9. Summary of Expenditures (non-Federal and Federal Costs):

Federal funds of \$1,650,000 have been provided for this study (including funds initially provided for an Independent External Project Review,) and local funds of \$1,674,999.95 have been provided through April 10 2019. The final cost for the study is estimated to be \$1,620,000 for each sponsor, both Federal and local.

Enclosures:

A: Kotzebue, Alaska Harbor Study Location and Vicinity