
**PEER REVIEW PLAN
FOR
FEASIBILITY STUDY
OF
LAKE WASHINGTON SHIP CANAL
SECTION 216 WATER CONSERVATION/RESTORATION
GENERAL INVESTIGATION STUDY, SEATTLE, WASHINGTON**

PEER REVIEW PLAN

January 23, 2008

1. INTRODUCTION

Section 216 of the 1970 Flood Control Act authorizes the Corps of Engineers to evaluate modifications to the Lake Washington Ship Canal (including the Chittenden Locks, Shilshole Bay, and surrounding Lake Washington basin) for the purposes of water conservation and ecosystem restoration. In 1992 a reconnaissance study was initiated to investigate conservation of water at the locks for municipal and industrial water supply use by the City of Seattle. This study was discontinued because of unresolved water right issues for the Cedar River. The study was reinitiated in 1997 at the request of the City of Seattle and King County, to consider water conservation for fish passage. In July 1998 the Corps completed a favorable reconnaissance report. The City of Seattle Public Utilities (SPU) initiated feasibility studies with the Corps in June 1999; King County in August 1999. In April 2002 the feasibility study was split into two separate studies based on geography and complexity. The King County study focused on ecosystem restoration needs for the Lake Washington Basin, including the Cedar River, Sammamish River, and Lake Sammamish. Whereas, the Seattle study is focusing on complicated environmental restoration needs of the Ship Canal, locks, and estuary. In 2007, King County withdrew sponsorship of their portion of the study in order to expedite the implementation of projects recommended by the General Investigation study using local funds.

The feasibility study funded by SPU is continuing. Under this study, the primary focus is: salmon restoration in the Ship Canal, Lake Union, and Shilshole Bay and the improvement of fish passage at the Chittenden Locks. A key concern for Seattle is the improved use of fresh water at the Locks. This study has the support of the state-mandated watershed salmon recovery committee for the Lake Washington basin (the Watershed Regional Inventory Area (WRIA) 8) and has been coordinated with the Muckleshoot Indian Nation. Input from the feasibility study has been critical to the completion of a state-approved Salmon Recovery Plan for endangered Chinook salmon for the Lake Washington Basin.

The purpose of the General Investigation (GI) feasibility phase of the project development is to investigate and formulate a solution to address ecosystem restoration for the Ship Canal. The recommended plan identified in the feasibility report must be both technically and economically viable and capable of being implemented to meet project objectives. The feasibility phase includes: formulating alternative solutions and assessing impacts to satisfy the National Environmental Policy Act (NEPA) requirements, evaluating costs and benefits, preparing initial designs, and recommending a plan to initiate solutions to the problem.

The purpose of the Peer Review Plan (PRP) is to: assign the appropriate level and review independence, establish the procedures, and assign responsibilities for conducting the independent technical reviews (ITRs) of all applicable decision documents to ensure the quality and credibility of all decision documents developed during the GI. This PRP is written as a stand-alone document that acts as a part of the Project Management Plan

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(PMP). The PRP will subsequently be updated with the PMP. The PRP will be electronically posted for public access on the Seattle District website: <http://www.nws.usace.army.mil/> within the Lake Washington Basin study webpage. This plan is compliant with EC 1105-2-408 *Peer Review of Decision Documents*, 31 May 2005, section 6, parts a. through j. This plan also is compliant with the 20 April 2007 USACE Northwestern Division memorandum *Peer Review Process*.

Table 1 provides a summary of acronyms used in this document.

DEIS	Draft Environmental Impact Statement
DFR	Draft Feasibility Report
EPR	External Peer Review
FEIS	Final Environmental Impact Statement
FFR	Final Feasibility Report
GI	General Investigation
ITR	Independent Technical Review
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
PBA	Programmatic Biological Assessment
PMP	Project Management Plan
PRP	Peer Review Plan
SPU	Seattle, Public Utilities
WRIA8	Water Resource Inventory Area 8

The components of the project delivery team are presented in Table 2. The project manager, Rebecca Jahns, is the main point of contact at Seattle District for more information about this project and the peer review plan. The technical point of contact for requirements for Independent Technical Review and External Peer Review is the Ecosystem Planning Center of Expertise for the Corps of Engineers at (601)-634-5854.

TABLE 2.

FEASIBILITY PHASE PROJECT DELIVERY TEAM

<u>Discipline</u>	<u>Office/Agency</u>
Project Manager	CENWS-PM-PL-PF
Program Manager (GI)	CENWS-PM-PL-PF
Planning Center of Expertise	CENWS-MVD-RB-T
Program Analyst	CENWS-PM-CU
Plan Formulation	CENWS-PM-PL-PF
Environmental Coordinator	CENWS-PM-PL-ER
Cultural Resources	CENWS-PM-PL-ER

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Historic Properties	CENWS-EC-DB-AS
Environmental Eng/HTRW	CENWS-EC-TB-ET
Biological Analysis	CENWS-PM-PL-ER
Civil Design	CENWS-EC-DB-CS
Structures	CENWS-EC-DB-CS
Survey/ CADD Mapping/GIS	CENWS-EC-TB-SY
GIS	CENWS-IM-PI
Geotechnical	CENWS-EC-DB-CS
Hydraulics & Hydrology	CENWS-EC-TB-HE
Economic Evaluation	CENWS-PM-PL
Cost Engineering	CENWS-EC-CO-C
Real Estate	CENWS-RE-RS
Public Affairs Office	CENWS-PA
Office of Counsel	CENWS-OC
Co-Sponsor PM	Seattle Public Utilities

2. PROJECT SIGNIFICANCE

The GI Feasibility Report (FR)/ Environmental Impact Statement (EIS) is likely to require External Peer Review (EPR) for the following reasons:

- New fish passage systems at the Chittenden locks may be unique and controversial in design and effectiveness
- The recommended alternatives may be controversial based on impacts to navigation, water supply, and water quality.
- There is strong agency interest in improving fish passage survival in the Ship Canal by federal, state, and local resource agencies, and the Muckleshoot Indian Nation. Members of the WRIA 8, including the Washington Department of Ecology, Washington Department of Fish and Wildlife, King County, and the City of Seattle have a strong interest in improving fish passage to complement their restoration programs in Lake Washington. The National Oceanic and Atmospheric Administration (NOAA) has an interest in reducing harm to endangered species (Puget Sound Chinook salmon).
- Depending on the alternatives recommended for ecosystem restoration, there could be impacts to navigation, the local economy, and recreation.
- There is potential risk to an endangered species of salmon if the recommended projects do not function properly.

3. TECHNICAL REVIEW SCHEDULE

Independent Technical Review (ITR) will be conducted for all major GI phase documents (i.e, without project report, feasibility scoping documents, plan selection report, and Draft EIS/FR) and major engineering and scientific documents products (e.g., cultural resources overview and programmatic biological assessment). The review schedule will

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be included in the amended Project Management Plan (PMP) for the feasibility study, which is scheduled to be completed in February 2008. Key milestone dates from the PMP will be added to the PRP at that time.

Review Milestone	Scheduled Start Date	Scheduled Finish Date
Without Project Condition Report	TBD	TBD
Feasibility Scoping Documents	TBD	TBD
Plan Selection Report	TBD	TBD
Programmatic Biological Opinion	TBD	TBD
Draft EIS and FR	TBD	TBD
Final EIS and FR	TBD	TBD

4. EXTERNAL PEER REVIEW

An external peer review (EPR) is recommended prior to final approval of the FR/EIS. EPR team members for fisheries expertise are recommended by resource agencies and University of Washington scientists, to be approved by the Corps. Peer reviewers may be required for structural/mechanical/electrical engineering, water quality, geology and geomorphology, economics, and hydrology and hydraulic engineering depending on the disciplines involved in the recommended plan. These disciplines will be nominated by local and regional experts from the public, federal, state and local agencies and governments, and technical engineering firms and organizations. For all nominees, the Corps will approve EPR participants from the nominee lists for each discipline. The need for an EPR will be confirmed with the study Vertical team (District, Division, Headquarters, local sponsor, key stakerholders/agencies) after selection of the recommended plan.

5. PUBLIC REVIEW OPPORTUNITIES

Study documents will be posted on the District website, and linked into the websites for the local sponsor (City of Seattle – <www.seattle.gov>), and WRIA 8 (<http://dnr.metrokc.gov/WRIAS/8/>). The sponsor and Corps will cosponsor a number of public meetings and workshops to obtain public input as part of the planning and NEPA process for the General Investigation (GI). The schedule for public review will be developed during the interim scoping process for the GI between February 2008 and November 2008 then included in an updated PRP. Resource agencies, technical specialists, tribal nations, and local governments will be closely involved in the actual development of the amended Project Management Plan.

6. AVAILABILITY OF PUBLIC COMMENTS TO ITR TEAM

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Public input from the NEPA workshops and the public scoping meetings will be available to the ITR members to ensure that public comments have been considered in the development of the without project conditions report, the sediment management report, and the draft FR/EIS. However, the draft FR/EIS will be independently reviewed prior to the conclusion of the public comment period subsequently, these comments will not be available to the ITR members. In the event that the final FR/EIS is significantly revised from the draft, an additional ITR will be scheduled and public comment from the draft will be available to the reviewers.

7. ANTICIPATED NUMBER OF REVIEWERS

The current ITR plan is to include at least 14 independent reviewers. This number is based on the disciplines required to develop the feasibility products and the draft and final FR/EIS.

8. PRIMARY DISCIPLINES AND EXPERTISE NEEDED FOR THE ITR

The disciplines and expertise required for the ITR team are presented in Table 2.

**TABLE 2.
 PROPOSED INDEPENDENT TECHNICAL REVIEW TEAM**

<u>Discipline</u>	<u>Reviewer</u>
Review Team Leader	TBD
Plan Formulation	TBD
Environmental Coordinator	TBD
Cultural Resources/Historical	TBD
Civil Design/Structures	TBD
Geotechnical/Geomorphic	TBD
Economic Evaluation	TBD
Cost Engineering	TBD
Structure/Mechanical/Electrical Engineering	TBD
Water Quality	TBD
Real Estate	TBD
Sponsor (Seattle Public Utilities)	TBD
WRIA 8	TBD
Hydraulics and Hydrology	TBD

This information will be updated a deliverable for technical review nears completion. The Independent Technical Review Team will be selected on the basis of having the proper knowledge, skills, and experience necessary to perform the task; furthermore, their lack of affiliation with the development of the feasibility report/EIS and associated

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appendixes. The review team will be approved by the Center of Expertise for Ecosystem Restoration, in coordination with the national directories of expertise (including cost estimatin) to ensure that the technical work and products achieve a quality product. Funding ITR team member participation may include travel to Seattle District for the review conference. All ITRs will be completed through DRCHECKS where comments and comment resolution are captured.

Technical review will use appropriate analytical methods for each technical area. Technical review will rely on periodic independent technical review team meetings to discuss critical plan formulation or other project decisions; additionally, the review of the written feasibility report documentation and files. Independent technical review will ensure that:

- the FR/EIS is consistent with current criteria, procedures and policy
- clearly justified and valid assumptions that are in accordance with established guidance and policy have been utilized, with any deviations clearly identified and properly approved
- concepts, features, analytical methods, analyses, and details are appropriate, fully coordinated, and correct
- problems/issues are properly defined and scoped
- conclusions and recommendations are reasonable and justified.

The feasibility study has not yet identified specific models needed to develop the benefits, impacts, or risks with the project. If any models are identified in the future, the Corps will coordinate with the pertinent Centers of Expertise and Division concerning the certification requirements for models.

9. EXTERNAL PEER REVIEWERS

The Corps will coordinate with the study Vertical Team (District, Division, Headquarters staff, sponsor, critical stakeholders, resource agencies) to confirm whether EPR is appropriate, and what disciplines should be included. This will happen after the selection of a tentatively recommended plan for the project. The current EPR plan is to include at least 9 independent reviewers. This number is based on the disciplines required to develop the feasibility products and the draft and final FR/EIS. The focus of the EPR will be fish impacts. However, reviewers in other fields of expertise are likely (Reference Section 4) depending on the alternatives recommended.

The disciplines and expertise required for the EPR panel are presented in Table 3.

TABLE 3.
PROPOSED External Peer Review Team Disciplines

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Discipline	Reviewer
Plan Formulation	TBD
Electrical Engineering	TBD
Mechanical Engineering	TBD
Structural Engineering	TBD
Fisheries Biologist	TBD
Civil Design	TBD
Geotechnical/Geomorphic	TBD
Cost Engineering	TBD
Hydrology and Hydraulics	TBD
Water Quality	TBD

The External Peer Review Panel will be selected on the basis of having the proper knowledge, skills, and experience necessary to perform the task; furthermore, their lack of affiliation with the development of the feasibility report/EIS and associated appendixes. The EPR panel will be approved by the Center of Expertise for Ecosystem Restoration and will be based on public and agency input. EPR will insure that the technical work serving as the basis for the feasibility recommendations is sound, and that proper methods and conclusions were reached.

10. PUBLIC SELECTION OF PEER REVIEWERS

Public input will be solicited at the time of selection of the EPR panel. Because of the highly technical nature of the studies, federal, state, and local resource agencies, tribal nations, and representatives from the University of Washington will play a large part in the recommendation of an EPR panel of experts.