DECISION DOCUMENT REVIEW PLAN

USING THE NATIONAL PROGRAMMATIC REVIEW PLAN MODEL

for

Continuing Authorities Program
Section 14, 107, 111, 204, 206, 208 and 1135 Projects

Bennington Lake Diversion Dam Fish Passage; Walla Walla, Washington
Section *1135* Project

Walla Walla District Corps of Engineers

MSC Approval Date: *Pending*
Last Revision Date: February 22, 2011

US Army Corps
of Engineers ®

DECISION DOCUMENT REVIEW PLAN
USING THE NATIONAL PROGRAMMATIC REVIEW PLAN MODEL

Bennington Lake Diversion Dam Fish Passage, Walla Walla, Washington
Section *1135* Project

TABLE OF CONTENTS

1. PURPOSE AND REQUIREMENTS 1
2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION 2
3. STUDY INFORMATION 3
4. DISTRICT QUALITY CONTROL (DQC) 5
5. AGENCY TECHNICAL REVIEW (ATR) 5
6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR) 7
7. POLICY AND LEGAL COMPLIANCE REVIEW 8
8. COST ENGINEERING DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION 9
9. MODEL CERTIFICATION AND APPROVAL 9
10. REVIEW SCHEDULES AND COSTS 11
11. PUBLIC PARTICIPATION 11
12. REVIEW PLAN APPROVAL AND UPDATES 11
13. REVIEW PLAN POINTS OF CONTACT 13
ATTACHMENT 1: TEAM ROSTERS 14
ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS 16
ATTACHMENT 3: REVIEW PLAN REVISIONS 17
ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS 18
ATTACHMENT 6: PROJECT SCHEDULE 20

1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the Bennington Lake Diversion Dam Fish Passage, Walla Walla, WA, Section 1135 project decision document.

Section 1135 of the Water Resources Development Act of 1986, Public Law 99-662, provides the authority to modify existing Corps projects to restore the environment and construct new projects to restore areas degraded by Corps projects with the objective of restoring degraded ecosystem structure, function, and dynamic processes to a less degraded, more natural condition considering the ecosystem's natural integrity, productivity, stability and biological diversity. This authority is primarily used for manipulation of the hydrology in and along bodies of water, including wetlands and riparian areas. It is a Continuing Authorities Program (CAP) which focuses on water resource related projects of relatively smaller scope, cost and complexity. Traditional USACE civil works projects are of wider scope and complexity and are specifically authorized by Congress. The Continuing Authorities Program is a delegated authority to plan, design, and construct certain types of water resource and environmental restoration projects without specific Congressional authorization.

Additional Information on this program can be found in Engineering Regulation 1105-2-100, Planning Guidance Notebook, Appendix F.

b. Applicability. This review plan is based on the model National Programmatic Review Plan for Section 14, 107, 111, 204, 206, 208 and 1135 project decision documents, which is applicable to projects that do not require Independent External Peer Review (IEPR), as defined in ER 1165-2-209 Civil Works Review Policy. A Section 14, 107, 111, 204, 206, 208 and 1135 project does not require IEPR if ALL of the following specific criteria are met:

- The project does not involve a significant threat to human life/safety assurance;
- The total project cost is less than $45 million;
- There is no request by the Governor of an affected state for a peer review by independent experts;
- The project does not require an Environmental Impact Statement (EIS),
- The project/study is not likely to involve significant public dispute as to the size, nature, or effects of the project;
- The project/study is not likely to involve significant public dispute as to the economic or environmental cost or benefit of the project;
- The information in the decision document or anticipated project design is not likely to be based on novel methods, involve the use of innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices;
- The project design is not anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule; and
- There are no other circumstances where the Chief of Engineers or Director of Civil Works determines Type I IEPR is warranted.

If any of the above criteria are not met, the model National Programmatic Review Plan is not applicable and a study specific review plan must be prepared by the home district, coordinated with the appropriate Planning Center of Expertise (PCX) and approved by the home Major Subordinate Command (MSC) in accordance with EC 1165-2-209.

Applicability of the model National Programmatic Review Plan for a specific project is determined by the home MSC. If the MSC determines that the model plan is applicable for a specific study, the MSC Commander may approve the plan (including exclusion from IEPR) without additional coordination with a PCX or Headquarters, USACE. The initial decision as to the applicability of the model plan should be made no later than the Federal Interest Determination (FID) milestone (as defined in Appendix F of ER 1105-2-100, F-10.e.1) during the feasibility phase of the project. A review plan for the project will subsequently be developed and approved prior to execution of the Feasibility Cost Sharing Agreement (FCSA) for the study. In addition, per EC 1165-2-209, the home district and MSC should assess at the Alternatives Formulation Briefing (AFB) whether the initial decision on Type I IEPR is still valid based on new information. If the decision on Type I IEPR has changed, the District and MSC should begin coordination with the appropriate PCX immediately.

This review plan does not cover implementation products. A review plan for the design and implementation phase of the project will be developed prior to approval of the final decision document in accordance with EC 1165-2-209.

c. 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 2010
(3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
(4) ER 1105-2-100, Planning Guidance Notebook, Appendix F, Continuing Authorities Program, Amendment #2, 31 Jan 2007
(5) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007

d. Requirements. This programmatic 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 Section *1135* decision documents is the home MSC. The MSC will coordinate and approve the review plan and manage the ATR. The home District will post the approved review plan on its public website. A copy of the approved review plan (and any updates) will be provided to the Planning Ecosystem Center of Expertise (*ECO-PCX)* to keep the PCX apprised of requirements and review schedules.

3. STUDY INFORMATION

a. Decision Document. The Bennington Lake Diversion Dam Fish Passage, Walla Walla, Washington decision document will be prepared in accordance with ER 1105-2-100, Appendix F. The approval level of the decision document (if policy compliant) is the home MSC. An Environmental Assessment (EA) will be prepared along with the decision document.

b. Study/Project Description. Fish passage at Bennington Lake Diversion Dam near Walla Walla, WA is an issue of concern to area fishery managers. Recent studies have shown that the existing ladder is insufficient and prevents many fish from passing including ESA listed steelhead and bull trout that are found in Mill Creek. A Biological Opinion was issued by U.S. Fish and Wildlife Service in October 2007. The BiOp states that "Bull trout are likely to be injured or killed through contact with concrete structures in inappropriately designed gates, headworks, ladders, spillways, canals, weirs, or other Corps operated or maintained structures instream." It also states that "Bull trout are likely to be harmed through inability to pass barriers to access refugia when lower watershed conditions become inhospitable through low flows or high temperatures." The BiOp mandates that the Corps take reasonable and prudent measures to "Provide better connectivity and passage for bull trout through management and improvement of fish passage barriers within the Mill Creek Project."Specifically at the Bennington Lake Diversion Dam, the Corps is required to "improve upstream and downstream passage by October 2012 to meet NMFS fish passage guidelines and criteria." The BiOp also requires the Corps to make modifications to the stilling basin that provide better escape from stilling basin when spill ends.

A draft BiOp has been prepared by the National Marine Fisheries Service and it too also places certain requirements for change on the Corps in the area of Mill Creek. A finalized BiOp is expected in 2011.

c. The Diversion Dam is located at Mill Creek river mile 11.5 near Walla Walla, Washington. The Diversion Dam was constructed in 1942 by the Corps of Engineers as part of a project to protect the city of Walla Walla from flooding. No, or very limited, fish passage was provided past the dam from 1942 to 1982 when the present fish ladder was constructed.

The existing fish ladder does not meet NMFS fish passage guidelines and criteria for fish passage. During the study alternatives will be evaluated to improve conditions for ESA listed steelhead and bull trout by:

- making improvements to, or replacing the fish ladder to bring it up to current, state-of-the-art fishway criteria; and
- modifying the stilling basin to prevent stranding of adult fish and improving conditions for juvenile fish.

Currently there are five alternatives under consideration for Feasibility Phase design.

- Construction of a new vertical slot fish ladder located on the left bank of the channel
- Construction of a new vertical slot fish ladder located on the right bank of the channel
- Construction of a swim through fish passage and a diversion water facility which would divert water from Mill Creek to Bennington Lake at the existing diversion dam.
- Construction of a roughened channel fish passage located on the right bank of the spillway
- Construction of a pool and chute fish passage located on the right bank of the spillway

The sponsor for this 1135 project is Washington State Department of Fish and Wildlife. Preliminary designs of various alternatives range from $5 to $11 million. It is understood that the Federal cost share portion of this project is limited to $5 million. The sponsor would be required to pay the difference between the federal share and the total project cost.

A waiver may be pursued for the PPA in regards to the sponsor's requirement for O&M. Because this project is a requirement of a Biological Opinion and because this is a feature of an existing Corps facility, the sponsor feels that it should be the Corps responsibility to provide O&M for this project. It is not guaranteed that a waiver will be pursued, however it is a possibility.

d. Factors Affecting the Scope and Level of Review. The use of the Model Programmatic Review Plan for the Bennington Lake Diversion Dam Fish Passage project is supported by the simplistic nature of the fish passage problem and the limited alternative methods to address the problem. The most difficult portion of this project will be during the alternative evaluation and comparison. All alternatives will be designed to meet NMFS Fish Passage Standards. The difficulty lies in determining the benefits of each alternative and making a decision on which alternative should be chosen.

The sponsor, Washington State Department of Fish and Wildlife, is the important stakeholder in this project as are National Marine Fisheries Service and U.S. Fish and Wildlife Service. A working group of stakeholders has been actively working together over the past 7+ years to implement a solution that all interested parties can agree on. This active working group has provided valuable scoping and technical information to the Corps through the initial stages of the planning process. The general public places high value on ESA fish and fish passage in the region.

A risk associated with this project is potentially signing a PPA with a sponsor who is unwilling to pay the cost of maintenance of a feature that is part of an existing Corps facility. Upgrading the existing fish passage ladder is a requirement of a U.S. Fish and Wildlife Service Biological Opinion.

For this project it is determined that:

- The project does not involve a significant threat to human life/safety assurance. (All alternatives associated with this project are fish passage facility in nature and will not reduce the designed flood risk reduction capacity of the existing system);
- There is no request by the Governor of an affected state for a peer review by independent experts;
- The project/study is not likely to involve significant public dispute as to the size, nature, or effects of the project. (The public, although concerned about ESA fish and fish passage, will have little to dispute in regards to the construction of a fish passage facility that is designed to increase fish survival and provide additional habitat that was previously unavailable to several fish species. Some public discussion will occur on which alternative they would like to see implemented, however this discussion is not anticipated to cause significant concern or dispute);
- The project/study is not likely to involve significant public dispute as to the economic or environmental cost or benefit of the project (It is anticipate that this project will have very little impact to the economic conditions of the area as well as having limited environmental cost, mostly the short term effects associated with construction activities. The environmental benefits are expected to be substantial and it is assumed there will be little public controversy);
- The information in the decision document or anticipated project design is not likely to be based on novel methods, involve the use of innovative materials or techniques, present

complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices (The alternatives for fish passage will all be designed to meet the current fish passage standards and criteria established by NMFS. Although these are state-of-the-art criteria, these are tested methods and have been applied elsewhere in the state. The analysis and benefit calculations will be performed in the most simplistic approach possible and one that the stakeholders agree upon); and

- The project design is not anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule (The construction of the fish passage facility will be done according to established in-water work windows. There are no anticipated unique situations that need to be addressed at this time).

e. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC and ATR, similar to any products developed by USACE. There are no in-kind products or analyses expected to be provided by the sponsor for this project.

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. DQC comments will be compiled in a Microsoft Word table or Excel spreadsheet format, and should follow the Corps' four part comment structure (described in Section 5b). The final DQC review package will be provided to the ATR Team. A sample DQC comment table can be found in Attachment 5.

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.

Products to Undergo ATR. ATR will be performed throughout the study in accordance with the District and MSC Quality Management Plans. The ATR shall be documented and discussed at the Alternative Formulation Briefing (AFB) milestone. Certification of the ATR will be provided prior to the District Commander signing the final report. ATR will be performed for the Draft Feasibility Report (including NEPA/environmental compliance documentation and technical appendices).

a. Required ATR Team Expertise. The Agency Technical Review Team (ATRT) will be comprised of individuals that have not been involved in the development of the decision document and will be

chosen based on expertise, experience, and/or skills. The members will roughly mirror the composition of the PDT and, wherever possible, reside outside of the Northwestern Division region. It is anticipated that the team will consist of approximately 8 to 10 reviewers. The ATRT Lead will be outside the home MSC as required by EC1105-2-410 (or new EC1165-2-209). The ATRT members will be identified at the time the review is conducted and will be identified in Attachment 1.

The following table provides the disciplines needed to be included on the ATR team.

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional preferably with experience in preparing Section 1135 decision documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. Typically, the ATR lead will also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc). The ATR Lead MUST be from outside CENWD
Planning	The Planning reviewer should be a senior water resources planner with experience in fish passage and ecosystem restoration.
Economics	The Economics reviewer should be a senior economist with experience in ecosystem restoration projects and CE/ICA analysis
Environmental Resources	The Environmental Resources reviewer should be a senior environmental resource specialist with experience in ESA listed anadromous fish, fish passage, and ecosystem restoration. The reviewer will need to look at the Biological Assessment, the Draft EA, and the alternative evaluation and benefit calculation.
Cultural Resources	Archaeologist familiar with records searches, cultural resource survey methodology, area of potential effects, Section 106 of the National Historic Preservation Act, and state and Federal laws/executive orders pertaining to American Indian Tribes.
Hydrology and Hydraulics	Hydrologist or hydraulic engineer proficient with fish passage facility hydraulics, and associated models, risk and uncertainty analysis, and a number of other closely associated technical subjects as these relate to fish passage
Geotechnical Engineering	Geotechnical engineer familiar with river morphology, planning analysis, and a number of other closely associated technical subjects.
Civil Engineering	Civil engineer with experience in designing fish passage facilities
Structural Engineering	Structural engineer with experience in designing fish passage facilities
Cost Engineering	Cost DX Staff or Cost DX Pre-Certified Professional with experience preparing cost estimates for modification of existing or construction of new fish passage facilities

b. 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 been 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 1110-2-12 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 prior to the District Commander signing the 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.

  For Section 14, 107, 111, 204, 206, 208 and 1135 decision documents prepared under the model National Programmatic Review Plan, Type I IEPR is not required.

- 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.

  For Section 14, 107, 111, 204, 206, 208 and 1135 decision documents prepared under the model National Programmatic Review Plan, Type II IEPR is not anticipated to be required in the design and implementation phase, but this will need to be verified and documented in the review plan prepared for the design and implementation phase of the project.

a. Decision on IEPR. Based on the information and analysis provided in the preceding paragraphs of this review plan, the project covered under this plan is excluded from IEPR because it does not meet the mandatory IEPR triggers and does not warrant IEPR based on a risk-informed analysis. If any of the criteria outlined in paragraph 1(b) are not met, the model National Programmatic Review Plan is not applicable and a study specific review plan must be prepared by the home district, coordinated with the appropriate PCX and approved by the home MSC in accordance with EC 1165-2-209.

b. Products to Undergo Type I IEPR. Not applicable.

c. Required Type I IEPR Panel Expertise. Not Applicable.

d. Documentation of Type I IEPR. Not Applicable.

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. For decision documents prepared under the National Programmatic Review Plan Model, Regional cost personnel that are pre-certified by the DX will conduct the cost engineering ATR. The DX will provide the Cost Engineering DX certification. The RMO will coordinate with the Cost Engineering DX on the selection of the cost engineering ATR team member.

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 and ATR.

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 and ATR.

a. Planning Models. The following planning 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	Certification / Approval Status
IWR-PLAN	*This is an economic planning model certified by the Corps, which assists with the formulation and comparison of alternative plans. It assists with plan formulation by combining solutions to planning problems and calculating the additive effects of each combination. It will compare the cost effectiveness and incremental cost of each plan, identifying the plans that are the best financial investments and displaying the*	*Certified*

	effects of each on a range of decision variables. CE/ICA will only be able to show us the cost per miles of stream restored by creating acceptable fish passage facilities. The quality of stream habitat and miles of stream previously un-available for fish is the same for each alternative. The only difference will be the cost. Miles of stream is the only legitimate measurement of benefits that could be used for this project.	
Other models	*To determine the benefits of each alternative a hydraulic model (HEC-RAS) will be used to determine if the fish passage design for 6 inch Bull Trout meets the criteria established by USFWS. Either an alternative will meet the criteria and 30 miles of stream habitat will be restored for 6 inch Bull Trout or it won't meet the criteria and will be unacceptable. The amount of ecosystem restored will be the same for any alternative as long as it meets the criteria. Any alternative that goes above the criteria will also only restore the same amount of ecosystem. The differences between the alternatives will be calculated through the HEC-RAS model and displayed in a table or chart format. This table/chart will constitute the model that will need to be approved for one time use for this project by the ATR team.* *An excel sheet will be used to rank a series of evaluation criteria established to evaluate the alternatives with each other. The excel sheet is used to weight the importance of each evaluation criteria and then rank how each alternative meetsor fails to meet the criteria. The evaluation criteria will be supported by the information that is learned though the HEC-RAS analysis as well information about each alternative formulated during feasibility design. The excel sheet will be evaluated by the Corps, the sponsor, and other key stake holders including the applicable resource agencies and Native American Tribes.* *Model certification is not anticipated.*	*Reviewed by ATR team*

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 (River Analysis System)	*The Hydrologic Engineering Center's River Analysis System (HEC-RAS) program provides the capability to perform one-dimensional steady and unsteady flow river hydraulics calculations. The program will be used to evaluate the future without- and with-project conditions for the Bennington Lake Diversion Dam Fish Passage project*	*HH&C CoP Preferred Model*

10. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost. The ATR for the Bennington Lake Diversion Dam Fish Passage Project is estimated to occur beginning the first week of June 2011. The estimated time frame for the ATR to occur is 2 to 4 weeks. Coordination with the RMO is requested to complete the requirements of ATR. For scheduling and budgeting purposes it is assumed that the ATR lead will participate in the AFB milestone conference. The ATR is estimated to cost $40,000. This cost includes the time necessary for the review of the report and for model review.

b. Type I IEPR Schedule and Cost. Not applicable.

c. Model Certification/Approval Schedule and Cost. For decision documents prepared under the model National Programmatic Review Plan, use of existing certified or approved planning models is encouraged. Where uncertified or unapproved model are used, review of the model for use will be accomplished through the ATR process. The ATR team will apply the principles of EC 1105-2-407 during the ATR to ensure the model is theoretically and computationally sound, consistent with USACE policies, and adequately documented. If specific uncertified models are identified for repetitive use within a specific district or region, the appropriate PCX, MSC(s), and home District(s) will identify a unified approach to seek certification of these models.

11. PUBLIC PARTICIPATION

State and Federal resource agencies may be invited to participate in the study covered by this review plan as partner agencies or as technical members of the PDT, as appropriate. Agencies with regulatory review responsibilities will be contacted for coordination as required by applicable laws and procedures. The ATR team will be provided copies of public and agency comments.

The initial stages of this project have been coordinated extensively with the Mill Creek Work Group, made up of State, County, NGO, and Federal representatives. This group has been actively involved in fish passage at Mill Creek for the past 7+ years and will continue to be involved in alternative formulation and evaluation. The general public values fish and fish passage in this area and public meetings will occur as necessary. The public may have some interest in looking at the various alternatives and may want to have some input into which alternative is chosen. The draft decision document including the Environmental Assessment will be made available for public review and comment prior to it being finalized. All public participation will be in concert with the NEPA process.

12. REVIEW PLAN APPROVAL AND UPDATES

The home MSC Commander is responsible for approving this review plan and ensuring that use of the Model Programmatic Review Plan is appropriate for the specific project covered by the plan. 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. Significant changes may result in the MSC Commander determining that use of the Model Programmatic Review Plan is no longer appropriate. In these cases, a project specific review plan will be prepared and approved in accordance with EC 1165-2-209. The latest version of the review plan, along with the Commanders' approval memorandum, will be posted on the home district's webpage.

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the Feasibility Report and Environmental Assessment for Bennington Lake Diversion Dam Fish Passage project, Walla Walla, WA. 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 _____ Date _____

Name
ATR Team Leader
Office Symbol/Company

SIGNATURE _____ Date _____

Stan Heller
Project Manager (home district)
CENWD

SIGNATURE _____ Date _____

Name
Architect Engineer Project Manager[1]
Company, location

SIGNATURE _____ Date _____

Name
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 _____ Date _____

Name
Chief, Engineering Division (home district)
CENWD

SIGNATURE _____ Date _____

Name
Chief, Planning Division (home district)
CENWD

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

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number
1/10/11	Cost of proposed alternatives	Pg.4 /Para. 1.
1/10/11	Cost of ATR	Pg. 11/Para. 10. a.
1/10/11	Models	Pg. 10/Para. 9. a.
2/22/11	Cost of ATR	Pg. 11/Para. 10. a.

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
CAP	Continuing Authorities Program	O&M	Operation and maintenance
CSDR	Coastal Storm Damage Reduction	OMB	Office and Management and Budget
DPR	Detailed Project Report	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DQC	District Quality Control/Quality Assurance	OEO	Outside Eligible Organization
DX	Directory of Expertise	OSE	Other Social Effects
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
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMO	Review Management Organization
IEPR	Independent External Peer Review	RTS	Regional Technical Specialist
ITR	Independent Technical Review	SAR	Safety Assurance Review
LRR	Limited Reevaluation Report	USACE	U.S. Army Corps of Engineers
MSC	Major Subordinate Command	WRDA	Water Resources Development Act

ATTACHMENT 5: SAMPLE DQC COMMENT TABLE

PROJECT TITLE				Reviewer: *NAME* NWW – *DISCIPLINE*
Item #	**Statement of Concern**	**Basis for Concern**	**Significance of Concern**	**Recommended Action**
1.				
2.				
3.				
4.				
5.				

ATTACHMENT 6: PROJECT SCHEDULE

Task	Date
Project Review Plan	Feb 2011
Coordinate with MSC and post on website	Mar 2011
AFB	May 2011
ATR	June – July 2011
Draft Feasibility Report and Integrated EA	Aug 2011
Public Review of Draft Feasibility Report and Integrated EA	Aug – Sept 2011
Final Feasibility Report and Integrated EA	Oct 2011
Legal and Division Review and Approval of Final Feasibility Report and Integrated EA	Dec 2011