REVIEW PLAN

Howard A. Hanson Dam, Additional Water Storage Project,
Green River, King County, Washington
Post-Authorization Change Report

Seattle District

MSC Approval Date: 31 July 2008
Last Revision Date: 27 November 2012

US Army Corps
of Engineers ®

REVIEW PLAN

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1. PURPOSE AND REQUIREMENTS

Purpose. This Review Plan defines the scope and level of peer review for the Howard A. Hanson Dam (HAHD), Additional Water Storage Project (AWSP), Green River, King County, Washington, Post-Authorization Change Report.

a. References

(1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010
(2) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
(3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
(4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
(5) PMP, Howard A. Hanson Dam, Additional Water Storage Project, FY13 Revised Draft

b. Requirements. This review plan was developed in accordance with EC 1165-2-209, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement and rehabilitation (OMRR&R). The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. In addition to these levels of review, decision documents are subject to cost engineering review and certification (per EC 1165-2-209) and planning model certification/approval (per EC 1105-2-412).

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for decision documents is typically either a Planning Center of Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the decision document. The RMO for the peer review effort described in this Review Plan is MVD Ecosystem Restoration PCX.

The RMO will coordinate with the Cost Engineering Directory of Expertise (DX) to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules and contingencies. The HAHD AWSP is a multipurpose project (ecosystem restoration and water supply). As such, the Ecosystem Restoration PCX will need to coordinate with the Water Management and Reallocation PCX.

3. STUDY INFORMATION

a. Decision Document.

(1) This Review Plan is for the Howard A. Hanson Dam (HAHD), Additional Water Storage Project (AWSP), Green River, King County, Washington, Post-Authorization Change (PAC) Report.
(2) The purpose of the PAC Report is to recommend an increase in the maximum dollar amount the U.S. Army Corps of Engineers (USACE) is authorized to spend to complete the HAHD 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 PAC Report will be prepared in accordance with the Planning Guidance Notebook, Engineer Regulation 1105-2-100, Appendix G dated June 2004.

(3) The approval path for this PAC Report includes the MSC (Northwestern Division), HQUSACE and the ASA(CW) and will need Congressional authorization.

(4) The type of NEPA documentation to be prepared, if any, is still to be determined (TBD). HAHD AWSP has an environmental impact statement (EIS); the need for supplemental National Environmental Policy Act (NEPA) documentation is still TBD.

b. Study/Project Description. HAHD AWSP was authorized by Section 101 (b)(15) of the Water Resources Development Act (WRDA) of 1999 for municipal and industrial (M&I) water supply and ecosystem restoration. Fish passage was the primary element of the ecosystem restoration. The City of Tacoma (Tacoma Public Utilities, Water Division (TPU)) is the non-Federal sponsor (NFS). Puget Sound Chinook salmon and Coastal/Puget Sound bull trout were listed as threatened under the ESA in 1999. Biological Opinions (BiOp) from National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) were completed in 2000. (Since then, Puget Sound steelhead were listed as threatened, and critical habitat was designated for Chinook and bull trout.) The Endangered Species Act (ESA) consultation/BiOps addressed: (1) the consequences of historic and ongoing operation of HAHD, and (2) the species/habitat effects of implementing the AWSP. The NFS requested fish passage be paid 100% by the Corps, based on BiOp as opposed to earlier fish passage facility genesis. Cost attributed to ESA was reallocated in 2001. ROD signed in 2001 assigned 100% Federal cost to fish passage. The cost share for the fish passage facility is 98.4% federal and 1.6% non-federal. The Project Cooperation Agreement (PCA) executed with the NFS in 2003. PCA reflects 100% Federal responsibility for fish passage.

In 2007, a Post-Authorization Change Limited Rehabilitation Report was initiated under WRDA Section 902 when present construction costs and the estimated cost of the FPF were determined to exceed the authorized limit. Seattle District completed a Draft Post-Authorization Change Limited Re-Evaluation Report ("902 Report") in 2010, which underwent an Independent External Peer Review (IEPR). The findings of the IEPR team identified concerns of design complexity, constructability, construction costs, and O&M costs. Subsequent review of the PACR and IEPR by Northwestern Division (NWD) identified the need to reformulate the design for a more cost effective solution and to reinitiate consultation with the Services due to changes in ESA in the time since the 2000 BO, as well as determining the separable effects of O&M versus the AWSP to ensure the project is defensible in the federal budgeting process.

The fish passage reformulation project is required to address the cost issues being driven by the fish passage requirement under ESA at the flood control project. Fish passage, and specifically a fish passage facility, is a requirement under ESA as described in the 2000 NMFS BiOp, where it is tied to operation of HHD as well as to the AWSP. Fish passage is the last remaining element to be implemented for Phase 1 water supply (i.e., 20,000 ac-ft M&I water for the City of Tacoma), which raises the authorized conservation pool from elevation 1147 to 1167 feet.

The scope of this project is identification of required elements for fish passage under ESA and design and construction/initiation of those features to complete the implementation of Phase 1 AWSP under the current authorized cost or identify additional costs and revise the 902 report for review

and approval. The PDT will determine external and internal requirements and constraints imposed on the design of the AWSP and identify adjustments to make that will allow the project to move forward in this very cost constrained environment.

c. Factors Affecting the Scope and Level of Review.

Reformulation Challenges:

- Congress authorized AWSP in 1998 and the project has been in CG phase since 2001.
- All construction completed since 2011 was under current authorized limit.
- Total Allocation to Date of $106.7M is within 18.9% of the Section 902 Limit of $131.5M and current estimated total project cost of $342.2M exceeds the Section 902 limit.
- HAHD has been storing drinking water since 2007, but is shared 50/50 with resource agencies for low flow augmentation.
- Fish passage eliminated in 1912 with the construction of Tacoma Water Diversion Dam.
- 221 square miles in the upper watershed.
- Complex fish passage requirements include juvenile and adult steelhead and juvenile Chinook, plus temperature control.
- Reformulation objectives include cost-effectiveness in construction and operations and maintenance (O&M).
- Design challenges – wide fluctuation of pool heights when need to pass fish.
- Consultation challenges identifying responsibilities related to separable authorized project purposes while still avoiding segmentation of the BA/BO.

Life Safety:

- Fish passage at HAHD must not impede ability to perform flood control operations.
- Project not likely to involve significant threat to human life.

Public Interest:

- NWS anticipates high interest in the community on the outcome of this reformulation process.

Novel Methods, Innovative Materials, Complex Challenges, etc.

- Please see “Reformulation Challenges” section above
- The PAC Report has the potential to contain influential scientific information or be a highly influential scientific assessment because of the nature of fish passage.

Design Redundancy, Resiliency, etc.

- The project may have a unique construction sequence potentially due to flood control, to minimize flood control impacts, water quality impacts, and fish passage impacts

Other

- Interagency interest in the project.
- Seattle District prepares an annual report and participates in an annual meeting with other agencies on ESA issues identified in 2000 BiOp; this is likely to continue under a new BiOp.

d. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. No in-kind products/analyses provided by the sponsor are anticipated at this time.

4. DISTRICT QUALITY CONTROL (DQC)

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The home district shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the District and the home MSC.

a. Documentation of DQC. DrChecks review software will be used to document all DQC comments, responses and associated resolutions accomplished throughout the review process. Relevant DQC records will be reviewed during each ATR event and the ATR team will provide comments as to the adequacy of the DQC effort for the associated product.

b. Products to Undergo DQC. The PAC Report, including all appendices and the design of the recommended plan will undergo DQC prior to release from the District for external reviews and for design to go from 35% to 65% or 95%. All DQC reviews will be complete and closed out before external reviews (i.e. ATR and Type I IEPR) are initiated.

c. Required DQC Expertise. Required expertise for DQC includes individuals from Planning Branch, Environmental and Cultural Resources Branch, Design Branch, Geotechnical/Geology, Operations, Hydraulics and Hydrology, Cost Engineering, Dam Safety, Office of Counsel. DQC Reviewer expertise should be similar to ATR Team member expertise described in Section 5.b. below).

5. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.). The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with published USACE guidance, and that the document explains the analyses and results in a reasonably clear manner for the public and decision makers. ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. The ATR team lead will be from outside the home MSC.

a. Products to Undergo ATR. The PAC Report, including all appendices and the design of the recommended plan will undergo ATR.

b. Required ATR Team Expertise. Below is a list of anticipated disciplines for the ATR Team. This list will be revised if the expertise needed for the review changes as the study progresses.

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents – including PAC Reports - and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The ATR lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc).
Planning	The Planning reviewer should be a senior water resources planner with experience in plan formulation.
Economics	The economist reviewer will be an expert in the field of economics and have a thorough understanding of incremental analysis, cost allocation, and 902 calculations.
Environmental Resources	The environmental resources reviewer will be an expert in the field of fish passage and have a thorough understanding of fish passage in the Pacific Northwest.
Hydrology	The hydrologist reviewer will be an expert in the field of hydrology and have a thorough understanding of fish passage.
Hydraulic Engineering	The hydraulic engineering reviewer will be an expert in the field of hydraulics and have a thorough understanding of downstream passage of anadromous juvenile ESA-listed fish in the Pacific northwest.
Geotechnical Engineering	The geotechnical engineering reviewer will be an expert in the field of geotechnical engineering.
Geology	The geology reviewer will be an expert in the field of geology.
Civil Engineering	The civil engineering reviewer will be an expert in the field of civil engineering.
Structural Engineering	The structural engineering reviewer will be an expert in the field of structural engineering and have a thorough understanding of Civil Works and Hydraulic structures and current pertinent USACE CW criteria.
Electrical Engineering	The electrical engineering reviewer will be an expert in the field of electrical engineering and have a thorough understanding of electrical systems specifically required for fish passage.
Mechanical Engineering	The mechanical engineering reviewer will be an expert in the field of mechanical engineering and have a thorough understanding of mechanical systems specifically required for fish passage.
Cost Engineering	The cost engineering reviewer will be an expert in the field of cost engineering and have a thorough understanding of the construction of large civil works projects, the formal Cost and Schedule Risk Analysis Process, and Primavera P6 scheduling.
Construction	The construction reviewer will be an expert in the field of construction, specifically for fish passage at dams.
Operations	The operations reviewer will be an expert in the field of operations at dams and for fish passage facilities.
Dam Safety	The dam safety reviewer will be an expert in the field of dam safety and will meet qualifications set forth in NWDR 1110-1-3.

c. Documentation of ATR. DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments

should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

(1) The review concern – identify the product's information deficiency or incorrect application of policy, guidance, or procedures;
(2) The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not be properly followed;
(3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and
(4) The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, comments may seek clarification in order to then assess whether further specific concerns may exist.

The ATR documentation in DrChecks will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes the district, RMO, MSC, and HQUSACE), and the agreed upon resolution. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in either ER 1110-1-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

At the conclusion of each ATR effort, the ATR team will prepare a Review Report summarizing the review. Review Reports will be considered an integral part of the ATR documentation and shall:

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed, based on work reviewed to date, for the AFB, draft report, and final report. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

IEPR may be required for decision documents under certain circumstances. IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. A risk-informed decision, as described in EC 1165-2-209, is made as to whether IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR:

- Type I IEPR. Type I IEPR reviews are managed outside the USACE and are conducted on project studies. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-209.

- Type II IEPR. Type II IEPR, or Safety Assurance Review (SAR), are managed outside the USACE and are conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. Type II IEPR panels will conduct reviews of the design and construction activities prior to initiation of physical construction and, until construction activities are completed, periodically thereafter on a regular schedule. The reviews shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.

a. Decision on IEPR. Based on the information in Section 3.c. above (Factors Affecting the Scope and Level of Review), and the decision document meeting the mandatory trigger of cost described in EC 1165-2-209 ("Total Project Cost > $45M."), a Type I IEPR will be conducted on the PAC Report.

Type II IEPR is not anticipated to be required on the PAC Report and 35% design of recommended plan. Type II IEPR will be required for 95% design. The Review Plan will be updated for the design phase following approval of the PAC Report.

b. Products to Undergo Type I IEPR. The products for this study that will undergo Type I IEPR include the PAC Report, all appendices and the design of the recommended plan.

c. Required Type I IEPR Panel Expertise. Below is a list of anticipated disciplines for the Type I IEPR Panel. This list will be revised if the expertise needed for the review changes as the study progresses.

IEPR Panel Members/Disciplines	Expertise Required
Planning	The Planning reviewer should be a senior water resources planner with experience in plan formulation.
Economics	The economist reviewer will be an expert in the field of economics and have a thorough understanding of incremental analysis, cost allocation, and 902 calculations.
Environmental Resources	The environmental resources reviewer will be an expert in the field of fish passage and have a thorough understanding of fish passage in the Pacific Northwest.
Hydrology	The hydrologist reviewer will be an expert in the field of hydrology and have a thorough understanding of fish passage.
Hydraulic Engineering	The hydraulic engineering reviewer will be an expert in the field of hydraulics and have a thorough understanding of downstream passage of anadromous juvenile ESA-listed fish in the Pacific northwest.
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Civil Engineering	The civil engineering reviewer will be an expert in the field of civil engineering.
Structural Engineering	Structural Engineering: The structural engineering reviewer will be an expert in the field of structural engineering and have a thorough understanding of Civil Works and Hydraulic structures and current pertinent USACE CW criteria.
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Construction	The construction reviewer will be an expert in the field of construction, specifically for fish passage at dams.
Operations	The operations reviewer will be an expert in the field of operations at dams and for fish passage facilities.
Dam Safety	The dam safety reviewer will be an expert in the field of dam safety and will meet qualifications set forth in NWDR 1110-1-3.

d. Documentation of Type I IEPR. DrChecks review software will be used to document all IEPR comments, responses and associated resolutions accomplished throughout the review process. The IEPR panel will be selected and managed by an Outside Eligible Organization (OEO) per EC 1165-2-209, Appendix D. Panel comments will be compiled by the OEO and should address the adequacy and acceptability of the economic, engineering and environmental methods, models, and analyses used. IEPR comments should generally include the same four key parts as described for ATR comments in Section 4.d above. The OEO will prepare a final Review Report that will accompany the publication of the final decision document and shall:

- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions; and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

The final Review Report will be submitted by the OEO no later than 60 days following the close of the public comment period for the draft decision document. USACE shall consider all recommendations contained in the Review Report and prepare a written response for all recommendations adopted or not adopted. The final decision document will summarize the Review Report and USACE response. The Review Report and USACE response will be made available to the public, including through electronic means on the internet.

No interim technical products or milestone documents are anticipated at this time.

7. POLICY AND LEGAL COMPLIANCE REVIEW

All decision documents will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the home MSC Commander. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.

8. COST ENGINEERING DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION

All decision documents shall be coordinated with the Cost Engineering DX, located in the Walla Walla District. The DX will assist in determining the expertise needed on the ATR team and Type I IEPR team (if required) and in the development of the review charge(s). The DX will also provide the Cost Engineering DX certification. The RMO is responsible for coordination with the Cost Engineering DX.

9. MODEL CERTIFICATION AND APPROVAL

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models, for the purposes of the EC, are defined as any models and analytical tools that planners use to define water resources management problems and opportunities, to formulate potential alternatives to address the problems and take advantage of the opportunities, to evaluate potential effects of alternatives and to support decision making. The use of a certified/approved planning model does not constitute technical review of the planning product. The selection and application of the model and the input and output data is still the responsibility of the

users and is subject to DQC, ATR, and IEPR (if required).

EC 1105-2-412 does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies and these models should be used whenever appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

a. Planning Models. Planning models to be used during this study will be determined as the study progresses. This section of the Review Plan will be revised accordingly.

b. Engineering Models. The following engineering models are anticipated to be used in the development of the decision document:

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Approval Status
HEC-RAS.	This Corps 1-dimensional river analysis model would be used to determine initial estimates of water surface profiles in the proposed fish passage structures, in the forebay and possibly the tailrace.	CoP-preferred.
STAR-CD.	This non-Corps of Engineers model is a 3-dimensional hydrodynamic model that would be used for forebay studies to set boundary conditions for a physical model, and possibly to get refined fish passage structure geometry as a followup to HEC-RAS modeling.	Allowed for use.
HEC RES-SIM.	This Corps model would be used to determine how water management operations would be conducted with alternative configurations of the fish passage facility interacting with the existing reservoir outlet works in water management operations.	CoP-preferred.
CE-QUAL-W2.	This Corps of Engineers water quality model would be used to determine how the recommended alternative (and possibly other alternatives) would perform with respect to downstream water temperature control.	CoP-preferred.
Physical model of the 35% recommended alternative.	Depending on the alternative selected, a physical model of the new fish passage structure may be needed to refine the design and to demonstrate its effectiveness to agencies and stakeholders.	Approval by NWD would be needed to construct and test the model.
Physical model.	A second physical model may be needed to determine how the 35% alternative interacts with the existing outlet structure, tunnel and stilling basin.	Approval by NWD would be needed to construct and test the model.

10. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost. ATR of the Draft PAC Report, appendices and 35% design of the recommended plan is scheduled to occur 23 Sept 2015 – 24 Nov 2015 at an estimated cost of $20,000.

b. Type I IEPR Schedule and Cost. Type I IEPR of the Draft PAC Report, appendices and 35% design of the recommended plan is scheduled to occur 24 Nov 2015 – 27 Jan 2016 at an estimated cost of $300,000.

c. Model Certification/Approval Schedule and Cost. Planning models to be used during this study will be identified as the study progresses and Section 9.a. above will be updated at that time. The estimated schedule and cost for any necessary certification and approval will also be revised at that time. Several engineering models anticipated for this study are already CoP-Preferred or Allowed for Use (see Section 9.b. above.) Seattle District will coordinate with the appropriate PCX or the RMC for additional model(s), as needed, as the study progresses and will revise this section accordingly.

11. PUBLIC PARTICIPATION

High-interest groups that will likely comment on the PAC Report include: the non-federal sponsor (City of Tacoma) as well as the Muckleshoot Indian Tribe, the State of Washington, King County, and the cities of Kent, Auburn, Tukwilla, Renton, Covington, and Lake Haven. If a NEPA document is required, public participation opportunities will be provided, per NEPA regulation.

This Review Plan and the accompanying PMP will be posted to the District web site for public review once it is approved by the MSC. The PAC Report, if approved, will also be available on the District web site. The IEPR Report will be a part of the administrative record and available upon request.

12. REVIEW PLAN APPROVAL AND UPDATES

The Northwestern Division (NWD) Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review for the decision document. Like the PMP, the Review Plan is a living document and may change as the study progresses. The home district is responsible for keeping the Review Plan up to date. Minor changes to the review plan since the last MSC Commander approval are documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) should be re-approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commanders' approval memorandum, should be posted on the Home District's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

13. REVIEW PLAN POINTS OF CONTACT

ATTACHMENT 1: TEAM ROSTERS

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECSION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the *Post Authorization Change Report* for *Howard A. Hanson Dam, Additional Water Storage Project, Green River, King County, Washington*. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-209. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks[sm].

SIGNATURE _____ _____

Name Date
ATR Team Leader
Office Symbol/Company

SIGNATURE _____ _____

Name Date
Project Manager
Office Symbol

SIGNATURE _____ _____

Name Date
Architect Engineer Project Manager[1]
Company, location

SIGNATURE _____ _____

Name Date
Review Management Office Representative
Office Symbol

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: *Describe the major technical concerns and their resolution.*

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

SIGNATURE _____ _____

Name Date
Chief, Engineering Division
Office Symbol

SIGNATURE _____ _____

Name Date
Chief, Planning Division
Office Symbol

[1] Only needed if some portion of the ATR was contracted

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number
31 July 2008	Revised Review Plan	All
27 Nov 2012	Using RP template for revision; 2008 approved plan did not use current template.	All

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

Term	Definition	Term	Definition
AFB	Alternative Formulation Briefing	NED	National Economic Development
ASA(CW)	Assistant Secretary of the Army for Civil Works	NER	National Ecosystem Restoration
ATR	Agency Technical Review	NEPA	National Environmental Policy Act
AWSP	Additional Water Storage Project	O&M	Operation and maintenance
BiOp	Biological Opinion	OMB	Office and Management and Budget
CSDR	Coastal Storm Damage Reduction	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DPR	Detailed Project Report	OEO	Outside Eligible Organization
DQC	District Quality Control/Quality Assurance	OSE	Other Social Effects
DX	Directory of Expertise	PCA	Project Cooperation Agreement
EA	Environmental Assessment	PCX	Planning Center of Expertise
EC	Engineer Circular	PDT	Project Delivery Team
EIS	Environmental Impact Statement	PAC	Post Authorization Change
EO	Executive Order	PMP	Project Management Plan
ER	Ecosystem Restoration	PL	Public Law
FDR	Flood Damage Reduction	QMP	Quality Management Plan
FEMA	Federal Emergency Management Agency	QA	Quality Assurance
FRM	Flood Risk Management	QC	Quality Control
FSM	Feasibility Scoping Meeting	RED	Regional Economic Development
GRR	General Reevaluation Report	RMC	Risk Management Center
Home District/MSC	The District or MSC responsible for the preparation of the decision document	RMO	Review Management Organization
HAHD	Howard A. Hanson Dam	RTSRMO	Regional Technical SpecialistReview Management Organization
HQUSACE	Headquarters, U.S. Army Corps of Engineers	SARRTS	Safety Assurance ReviewRegional Technical Specialist
IEPR	Independent External Peer Review	USACESAR	U.S. Army Corps of Engineers Safety Assurance Review
ITR	Independent Technical Review	WRDAUSACE	Water Resources Development ActU.S. Army Corps of Engineers
LRR	Limited Reevaluation Report	WRDA	Water Resources Development Act
MSC	Major Subordinate Command		