



REPLY TO  
ATTENTION OF

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

CEPOD-PDC

7 November 2007

MEMORANDUM FOR COMMANDER, ALASKA ENGINEER DISTRICT, ATTN:  
CEPOA-PM-C

SUBJECT: Peer Review Plan Approval for the Yakutat, Alaska, Watershed Study

1. The enclosed Review Plan for the Yakutat, Alaska, Watershed 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 has been coordinated with the Flood Risk Management Planning Center of Expertise of the South Pacific Division, U.S. Army Corps of Engineers, which is the lead office to execute this Review Plan. The Review Plan does include external peer review for those portions of the study related to glaciology and economic development.
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) 753-5621.

FOR THE COMMANDER:

Encl

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

**Attachment 2: FEASIBILITY STUDY PEER REVIEW PLAN**  
**Watershed Study**  
**Yakutat, Alaska**  
**PWI: 013785**

*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.*

1. The Alaska District, Corps of Engineers (COE) is conducting a Feasibility watershed study at Yakutat, Alaska under Section 117 authority. Decision documents generated by this feasibility study will undergo independent technical review in accordance with EC1105-2-408, Peer Review of Decision Documents. The feasibility study will evaluate flood damage reduction alternatives to mitigate damages from a major overflow event from Russell Lake into the Situk River. The major potential solutions anticipated are related to flood protection of the Yakutat Airport. Another major thrust of this study is to identify non-structural solutions to reduce and mitigate economic damages where possible. This second intent uses watershed planning methodology to identify resources and opportunities for improvement. The two major thrusts both require input from the same hydrology and flood modeling to identify the impacted areas. The project development team (PDT) for this study consists of the following disciplines/positions. Other disciplines will be included as needed.

Project Delivery Team (PDT)	
Project Manager	Alaska District
City Planner	City and Borough of Yakutat
Project Formulator	Alaska District
Hydraulic Engineer	Alaska District
Economist	Alaska District
Biologist	Alaska District
Archaeologist	Alaska District
Cost Engineer	Alaska District
Geotechnical Engineer	Alaska District
Biologist	Alaska Dept Fish & Game
Glaciologist	Cold Regions Research and Engineering Laboratory (CRREL)
Remote Sensing Specialist	CRREL
Electronics Technician	CRREL

Questions and comments on this Peer Review Plan should be directed to the Project Manager who can be reached at 907-753-5621.

2. The study will incorporate analyses of hydrology and environmental concerns in the Situk River and adjacent drainages, the economics of the industries that utilize these resources and the airport (which is sited in the lower reach of the Situk drainage area), and analyses of the Russell Fiord and the Hubbard Glacier and their physical relationships. It is anticipated that this study will utilize information from research studies of the Hubbard Glacier and prior closure events, and ongoing research to develop realistic risk scenarios for flood events.

3. The scope and technical complexity for this study and feasibility report is not expected to be novel, controversial, or precedent setting for much of the study. However, the study does encompass the field of glaciology to determine potential for developing a stable glacier dam sufficient to maintain a flood level in Russell Fiord, and will look at the economics of diversification (initiation of new business areas) for Yakutat. Therefore external peer review (EPR) by organizations and personnel not affiliated with the Corps of Engineers, such as academia, seems warranted for this study, within those areas. This study will use a number of engineering and economic technical models to develop flood scenarios and economic benefits. The engineering models include HEC-RAS, a one-dimensional flow modeling program, and ADH, a two dimensional flow modeling program. The economic model for incremental cost analysis is CEICA as developed by the institute for Water Resources (IWR). A model of Hubbard glacier will also be developed for determining the potential stability of dams developed by the glacier with Gilbert Point. This model will be a single use model and is not expected to be certified, but reviewed in the independent technical review (ITR) for the study.

4. Review will consist of ITR by personnel within the Corps of Engineers. Technical reviewers will be personnel at journeyman or senior levels with experience in Corps of Engineers civil works studies. These reviewers will not be involved in the day to day decisions and development of study work products. Where possible the ITR personnel will be selected from outside Alaska District. Since South Pacific Division is the Planning Center of Expertise (PCX) for flood risk management, the ITR team leader will be from the PCX. The ITR Team will be made up of people with experience in the major disciplines and include representatives of the local sponsor. The ITR team leader will be responsible for selecting ITR personnel. The team's purpose is to provide a technical review of all elements of the feasibility study and to insure planning, analysis, and design conform to applicable USACE standards, policy, and guidance. The following disciplines are anticipated for the Corps ITR team:

- Project Formulator
- Hydraulic Engineer
- Biologist
- Archaeologist
- Cost Engineer
- Geotechnical Engineer

Independent technical review of the glaciology work is anticipated to come from the glaciology program at the University of Alaska, Fairbanks and/or from the resident glaciologist at the US Geological Survey, Alaska. Also, the economics of the diversification is anticipated to be reviewed by an economist from the commercial arena. The ITR work for economics is expected to be provided by Jim Richardson from ResourceEcon.

The ITR team will review Alternative Formulation Briefing (AFB) documents and draft feasibility report/EIS before submittal to Pacific Ocean Division for approval and processing to USACE higher authority. The team will review the final Feasibility Report and Environmental Impact Statement (FR/EIS) before it is submitted to Pacific Ocean Division for approval and processing to USACE higher authority only if there are significant changes in the report as a result of public reviews.

5. The anticipated schedule for ITR review is:

Feasibility Scoping Meeting (FSM) documents	Jan – Feb 2009
Alternative Formulation Briefing (AFB) documents	Feb-Mar 2011
Draft Feasibility Report and EIS	Fall 2012

6. As with the ITR, the external peer review of the feasibility report and environmental impact statement will be done in coordination with the Flood Risk Management PCX in the South Pacific Division. The PCX will assist in determining the EPR participants and the EPR process for this particular study.

7. The public will have opportunities to review the study and will be notified of availability of draft documents and public meetings in accordance with NEPA procedures. Public meetings will be held in Yakutat. The ITR team will generally not receive public comments as public comments are used to develop the documents the ITR team reviews.