



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
**PACIFIC OCEAN DIVISION, CORPS OF ENGINEERS**  
**FORT SHAFTER, HAWAII 96858-5440**

CEPOD-PDC

12 October 2007

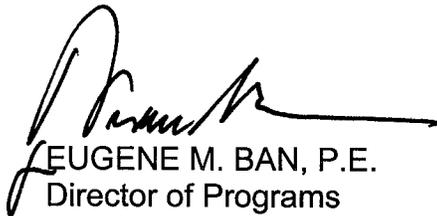
MEMORANDUM FOR COMMANDER, ALASKA ENGINEER DISTRICT, ATTN:  
CEPOA-EN-CW-PF

SUBJECT: Peer Review Plan Approval for the Unalakleet Navigation Improvements,  
Unalakleet, Alaska Study

1. The enclosed Review Plan for the Unalakleet Navigation Improvements, Unalakleet, Alaska Study has been prepared in accordance with EC 1105-2-408 and the Director of Civil Works' "Peer Review Process" memorandum dated March 30, 2007.
2. The Review Plan is available for public comment, and the comments received will be incorporated into the Review Plan as appropriate. The Review Plan will be coordinated with the Deep Draft Navigation Planning Center of Expertise of the South Atlantic Division, U.S. Army Corps of Engineers, which is the lead office to execute this Review Plan. The Review Plan does not include external peer review because the scope and technical complexity of the feasibility report are not expected to be novel, controversial or precedent setting.
3. I hereby approve this Review Plan, which is subject to change as study circumstances require, consistent with study development under the Project Management Business Process. Subsequent revisions to this Review Plan or its execution will require new written approval from this office.
4. The point of contact for this Review Plan can be reached at (907) 753-5710.

FOR THE COMMANDER:

Encl

  
EUGENE M. BAN, P.E.  
Director of Programs

# Peer Review Plan for Unalakleet Navigation Improvements Unalakleet, Alaska

## Project Management Plan Attachment 4

*This information is distributed solely for the purpose of pre-dissemination peer review under applicable information quality guidelines. It has not been formally disseminated by the Corps. It does not represent and should not be construed to represent any agency determination or policy.*



**US ARMY CORPS  
OF ENGINEERS**

**ALASKA DISTRICT**

Project Management Plan  
Navigation Improvements  
Unalakleet, Alaska

## 1.0 PURPOSE

This Attachment presents the process that assures quality products for the Unalakleet Navigation Improvements, Unalakleet, Alaska Feasibility study. Quality control is governed by HQUSACE ER 1110-1-12, U.S. Army Corps of Engineers, Engineering and Design Quality Management (CEMP-ES/CECQ-EP, 1993), Pacific Ocean Division (POD) regulation PODR 1110—1-7, Quality Management Plan, and by Alaska District (CEPOA) ISO section CEPOA-7.1-11, Study Quality Management. Independent Technical Review (ITR) is further governed by Appendix H of ER 1105-2-100, Planning Guidance Notebook, Engineering Circular (EC) 1105-2-408, Peer Review of Decision Documents, and CEPOA ISO section 7.3-4, Independent Technical Review/Design Review. These documents can be reviewed at the HQUSACE Publications Site, and the POD and POA Quality Management Portals at: [www.usace.army.mil/usace-docs](http://www.usace.army.mil/usace-docs); [www.pod.usace.army.mil](http://www.pod.usace.army.mil); and [www.poa.usace.army.mil](http://www.poa.usace.army.mil) respectively.

The product to be reviewed by the ITR team is the Unalakleet Navigation Improvements, Unalakleet, Alaska Feasibility report, and NEPA documentation. Under the provisions of Corps of Engineers policy, as detailed in EC1105-2-408 dated May 31, 2005, the ITR will be conducted by specialists from organizations outside of the district responsible for the study. Independent Technical Review will be conducted for all decision documents and will be independent of the technical production of the project. This Peer Review Plan is, by reference, a part of the PMP for this study.

## 2.0 APPLICABILITY

This document provides the Peer Review Plan for the Feasibility Study. It identifies independent technical review for all work to be conducted under this study authority, including in-house, sponsor and contract work. This document is presented for Public Review and comment. Questions and comments should be directed to the Project Planner who can be reached at (907) 753-5710.

### References:

- a) EC1105-2-408 "Peer Review of Decision Documents" dated May 31, 2005;
- b) ER 1105-2-100 "Planning Guidance Notebook & Appendices D, F, G & H";
- c) PODR 1110-1-7, Pacific Ocean Division Quality Management Plan;
- d) CEPOA-7.1-11, Alaska District Study Quality Management; and
- e) CEPOA-7.3-4, Independent Technical Review/Design Review

## 3.0 GENERAL

The Unalakleet Navigation Improvements Project is authorized by the "Rivers and Harbors in Alaska" study resolution adopted by the U.S. House of Representatives Committee on Public Works on December 2, 1970. The applicable text of the authorization is as follows:

*"Resolved by the Committee on Public Works of the House of Representatives, United States, that the Board of Engineers for Rivers and Harbors is hereby requested to review the reports of the Chief of Engineers on Rivers and Harbors in Alaska, published as House Document Numbered 414, 83rd Congress, 2nd Session; and other pertinent reports, with a view to determining whether any modifications of the recommendations contained therein are advisable*

*at the present time.*

Unalakleet is located at the mouth of the Unalakleet River on the Norton Sound Coast of western Alaska 150 air miles east-southeast of Nome, Alaska. The City of Unalakleet is a Second Class City in Alaska's Unorganized Borough. The recognized tribal entity is the Native Village of Unalakleet. Unalakleet is within the Bering Straits Native Corporation under the Alaska Native Claims Settlement Act (ANCSA) and is served by the Norton Sound Economic Development Corporation of the Community Development Quota program. Attachment 1 shows the project location.

Unalakleet has one of Alaska's newest fish processing facilities. The commercial salmon fishery and growing sport fishing industry are significant elements to the cash economy. In addition the community hopes to develop a crab fishery to enhance the economy. Subsistence is a significant lifestyle and important economic factor.

Emerging sandbars in the generally shallow water along the coast of Norton Sound off Unalakleet obstruct the mouth of the river causing delays in receipt of bulk goods, fuel and perishable fish as barges and fishing boats must await high water conditions for passage to the unloading areas accessed through the Unalakleet River. Demurrage and groundings of barges increases the cost of the cargo and moorage. Delays in getting the commercial fish catch to the processing plant results in decreased quality of the fish and hence, decreased price. Having to await high tide forces fishing boats to remain idle for hours during the short commercial harvest season and, during storms, jeopardizes boats unable to access the safety of the river. Improving navigational access to Unalakleet would decrease the costs of goods and fuel, increase the revenues from the commercial fishery, increase subsistence fishery opportunity, and improve the efficiency and safety of operations at Unalakleet.

At present, marine access to the fish processing plant and small boat landing/moorage area is via a marked mile-long channel following the offshore thalweg of the Unalakleet River. This channel swings north from the mouth of the river sub-parallelizing the shoreline. Local residents state that although the river mouth is about 45 feet deep, the offshore channel is less than four feet deep over much of its length, and areas outside the channel are only two feet deep at low tide. Acceptable bathymetric data are lacking. Tidal regimen is mixed, but generally diurnal with high tide about mid-day. The closest tidal data are from St. Michael, 50 miles to the southwest where mean tide is 2.0 ft. No mean range was found. Barges with 4-6 ft draft offload fuel and supplies on the beach north of the city rather than chancing the tidewater channel. Waves are reported to break far off shore and normally approach the beach with a wave height of less than 3 feet.

The shallow channel and offshore area in front of Unalakleet is believed to result from sand waves moving inland during storms. Flocculation of fine particulates in the river water is believed to be a minor contributor. Sediment transported by long shore currents from the south apparently drop their load off the southern edge of the Unalakleet River mouth, forming a shoal area extending at least 1/2 mile offshore.

The Reconnaissance Report identified a navigation channel with and without breakwaters as a possible solution to the access problem. The purpose of the feasibility study will be to thoroughly investigate the viability of the navigation channel alternative from the Reconnaissance Report. Also, the Project Delivery Team (PDT) expects to consider offloading facilities at several locations along the Norton Sound coastline as additional alternatives in the feasibility report.

#### **4.0 REVIEW REQUIREMENTS**

Initial Quality Control (QC) review will be handled within the Section or Branch performing the work. Additional QC will be performed by the PDT during the course of completing the study report. The detailed checks of computations and methodology should be performed at the District level, and the processes for this level of review are well established, see reference d.

This study is expected to utilize standard economic models in the analysis. The cost estimate will use the Corps' Micro Computer Aided Cost Estimating Software (MCACES). Risk analysis will use either Crystal Ball or At-Risk, both of which are well known commercial products. It is expected that all of these models will be certified for use by the time that the analysis is performed. At this time engineering models are not required to be certified for use, however, this study anticipates using standard Corps' developed hydraulic models such as the advanced circulation (ADCIRC) and the sediment transport (STFATE) models.

This study anticipates that the Planning Center of Expertise (PCX) for Deep Draft Navigation Projects will assign and coordinate the efforts of a Corps ITR team. It is recommended that the ITR be handled within the Corps, as the scope and technical complexity do not appear to warrant an External Peer Review (EPR). It is anticipated that while this study will be challenging and beneficial, it will not be novel, controversial or precedent setting, nor have significant national importance. The ITR will focus on:

- Review of the assumptions and criteria applied;
- Review of the methods of analysis and design; and,
- Compliance with client, program and NEPA requirements.

#### **5.0 REVIEW PROCESS**

The ITR will be conducted prior to the Alternate Formulation Briefing (AFB) which is anticipated in the second quarter of FY 2009. When convened the ITR team will be provided with the Project Management Plan, including the detailed study scope, budget and schedule, and the guidance memo from the Feasibility Scoping Meeting (FSM). Prior to the review, the ITR team will be provided with the partial draft report containing study results developed to that point. If necessary, the study manager will brief the ITR team on the navigation project.

#### **6.0 REVIEW COST**

The cost of the ITR is estimated to be about \$50,000 based on similar reviews conducted by the PCX.

## 7.0 REVIEW SCHEDULE

The study schedule is currently under development, but the ITR and AFB are anticipated for second quarter of FY 2009.

## 8.0 PEER REVIEW PLAN

The components of the Peer Review Plan were developed pursuant to the requirements of EC 1105-2-408.

### 8.1 BASIC INFORMATION

The documents that will be the subject of the peer review process are the Feasibility Report, and Environmental Assessment, and the Finding of No Significant Impact (assumed) for the Unalakleet Navigation Improvements study.

### 8.2 DISTRICT PDT

<i>Position</i>	<i>Affiliation</i>
Project Manager	CEPOA-PM-C
Study Coordinator	CEPOA-EN-CW-PF
Hydraulic Engineer	CEPOA-EN-CW-HH
Biologist	CEPOA-EN-CW-ER
Archaeologist	CEPOA-EN-CW-ER
Native Liaison	CEPOA-EN-CW-ER
Economist	CEPOA-EN-CW-EC
Cost Engineer	CEPOA-EN-CE
Realty Specialist	CEPOA-RE-PC
Geotechnical Engineer	CEPOA-EN-ES-SG
Operations	CEPOA-CO-O
Value Specialist	CEPOA-EN-ES

### 8.3 ITR TEAM (TO BE ASSIGNED BY THE PCX)

<i>Position</i>	<i>Affiliation</i>
Team Leader	
Hydraulic Engineer	
Biologist	
Economist	
Cost Engineer	CENWW

### 8.4 EPR PROCESS

No External Peer Review process is envisioned at this time. Based upon the evaluation by the PDT, it is highly unlikely that the Corps report to be disseminated will contain influential scientific information. There are no controversial or complex issues associated with this study, nor will the study recommend any procedure that would be precedent setting or change prevailing practices. The Project Complexity Analysis was used in making this determination.

### Project Complexity Analysis

Factor Discipline	Unique Methodology	Technical Complexity	Precedent Setting Methods/Model	Potential Change Current Practice	Significant Policy Impact	Highest Value
Plan Formulation	1	1	1	1	0	1
Economic	1	1	1	1	0	1
Environmental	1	1	1	1	1	1
Technical	1	1	1	1	1	1
Highest Value	1	1	1	1	1	1

Scoring: None 0    Low 1-2    Medium 3-4    High 5

#### 8.5 EPR MEMBER SELECTION

An External Peer Review is not anticipated for this study.

#### 8.6 PUBLIC COMMENT

The District anticipates meeting with interested groups including the City and Tribal Councils, local fishermen, shippers, and Norton Sound Economic Development Agency. The report and environmental documentation will be available for public review. A public meeting will be conducted during the public review period.

#### 8.7 DISSEMINATION OF PUBLIC COMMENT

Minutes of meetings with public organizations and/or individuals will be prepared and distributed to the PDT, participants, and any individuals or organizations that are identified to have an interest in the project. Comments made by the public will not be provided to the ITR team because the public review will occur after the ITR team has concluded their review. However, all public comments generated during the review period will be addressed in the final report.

#### 8.8 REVIEW DISCIPLINES

It is anticipated that the ITR team will be comprised of four to five reviewers in the following disciplines: Coastal Engineering; Environmental; Economics; Planning; and Cost Estimating.

##### 8.8.1 Hydraulic Engineering

The reviewer(s) should have extensive knowledge of coastal hydraulics, including ice impacts on structures.

##### 8.8.2 Environmental

The reviewer should have a thorough knowledge of in-water construction and dredging operations and open water disposal issues. The reviewer should be familiar with NEPA

requirements and process, and consultation requirements, as they apply or are practiced in Alaska.

**8.8.3 Cost Engineering**

The reviewer should be familiar with arctic construction methods in rural Alaska.

**8.8.4 Economics**

The reviewer should be familiar with economic conditions and subsistence living economics in rural Alaska.

**8.8.5 Planning**

The reviewer should be familiar with conditions and policy that affects planning in rural Alaska.

