



REPLY TO
ATTENTION OF

CENWD-PDD

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NORTHWESTERN DIVISION
PO BOX 2870
PORTLAND OR 97208-2870


13 DEC 2012

MEMORANDUM FOR Commander, Portland District (CENWP-PM-PF)

SUBJECT: Review Plan (RP) Approval for the Eugene-Springfield Metro Waterways Ecosystem Restoration, Oregon, Portland District

1. Reference EC 1165-2-209, Water Resources Policies and Authorities, Civil Works Review Policy, Change 1, 31 January 2012.
2. The enclosed RP for the Eugene-Springfield Metro Waterways Ecosystem Restoration Feasibility Report has been prepared in accordance with the referenced guidance.
3. The RP has been coordinated with the appropriate Planning Center of Expertise (PCX), the Ecosystem Restoration (ECO-PCX). The ECO-PCX has endorsed approval of the RP.
4. A Type I Independent External Peer Review (IEPR) is required on this study because the estimated total cost of the project is greater than \$45 million. The RP outlines a sufficient Type I IEPR Plan.
5. The RP has been reviewed by Northwestern Division. It is consistent with above referenced guidance. There are no outstanding comments.
6. I hereby approve this RP, which is subject to change as the study circumstances require, consistent with study development under the Project Management Business Process. Subsequent revisions to the RP or its execution will require review by CENWD and approval by this office.
7. The RP should be posted to the District internet site and made available for public comment.
8. Please contact Rebecca Weiss at 503-808-3728, if you have further questions regarding this matter.

Encl


ANTHONY C. FUNKHOUSER, P.E.
COL, EN
Commanding

1 3 FEB 2015



DEPARTMENT OF THE ARMY
MISSISSIPPI VALLEY DIVISION, CORPS OF ENGINEERS
P.O. BOX 80
VICKSBURG, MISSISSIPPI 39181-0080

REPLY TO
ATTENTION OF:

CEMVD-PD-N

03 December 2012

MEMORANDUM FOR Commander, Northwestern Division
ATTN: (Martin Hudson, CENWD-PDD)

SUBJECT: Eugene-Springfield Metro Waterways, Lane County Oregon, Feasibility Report, Portland District, Ecosystem Planning Center of Expertise Recommendation for Review Plan Approval

1. References:

- a. Engineering Circular (EC) 1165-2-209, Water Resources Policies and Authorities, CIVIL WORKS REVIEW POLICY, Change 1, 31 January 2012
- b. EC 1105-2-412, Assuring Quality of Planning Models, 31 March 2011
- c. Engineering Regulation (ER) 1110-2-12, Quality Management, 30 Sep 2006

2. The enclosed Review Plan (RP) complies with all applicable policy and provides an adequate Agency Technical Review (ATR) of the plan formulation, engineering, and environmental analyses, and other aspects of plan development. The Ecosystem Planning Center of Expertise (ECO-PCX) has reviewed the RP.

3. A Type I Independent External Peer Review (IEPR) is required on this study because the estimated total cost of the project is greater than \$45 million. The RP outlines a sufficient Type I IEPR Plan.

4. The study used the Waterway Assessment Models for Amazon and Cedar Creeks. These models have been approved for single-use. While identified issues with the models and their documentation have been effectively resolved to the satisfaction of the ECO-PCX for application on this study, they have not been approved for regional or Nation-wide application on other studies.

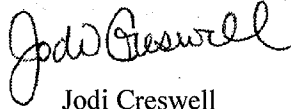
5. The ECO-PCX concurs with the enclosed RP. Upon approval by the MSC Commander, please provide the approved RP, the MSC Commander's approval memorandum, and the link to the District posting of the RP to Jodi Creswell. When substantive revisions are made to the RP, due to a decision on IEPR or changes in project scope or Corps policy, a revised RP should be provided to the ECO-PCX for review. Non-substantive changes do not require further PCX review.

6. Thank you for the opportunity to assist in the preparation of the RP. We look forward to working with you on IEPR.

CEMVD-PD-N

03 December 2012

SUBJECT: Eugene-Springfield Metro Waterways, Lane County Oregon, Feasibility Report, Portland District, Ecosystem Planning Center of Expertise Recommendation for Review Plan Approval



Enclosures (1)

Jodi Creswell
Operational Director,
National Ecosystem Planning
Center of Expertise

CF:

CEMVD-PD-N (Wilbanks, Smith, Creswell)

CENWD-PDD (Weiss)

CENWP-PM-FP (Gibbons)

CESAW-TSD-PL (Barnes)

CEMVP-PD-F (Knollenberg)

REVIEW PLAN

**Eugene-Springfield Metro Waterways General Investigation, Lane County
Oregon
Feasibility Report
Portland District**

**MSC Approval Date: January 2008
Last Revision Date: July 2010**



**US Army Corps
of Engineers ®**

REVIEW PLAN

**Eugene-Springfield Metro Waterways General Investigation, Lane County, Oregon
Feasibility Report**

TABLE OF CONTENTS

1. PURPOSE AND REQUIREMENTS 1

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION 1

3. STUDY INFORMATION 1

4. DISTRICT QUALITY CONTROL (DQC) 1

5. AGENCY TECHNICAL REVIEW (ATR) 2

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR) 5

7. POLICY AND LEGAL COMPLIANCE REVIEW 7

8. COST ENGINEERING DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION 7

9. MODEL CERTIFICATION AND APPROVAL 7

10. REVIEW SCHEDULES AND COSTS 10

11. PUBLIC PARTICIPATION 10

12. REVIEW PLAN APPROVAL AND UPDATES 10

13. REVIEW PLAN POINTS OF CONTACT 11

ATTACHMENT 1: TEAM ROSTERS 12

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS 13

ATTACHMENT 3: REVIEW PLAN REVISIONS 14

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS **Error! Bookmark not defined.**

1. PURPOSE AND REQUIREMENTS

a. **Purpose.** This Review Plan defines the scope and level of peer review for the Eugene-Springfield Metro Ways General Investigation, Lane County, Oregon Feasibility Report.

b. References

- Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010
- EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
- Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
- ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
- Eugene-Springfield Metro Waterways Feasibility Study PMP (August 2012)

c. **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 Ecosystem Planning Center of Expertise (ECO-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.

3. STUDY INFORMATION

a. **Decision Document.** The Eugene-Springfield Metro Waterways General Investigation, located in Lane County, Oregon will prepare a Feasibility Study Report. The purpose of the Feasibility Study Report is to document project evaluations and facilitate acceptance of the study conclusions and recommendations by the sponsor, public, state and local agencies, and the federal government. Approval will require a Chief of Engineers' Report and Congressional Authorization for construction. It is anticipated that an Environmental Assessment will be prepared for National Environmental Policy Action (NEPA) documentation and integrated into the Feasibility Report.

b. **Study/Project Description.** The Cities of Eugene and Springfield are located in Lane County, Oregon at the upper end of the Willamette Valley at the junction of several rivers; the McKenzie, Cedar Creek, a major tributary of the McKenzie, the Middle Fork of the Willamette, the Cost Fork of the Willamette,

the Willamette River Main Stem, and Amazon Creek, a major tributary to the Long Tom River. Lane County covers an area of approximately 4,620 square miles. From the Pacific Ocean to the Cascade Mountains, Lane County is larger than Delaware and Rhode Island combined. Although 90 percent of Lane County is forestland, Eugene and Springfield comprise the second largest urban area in Oregon after Portland. Lane County has a population of approximately 315,700 residents with about 130,000 residing in Eugene and 51,700 located in Springfield.

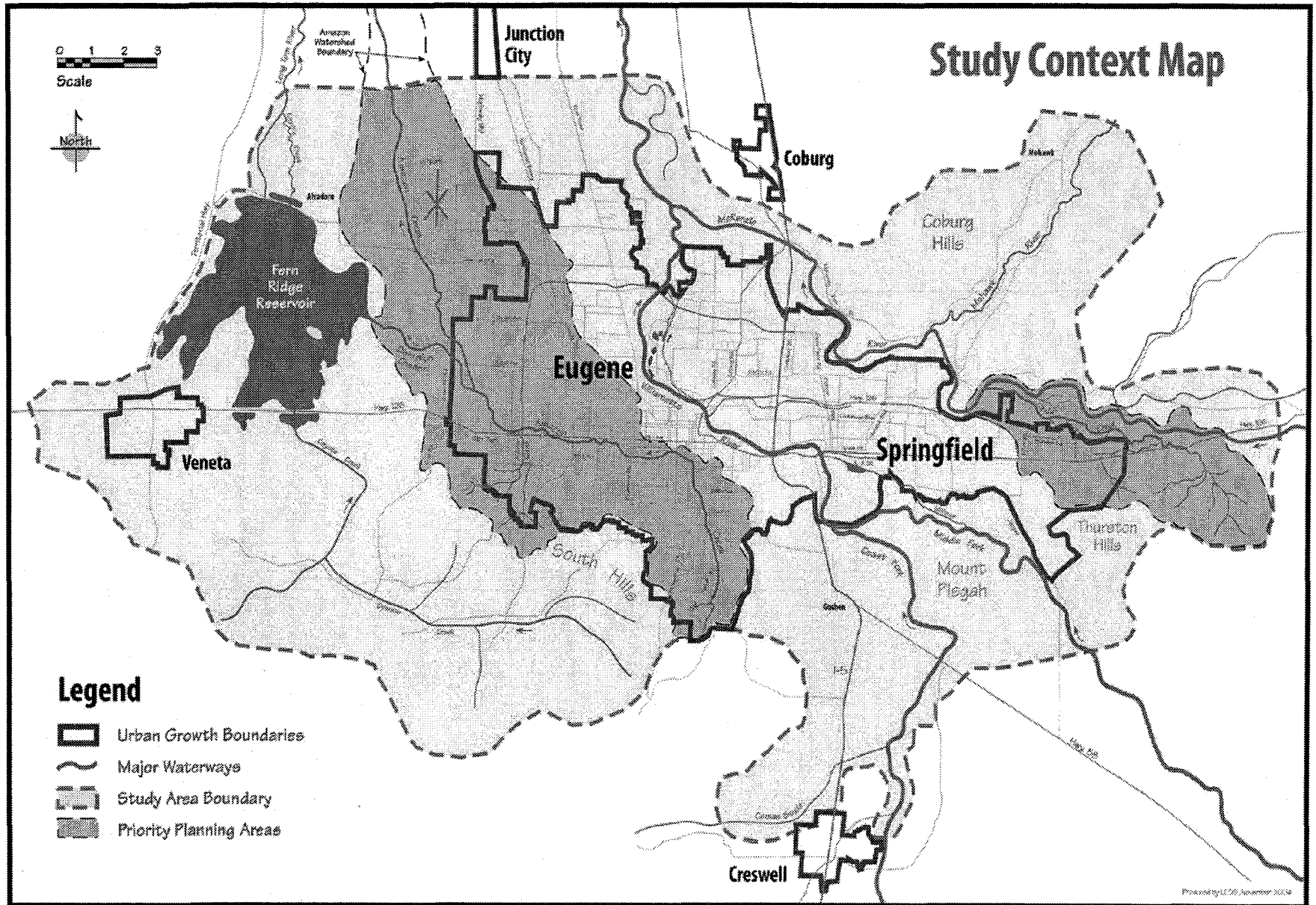
The Cities of Eugene and Springfield are dedicated to improving their communities "livability." Protecting and restoring the water resources for multiple use and values is critical to maintaining and improving the economic and environmental health of the county. Many water resource issues are being addressed by this study including, environmental restoration, endangered species conservation, watershed protection, and waterway improvements.

The study area encompasses approximately 240,000 acres and includes nearly 600 miles of waterways (see attached Study Context map).

The project's Reconnaissance Report—prepared and approved in October 2002— identified a Federal interest in pursuing the feasibility phase study to investigate watershed issues. During the reconnaissance phase, in spite the large number of ongoing local efforts to address watershed health issues, the sponsors determined there remains an over-arching need for an integrated, comprehensive approach for accomplishing waterway improvements and restoration in a coordinated fashion.

The purpose of the feasibility study is to develop a comprehensive watershed approach to restoration along waterways experiencing environmental problems in the Eugene-Springfield metropolitan area. Due to the large size of the Study Area, the Sponsors identified discrete watershed Planning Areas and prioritized those areas for study. The top priority areas were the Amazon Creek Planning Area and the Cedar Creek Planning Area.

The feasibility study will investigate measures to restore ecosystem functions and processes to benefit fish and wildlife in the project area. The feasibility phase of project development involves technical analyses to assess the effectiveness, efficiency, acceptability, and completeness of a range of alternative solutions to water resources issues including stream-bank erosion prevention, potential flood-damage-reduction measures, and ecosystem restoration opportunities in the study area. The implicit intent is that the recommended plan will: (1) Afford broad federal and non-federal support; (2) Effect timely benefits at an affordable cost; (3) Provide cost-effective ecosystem restoration benefits in the project area; and (4) Subsequently be authorized and implemented.



Factors Affecting the Scope and Level of Review.

- This will not be a highly controversial study, as the resource agencies and members of the public all support ecosystem restoration at in Amazon and Cedar Creeks. Implementation of the Eugene-Springfield Metro Waterways study will provide National Ecosystem Restoration benefits to the Nation, in terms of habitat units. There is no influential scientific information presented in this study;
 - The risks of this project occur mostly in the implementation phase, where risk of not receiving federal and non-federal funds would drive the costs of the project higher and delay the implementation and receipt of benefits to the environment. The risks of the project not performing as designed would result in those environmental restoration improvements not being realized and Amazon and Cedar Creeks would retain the existing poor aquatic habitat quality and water quality.
 - There is no significant threat to human life or safety as the actions on in Amazon and Cedar Creeks will be designed and constructed in coordination will not degrade the hydrologic or hydraulic capacity of either system. The alternatives to be analyzed for ecosystem restoration were designed to maintain channel capacity at its existing condition;
 - There is not a request by the Governor of an affected state for a peer review by independent experts;
 - The study is not likely to involve significant public dispute as to the size economic or environmental cost or benefit, nature, or effects of the project; and
 - The alternatives will be designed in such a way as they will be self-sustaining. The redundancy, resilience and/or robustness discussion does not apply to this ecosystem restoration study, as the purpose of this study is to bring natural restoration to Amazon and Cedar Creek.
- b. In-Kind Contributions.** Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. The in-kind products and analyses to be provided by the non-Federal sponsor include:
- Completed data collection and Waterways Assessment Model,
 - Existing Conditions Report, and
 - Public outreach and documentation

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.** DQC will be documented in DrChecks and a DrChecks report will be provided to the ATR team.
- b. Products to Undergo DQC.** Remaining products that will undergo DQC are the Draft and Final Integrated Feasibility Study Reports.
- c. Required DQC Expertise.**

DQC Team Members/Disciplines	Expertise Required
Planning/Economics	The planning/economics reviewer should be a senior water resources planner with experience in the plan formulation process. The reviewer should be familiar with evaluation plans for ecosystem restoration projects. The reviewer should be able to evaluate the appropriateness of cost effectiveness and incremental cost analysis, using IWR-Planning Suite, as applied to dollar costs and ecosystem restoration benefits. The reviewer should also have experience with National Ecosystem Restoration analysis procedures.
Environmental Resources	The environmental resources reviewer should have particular knowledge of ecosystem restoration, including the methods used to evaluate benefits, and should also be familiar with all NEPA requirements. The reviewer should have experience with anadromous fish biology, preferably experience in the Northwest.
Hydraulic Engineering	The hydraulic engineering reviewer will have a thorough understanding of the field of hydraulics and of computer modeling application in ecosystem restoration.
Design	The design reviewer will have a thorough understanding the identification of risks associated with conceptual level design detail.
Cost Engineering	The cost engineering reviewer will be familiar with cost estimating for similar projects using MII. The reviewer should be able to confirm that the cost estimate is ready for cost certification by the Cost PCX.
Real Estate	The real estate reviewer will be familiar with preparing real estate plans for the feasibility phase of a project and be able to apply Real Estate regulations to planning efforts with conceptual levels of design.

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.** ATR has been performed for the Feasibility Scoping Meeting (FSM) documentation and Alternative Formulation Briefing (AFB) documentation. Since completion of those reviews, it has been determined that the study process will now convert to the SMART

Planning paradigm. Consistent with SMART Planning, The Draft Feasibility Study Report (including NEPA and supporting documentation) will undergo ATR. The Draft Feasibility Study Report will be the final product ATR'd for the Study.

Prior to submittal of the Draft Feasibility Study Report, the PDT will achieve vertical alignment of study approach, level of effort, decision-making process, and outcome with NWD, HQUSACE, and the ATR lead. This process of vertical alignment is consistent with the SMART Planning philosophy and can result in a reduced number of ATR reviews.

b. Required ATR Team Expertise.

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 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 the plan formulation process. The reviewer should be familiar with evaluation plans for ecosystem restoration projects.
Economics	The economics reviewer should be able to evaluate the appropriateness of cost effectiveness and incremental cost analysis, using IWR-Planning Suite, as applied to dollar costs and ecosystem restoration benefits. The reviewer should also have experience with National Ecosystem Restoration analysis procedures.
Environmental Resources	The environmental resources reviewer should have particular knowledge of ecosystem restoration, including the methods used to evaluate benefits, and should also be familiar with all NEPA requirements. The reviewer should have experience with anadromous fish biology, preferably experience in the Northwest.
Hydraulic Engineering	The hydraulic engineering reviewer will have a thorough understanding of the field of hydraulics and of computer modeling application in ecosystem restoration.
Design	The design reviewer will have a thorough understanding the identification of risks associated with conceptual level design detail.
Cost Engineering	The cost engineering reviewer will be familiar with cost estimating for similar projects using MII. The reviewer will be a Certified Cost Technician, Certified Cost Consultant, or Certified Cost Engineer. A separate process and coordination is also required through the Walla Walla District PCX for cost engineering.
Real Estate	The real estate reviewer will be familiar with preparing real estate plans for the feasibility phase of a project and be able to apply

ATR Team Members/Disciplines	Expertise Required
	Real Estate regulations to planning efforts with conceptual levels of design.

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:

- The review concern – identify the product’s information deficiency or incorrect application of policy, guidance, or procedures;
- The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not be properly followed;
- 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
- 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.** The study scope was evaluated to determine if mandatory triggers described in EC 1165-2-209 Paragraph 11.d(1) for a Type I IEPR are met:
- **Significant threat to human life:** the study will not include consideration of construction or modification of features that protect human life and property from flood or storm damage;
 - **Estimated total cost greater than \$45M:** the estimated total cost is greater than \$45M;
 - **Governor request for peer review:** the Governor has not requested peer review;
 - **Deputy for Civil Works and the Chief of Engineers has determined that the project study is controversial due to significant public dispute:** this determination has not been made.
 - **It is not anticipated that the study will result in an Environmental Impact Statement;**
 - **The study purpose includes improving ecosystem conditions for significant tribal resources;**
 - **The study purpose includes improving ecosystem conditions for fish and wildlife species and their habitats;**

- The study purpose includes improving ecosystem conditions for species listed as threatened or endangered under the Endangered Species Act of 1973;
- It is not anticipated that non-performance of the recommended plan will result in significant adverse impacts to the ecosystem in the planning area and that the future without project condition will be the outcome in such a case;
- It is not anticipated that non-performance of the recommended plan will have any impact on human life or property safety;
- It is not anticipated that non-performance of the recommended plan will have any socio-economic impact on the local community;
- The study scope does not propose to develop highly influential scientific data but rather will utilize 30 years of data collected in the study area;
- No heads of federal or state agencies have requested an IEPR.

The total estimate cost is over \$45M; hence a Type I IEPR is required.

b. Products to Undergo Type I IEPR. The Type I IEPR should be performed for the Draft Report document (including NEPA and supporting documentation).

c. Required Type I IEPR Panel Expertise.

IEPR Panel Members/Disciplines	Expertise Required
Economics	The economics reviewer should be able to evaluate the appropriateness of cost effectiveness and incremental cost analysis, using IWR-Planning Suite, as applied to dollar costs and ecosystem restoration benefits. The reviewer should also have experience with National Ecosystem Restoration analysis procedures.
Environmental Resources	The environmental resources reviewer should have particular knowledge of ecosystem restoration, including the methods used to evaluate benefits, and should also be familiar with all NEPA requirements. The reviewer should have experience with anadromous fish biology, preferably experience in the Northwest.
Hydraulic Engineering	The hydraulic engineering reviewer will have a thorough understanding of the field of hydraulics and of computer modeling application in ecosystem restoration.
Cost Engineering	The cost engineering reviewer will be familiar with cost estimating for similar projects using MII. The reviewer will be a Certified Cost Technician, Certified Cost Consultant, or Certified Cost Engineer.

d. Documentation of Type I IEPR. 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.

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 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.** 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
Waterway Assessment – Amazon Creek Planning Area	A channel assessment model that scores physical, natural and water resource characteristics of reaches of the Planning Area for existing conditions. Each reach option is scored and entered into the model to generate Habitat Benefit Units.	Approved
Waterway Assessment – Cedar Creek Planning Area	A channel assessment model that scores physical, natural and water resource characteristics of reaches of the Planning Area for existing conditions. Each reach option is scored and entered into the model to generate Habitat Benefit Units.	Approved
IWR-PLAN	Used to determine and eliminate the irregular, non-continuously increasing cost changes that occur in the incremental cost per output calculations	Certified

- 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
Micro-Computer Aided Cost Estimating System (MCASES, MII)	The second generation of the MCASES. It is a detailed cost estimating program that was developed in conjunction with Project Time & Cost, Inc. (PT&C). MII provides an integrated cost estimating system for preparing cost estimates for project alternatives.	Certified
HEC-RAS 4.0 (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 for steady flow analysis to evaluate the future without- and with-project conditions along the Wild River and its tributaries.	HH&C CoP Preferred Model

10. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost.

<u>Task</u>	<u>Date</u>	<u>Estimated Cost</u>
ATR of FSM Documents	FY 06	\$25,000
ATR of AFB Documents	February 2011	\$50,000
ATR of Cost Estimate	January 2013	\$10,000
ATR of Draft FR/EA	January 2013	\$30,000

b. Type I IEPR Schedule and Cost

<u>Task</u>	<u>Date</u>	<u>Estimated Cost</u>
ECO-PCX Coordination of Type 1 IEPR	January 2013	\$10,000
Type 1 IEPR of Draft FR/EA	March 2013	\$250,000
Total:		\$260,000

c. Model Certification/Approval Schedule and Cost. No additional model approval is required.

11. PUBLIC PARTICIPATION

To date, the public was invited to comment directly to the PDT through informal and formal public scoping meetings and public review comment periods programmed into the feasibility schedule. In the future, the public will be invited to comment on the Draft FR/EA concurrently with the Type I IEPR.

This Review Plan and the accompanying Project Management Plan will be posted to the District web site for public review once it is approved by the MSC.

12. REVIEW PLAN APPROVAL AND UPDATES

The Northwest Division 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

Public questions and/or comments on this review plan can be directed to the following points of contact:

- Amy Gibbons, Project Manager, Portland District, 503.808.4687.
- Rebecca Weiss, Northwest Division, 503.808.3728
- Marc Masnor, ATR Team Lead, 918.669.7349

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 *<type of product>* for *<project name and location>*. 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 DrCheckssm.

SIGNATURE

Name
ATR Team Leader
Office Symbol/Company

Date

SIGNATURE

Name
Project Manager
Office Symbol

Date

SIGNATURE

Name
Architect Engineer Project Manager¹
Company, location

Date

SIGNATURE

Name
Review Management Office Representative
Office Symbol

Date

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
Chief, Engineering Division
Office Symbol

Date

SIGNATURE

Name
Chief, Planning Division
Office Symbol

Date

¹ Only needed if some portion of the ATR was contracted

ATTACHMENT 1: TEAM ROSTERS

Project Development Team

Name	Organization	Role	Email	Phone
Amy Gibbons	CENWP-PM	Project Manager/Plan Formulator	amy.c.gibbons@usace.army.mil	503.808.4687
Keith Duffy	CENWP-EC	Technical Lead/Hydraulic Engineer	keith.b.duffy@usace.army.mil	503.808.4696
Chris Humphrey	CENWP-EC	Geologist/Geotechnical Engineer	christopher.c.humphrey@usace.army.mil	503.808.4982
Kris Lightner	CENWP-PM	Environmental Compliance Specialist	kristine.a.lightner@usace.army.mil	503.808.4748
Chris McCann	CENWP-PM	Economist	christopher.a.mccann@usace.army.mil	503.808.4758
Joe Russell	CENWP-EC	Cost Engineer	joseph.b.russell@usace.army.mil	503.808.4917
Doug Swanson	CENWP-EC	Geographer/GIS	doug.c.wswanson@usace.army.mil	503.808.4858
Doris Cope	CENWS-RE	Real Estate Specialist	doris.l.cope@usace.army.mil	206.316.4417

AFB Agency Technical Review Team Roster

<u>Discipline</u>	<u>Name</u>	<u>Office/Agency</u>
ATR Lead/Planning	Marc Masnor	CESWT-PE-P
Environmental/NEPA/Cultural	Helene Haluska/Elliot Stefanik	CEMVP-PD-E
Hydraulic Engineer	Jon Hendrickson	CEMVP-EC-H
Geotechnical Engineer	Samir Itani	CESAJ-EN-GS
Civil Engineer	Mark Bryant	CENAO-EC-EC
Economist	Gary Bedker	CESPK-PD
Cost Engineering	Wallace Brassfield	CENWW-EC-X
Real Estate Specialist	Heather Sachs	CENAB-RE-C

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number
2009	Schedule Update	
2010	Schedule Update	
2012	Schedule and documents requiring ATR updated. Template update.	entirety

