

FINAL PEER REVIEW PLAN

**HOWARD HANSON DAM, WASHINGTON
ADDITIONAL WATER STORAGE PROJECT**

**POST AUTHORIZATION CHANGE
ENGINEERING DOCUMENTATION REPORT**

31 July 2008

1. INTRODUCTION

The Howard Hanson Dam (HHD) Additional Water Storage Project (AWSP) is a multi-purpose project with three purposes: water supply, ecosystem restoration, and Endangered Species Act (ESA) compliance. The project includes operational changes to the existing Howard Hanson Dam project to increase non-flood season water storage. The additional storage will provide municipal and industrial water supply for the City of Tacoma whose recent pipeline expansion doubled the capacity of their system serving multiple communities in the south Puget Sound region. The new storage will provide increased flows for fish and includes features for ecosystem restoration and ESA compliance such as construction of a new fish passage facility and construction of various habitat improvement sites upstream and downstream of the dam. The non municipal and industrial water supply components of the project are intended to provide for reestablishment of self-sustaining runs of ESA listed salmon in the watershed above Howard Hanson Dam for the first time since 1912.

The purpose of the Engineering Documentation Report (EDR) is to recommend an increase in the maximum amount the US Army Corps of Engineers (USACE) is authorized to spend to complete the HHD AWSP, and to document the reasons for the recommendation. The report is required because the estimated cost of completing the project exceeds the maximum cost limit, as defined in Section 902 of the Water Resources Development Act of 1986. The EDR will be prepared in accordance with the Planning Guidance Notebook, Engineer Regulation 1105-2-100, Appendix G dated June 2004.

The HHD AWSP was authorized in the Water Resources Development Act of 1999 at a total project cost of \$75,600,000. The Section 902 limit for the project is currently \$122,964,000. The authorized cost of \$75,600,000 was initially estimated to incur \$8,225,000 in inflation, which equals a fully funded cost estimate of \$83,825,000 over a 7-year construction period. Due to additional cost increases, the revised cost for the HHD AWSP is currently estimated at \$297,821,000.

The changes in costs are mainly a result of design changes and contract modifications. The cost increases are not associated with changes in project purpose or local cooperation requirements although these have changed as documented in the EDR. Also, the cost increases are not the result of changes to the location of project, or as a result of modifications required by law.

In summary, based on the data presented in the EDR, the October 2007 project cost estimate for the HHD AWSP is \$297,821,000 of which \$73,090,000 are sunk costs through FY 2007. This cost exceeds the current Section 902 cost limit of \$122,964,000 and therefore, requires explanation and approval. The EDR will document the history and background of project costs and serves as a basis for approval of an increase in the authorized cost.

The purpose of the peer review plan is to assign the appropriate level and review independence, establish the procedures, and assign responsibilities for conducting the peer review of the EDR to ensure the quality and credibility of all conclusions and recommendations and decisions presented in the EDR. 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*. The contents of this plan have been coordinated with the vertical team.

The project manager, is the main point of contact at Seattle District for more information about this project and the peer review plan. The project delivery team is presented in Table 1.

**TABLE 1.
PROJECT DELIVERY TEAM**

<u>Discipline</u>	<u>Office/Agency</u>
Project Manager	CENWS-PM-CP-CJ
Project Manager	GRD-AED
Cost Engineering	CENWW-EC-X
Economic Analysis	CENWS-PM-PL
Economic Analysis	CENWS-PM-PL

2. PROJECT SIGNIFICANCE

The HHD AWSP EDR is not likely to develop or contain influential scientific information and is not expected to be an influential scientific assessment. All data used to develop the projected future costs have developed using standard methods consistent with ER 1105-2-100 Appendix G, Amendment #1, 30 June 2004, pages G-64 to G-78. Therefore, the 902 EDR will only be reviewed by an ITR team coordinated by the Ecosystem Restoration PCX and managed by the same.

3. REVIEW SCHEDULE

The EDR schedule is presented in Table 3.

Table 3.
HHD AWSP Cost Increase EDR Report Schedule

Task	Milestone	Status
Assemble PDT for 902 EDR Report	September 15, 2007	Completed
Submit Project Cost Increase Fact Sheet to NWD	December 20, 2007	
Assemble ITR team for EDR report	December 10, 2007	Completed
Project Study Issue Checklist completed	December 20, 2007	Completed
NWW Cost Risk Analysis Workshop	December 28, 2007	Completed
Economics Telecon NWD and HQ	January 15, 2008	Completed
NWS Econ Update Waiver Letter	February 14, 2008	Completed
NWW Draft Cost Estimate	May 22, 2008	Completed
Complete Draft EDR report w/economics	June 22, 2008	Completed
Complete NWS EDR QC Review	July 11, 2008	Completed
Submit Draft EDR for ITR	August 11, 2008	
Submit EDR and Draft Director's Report to NWD	September 25, 2008	
NWD Submit EDR and Director's Report to HQUSACE RIT	October 9, 2008	
HQ Policy Compliance Review Complete	October 23, 2008	
Final EDR and Director's Report complete by NWS	November 6, 2008	
Submit EDR and Director's Report to ASA (CW)	November 24, 2008	
Report Submittal to OMB	December 22, 2008	
ASA(CW) Submits Report to Congress	February 16, 2009	

4. EXTERNAL PEER REVIEW

An external peer review will not be conducted, because the EDR is not formulating or recommending a modification to the authorized plan, and therefore, external peer review is not required.

5. PUBLIC REVIEW OPPORTUNITIES

No public reviews are scheduled or required, because there are no proposed or recommended changes in project purpose. In addition there have been no significant design changes since the last public outreach meetings, or proposed or recommended changes to the implementation of the downstream habitat features that would likely be of significant interest to the recreational boating community.

6. AVAILABILITY OF PUBLIC COMMENTS TO ITR TEAM

NA

7. ANTICIPATED NUMBER OF REVIEWERS

The current ITR plan is to include three independent reviewers (economics, policy, and cost) and a team leader. This number is based on the disciplines required to develop the EDR.

8. PRIMARY DISCIPLINES AND EXPERTISE NEEDED FOR THE ITR

The disciplines and expertise required for the ITR team are presented in Table 4.

**TABLE 4.
PROPOSED INDEPENDENT TECHNICAL REVIEW TEAM**

<u>Discipline</u>	<u>Reviewer</u>
Lead CX	ER CX
Review Team Leader	LRN
Economic Evaluation	NWO
Plan Formulation/Policy	LRN
Review	
Cost Engineering	NWW

The ITR team has been selected on the basis of having the proper knowledge, skills, and experience necessary to perform the task and their lack of affiliation with the development of the EDR and associated appendices. The review team has been selected by the team lead with concurrence from the other applicable centers or directories of expertise. The ITR will be completed through DRCHECKS where comments and comment resolution are captured to the satisfaction of the Ecosystem Restoration CX, which is the lead CX.

Technical review will use appropriate analytical methods for each technical area. Technical review will rely on the review of the written EDR documentation and files. Independent technical review will ensure that the EDR is:

- Consistent with current criteria, procedures and policy
- Clearly justified and valid assumptions in accordance with established guidance and policy have been utilized and that any deviations have been clearly identified and properly approved
- Appropriate, fully coordinated, and scoped features, analytical methods, analyses, and details
- Properly defined and scoped problems/issues
- Reasonable and justified conclusions and recommendations, based on the data provided.

9. EXTERNAL PEER REVIEWERS

N/A. Please see Section 4.

10. PUBLIC SELECTION OF PEER REVIEWERS

Public recommendation or selection of ITR or other reviewers is not anticipated at this time.