
**PEER REVIEW PLAN
FOR
EUGENE-SPRINGFIELD METRO WATERWAYS, OREGON
Multi-purpose
FEASIBILITY STUDY**

PEER REVIEW PLAN
January 9, 2008

1. INTRODUCTION

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, 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, but not limited to, flood damage reduction, environmental restoration, water quality, 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).

2. PROJECT BACKGROUND

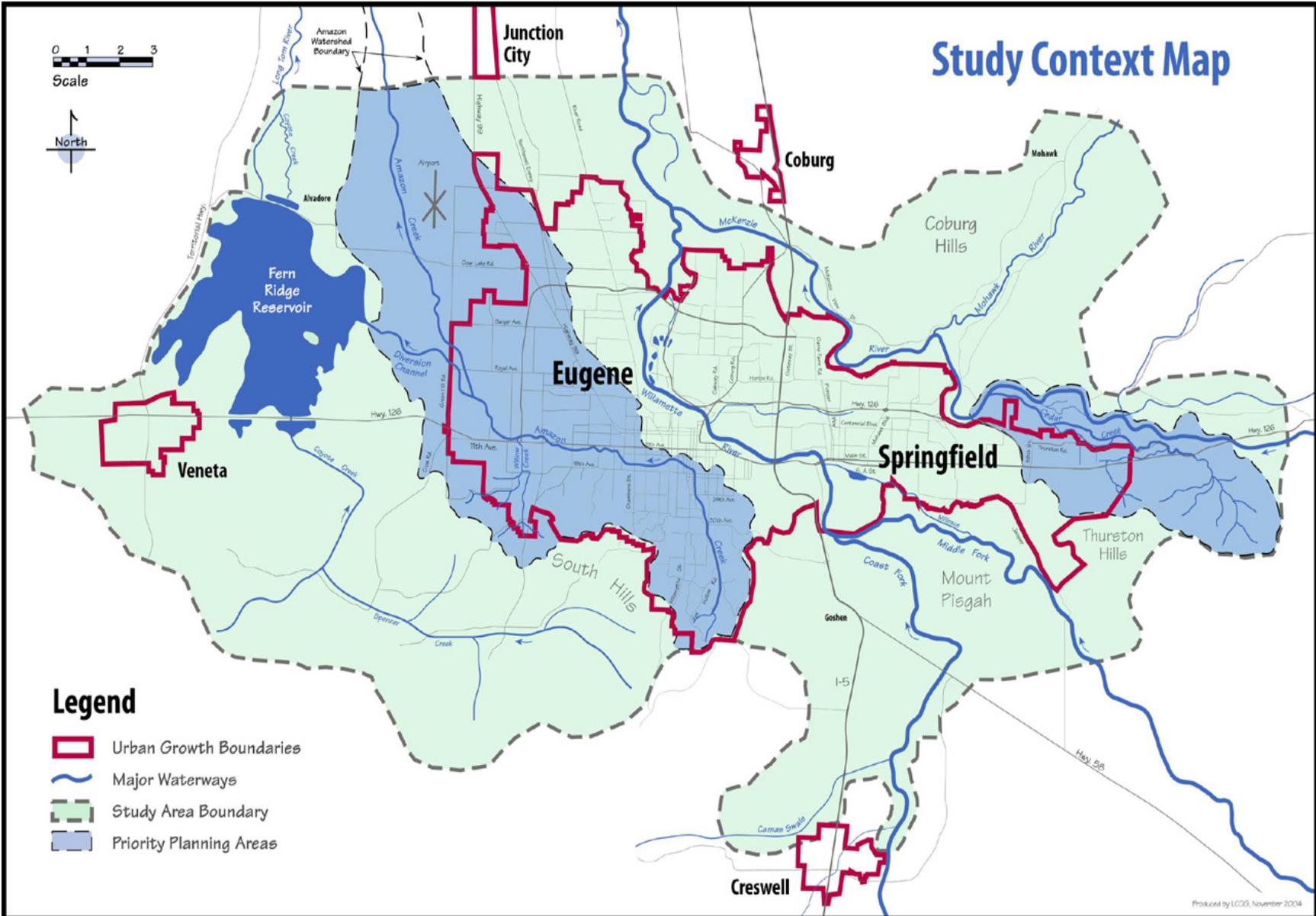
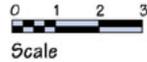
The project’s Reconnaissance Report—prepared and approved in October 2002—identified a Federal interest in pursuing the feasibility phase study to investigate watershed issues. During the reconnaissance phase, in spite the large number of ongoing local efforts to address watershed health issues, the sponsors determined there remains an over-arching need for an integrated, comprehensive approach for accomplishing waterway improvements and restoration in a coordinated fashion. Furthermore, although notable, and in some cases very sophisticated, progress has been made in the metro area related to waterways, vexing problems were repeatedly expressed in reviewed planning and management documentation, and by local representatives in Eugene and Springfield:

- Water quality remains impaired in certain waterways throughout the area;
- Many urban land development and land use activities continue to impact surface waters;
- Current storm water management is inadequate to provide for expected community growth;
- Incidences of localized flooding will become worsened without increased capacity and other improvements;
- Maintenance practices remain primarily focused on conveyance and conflict with water quality and other natural resource values;

PEER REVIEW PLAN
Eugene-Springfield Metro Waterways, GI
January 9, 2008

- There is a desire to better respond to spills, illegal discharges, and ongoing

Study Context Map



Legend

- Urban Growth Boundaries
- Major Waterways
- Study Area Boundary
- Priority Planning Areas

pollution issues;

- Federal ESA and CWA requirements are now a local reality with consequences of failing to comply with regulatory frameworks being substantial and costly for local jurisdictions;
- and, local staff resources are insufficient to adequately address these watershed scale needs on a local-only basis or as individual political jurisdictions.

The original and ongoing focus of the feasibility study, as scoped in the September 2003 PMP, is iteratively to formulate solutions to watershed problems in the study area. Due to Federal funding constraints—and the local sponsor’s reticence to sign a Feasibility Cost Sharing Agreement above \$3.5M—it was decided to attack watershed issues via a “rolling wave” of studies. For example, our study is initially focusing on the priority planning corridors of Amazon and Cedar Creeks. As the project delivery team (PDT) is developing the integrated feasibility and environmental assessment report, they will be simultaneously begin initially assessments of the Willamette River.

3. STUDY PURPOSE

The purpose of the feasibility study is to formulate and recommend comprehensive, multipurpose alternatives within the watershed. The feasibility study will also 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 studies 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.

The purpose of the peer review plan is to assign the appropriate level and review independence, establish the procedures, and assign responsibilities for conducting the independent technical reviews (ITRs) of all applicable decision documents to ensure the quality and credibility of all decision documents developed during the GI—this peer review plan specifically addresses the priority planning corridors of Amazon and Cedar Creeks, the next will address studies along the Willamette River. This plan is compliant with EC 1105-2-408 *Peer Review of Decision Documents*, 31 May 2005, section 6, parts a. through j. This plan also is compliant with the 20 April 2007 USACE Northwestern Division memorandum *Peer Review Process*.

The PDT is presented in Table 1. The project manager, Eric Bluhm, is the main point of contact at Portland District for more information about this project and the peer review plan.

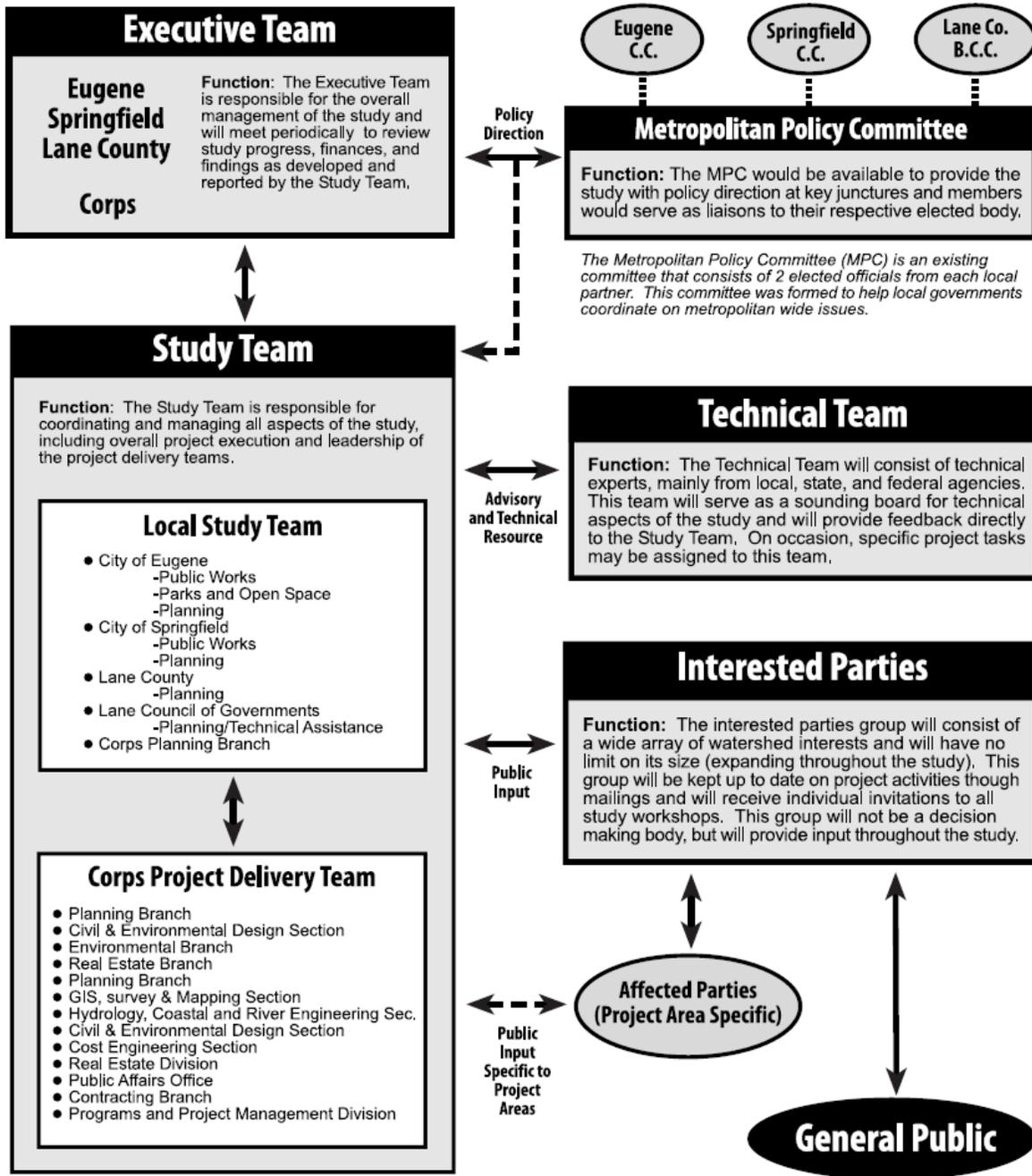
**TABLE 1
 FEASIBILITY PHASE PROJECT DELIVERY TEAM**

<u>Discipline</u>	<u>Name</u>	<u>Office/Agency</u>
Project Manager	Eric Bluhm	CENWP-PM-FP
Program Manager (GI)	Beth McDowell	CENWP-PM-PD
Program Analyst	Karen Trojano	CENWP-PM-PD
Plan Formulation	Eric Bluhm	CENWP-PM-FP
Environmental Coordinator	Kim Larson	CENWP-PM-E
Cultural Resources	TBD	CENWP-PM-E
Environmental Eng/HTRW	TBD	CENWP-EC-
Civil Design	Gail Lovell	CENWP-EC-DC
Survey/ CADD Mapping/GIS	Gregg Bertrand	CENWP-EC-TG
Geotechnical	TBD	CENWP-EC-
Hydraulics & Hydrology	James Crain	CENWP-EC-HY
Hydraulics & Hydrology	Seshu Vaddey	CENWP-EC-HY
Hydraulics & Hydrology	Chris Nygaard	CENWP-EC-HY
Economic Evaluation	Tim Kuhn	CENWP-PM-FE
Cost Engineering	Jerry Gardenhire	CENWP-EC-RC
Real Estate	TBD	CENWP-RE
Public Affairs Office	TBD	CENWP-PA
Sponsor PM	Ed Black	Springfield
Sponsor PM	Eric Wold	Eugene
PCX POC	David Vigh	CEMVD-RV-T

4. PROJECT SIGNIFICANCE

The ongoing Feasibility Report (FR)/ Environmental Assessment (EA) is developing a comprehensive watershed analysis and multi-objective improvements throughout the Eugene-Springfield Metro Waterways study area. The challenge the Corps faces in this study is to develop a systems based plan that effectively integrates the many water resources demands while incorporating the existing programs and ongoing efforts of the multiple levels of government agencies and stakeholders in the region. To meet this challenge, the Portland District recognized that a highly collaborative approach would be necessary to produce a quality product that would achieve broad acceptance and facilitate the actual implementation of the plan.

To promote this collaborative approach, the Corps established an organizational framework that incorporated existing committee structures and prevented redundancy in the planning effort (see figure). In addition, the Portland District took advantage of other initiatives of both Federal and local governments to promote the maximum amount of collaboration and secure ongoing funding sources. One example is the Urban Rivers Restoration Initiative. This initiative was established in an MOU between the Corps and the U.S. Environmental Protection Agency and designed to encourage the two agencies to



work more closely together on the restoration of urban rivers throughout the country. Also, the district worked closely with a local effort called the “United Front”. The United Front is organized by the Lane Council of Governments (LCOG) to establish a unified approach towards Federal priorities within Lane County. In addition to LCOG, this group includes the cities of Eugene, and Springfield; the Springfield Public Schools; Lane County; and the Lane County Transit District. Rather than independently requesting for Federal funding support in a competitive manner, the members of the United Front work together each year to develop a single document entitled “Lane County, Oregon –

Federal Priorities". Signed by the Executive Level of each local government entity, this document is provided to the Oregon Congressional Delegation and congressional representatives who are on key committees on Capitol Hill. By approaching congress each year in an organized way as a "united front," this group has been very successful at receiving Federal support for their planning efforts, civic programs and capital projects.

The Eugene-Springfield Metro Waterways Study has been under way for over five years. By focusing on an integrated and collaborative approach towards planning, the Portland District is successfully working to develop broad acceptance of a blueprint for managing the water resources into the future. Thanks to this approach, the district developed the trust and support of the government agencies and local communities involved in this challenging effort.

The study is initially focusing on two priority planning corridors: Amazon and Cedar Creeks. The first FR/EA will be focusing on these waterways; and the second, evaluating the Willamette, will be initiated in FY 08. Furthermore, background on methodologies used for the incremental cost analysis/cost effectiveness (ICA/CE), waterway assessments, and the without-project condition can be found at the study website: www.lcog.org/mw/

5. PROPOSED PLANNING MODELS

The primary expected output of alternatives developed and evaluated in this feasibility study will be ecosystem restoration benefits. The PDT is currently working on a framework for combining several existing habitat models to produce quantitative estimates of ecological outputs as a single floodplain restoration "index" that captures the ecological outputs (benefits) of the proposed alternatives. The combined model is being developed based on previous recommendations of expert panels regarding the types of indicators that should be used to represent natural floodplain functions. Indicators include species, plant communities, and hydrogeomorphic functions. Indicator attributes to be considered include the actual physical or biological features or processes that can be measured either in the field or via GIS analysis, including features such as channel length, area of cottonwood community, temperature, pieces of large woody debris, etc.

The proposed model will integrate an existing Ecosystem Diagnosis and Treatment (EDT) model which provides an indicator of the existing and potential future conditions for spring chinook salmon populations and their habitat, with other existing Habitat Evaluation Procedure (HEP) models that estimate ecological outputs for other aquatic and terrestrial species.

The resulting outputs of the combined model will be used as the basis of the incremental cost analysis/cost effectiveness (ICA/CE) for all ecosystem restoration and mitigation plans. This analysis compares the potential costs of each proposed alternative to the potential ecological benefits. This analysis is facilitated by developing a single numeric

value for the ecological benefits for each alternative. Thus, the general framework of the model, as shown above, results in a single “score” for each alternative. Such a single numeric value is most certainly an oversimplification of a highly complex ecosystem. However, if the model is completely transparent so that both users and decision-makers can view the relationships and equations used in each part of the model; the inputs and outputs of the model; and understand how each score is derived, it will be a highly useful tool for comparing the relative benefits of potential restoration alternatives. It is not intended to be a rigorous prediction of fish and wildlife production or geomorphic rates of change.

Upon completion of the ICA/CE process, the NWW Cost Estimating Directory of Expertise will be consulted and review selected plan cost estimates as part of finalizing the FR/EA in FY 09 (contingent upon Federal funding).

Monitoring and evaluation of baseline versus post-implementation conditions can provide a valuable evaluation of the accuracy of the model in predicting benefits to specific species or ecosystems over time and within other reaches or subbasins of the Willamette River and will be considered for implementation as part of this project.

It is not anticipated that the feasibility report will disseminate influential scientific information or a highly influential scientific assessment.

The PDT is also developing a HEC-RAS model to describe baseline hydrologic conditions on the floodplain within the study area and to assist in evaluating the hydraulic effects of alternative ecosystem restoration measures considered in the alternatives. The outputs of the HEC-RAS model will provide important information about habitat effects and attributes that will be incorporated into the ecological models described above.

All models determined to require Center of Expertise certification will be formally provided for review.

6. REVIEW SCHEDULE

ITRs will be conducted for all major GI phase documents (i.e, without-project report, feasibility scoping documents, plan selection report, and Draft FR/EA) and major engineering and scientific documents products (e.g., cultural resources overview, geomorphology report, and programmatic biological assessment). The review schedule is included in the Project Management Plan (PMP) and will be updated as reviews are scheduled.

<u>Review</u>	<u>Date</u>
Without-project condition Report	FY 06
Conceptual Alternatives Review	June 2007
Third Public meeting	February 27-28 2008
Draft FR/EA	May 2008
Alternative Formulation Briefing	May 2008
Selected alternative cost estimate review	FY 09
Final FR/EA	FY 09

7. EXTERNAL PEER REVIEW

An external peer review is planned for the draft final FR and EA for the following reasons: (a) the large geographical scale of the project, (b) potential high urban construction costs projected at over \$100M, (c) vertical team consensus up through NWD, (d) environmental importance of the project area, and (e) to ensure the continued public/agency trust of the Corps hydrologic and hydraulic modeling for the without-project condition.

8. PUBLIC REVIEW OPPORTUNITIES

The public has and will continue to be provided many opportunities for external peer review, and will be encouraged to continue to provide input to the review process through scoping meetings and review periods programmed into the feasibility schedule. The PDT has already held four public meetings over the past two years and has scheduled two more in 2008. Furthermore, the public will be asked to participate in the recommendation of a Peer Review Panel for the review of the feasibility report and EA. Finally, all public comment during the feasibility study will be provided to the External Peer Review Panel.

9. AVAILABILITY OF PUBLIC COMMENTS TO ITR TEAM

Public input from workshops and scoping meetings will be available to the ITR members to ensure that public comments were considered during development of the without-project conditions report, and will be considered during development of the plan formulation documents, and the draft FR/EA. In addition, the draft FR/EA will be independently reviewed prior to the conclusion of the public comment period, and, therefore, these comments will not be available to the ITR members. In the event that the final FR/EA is significantly revised from the draft, another ITR will be scheduled and public comment on the draft will be available to the reviewers.

10. ANTICIPATED NUMBER OF REVIEWERS

The current ITR plan is to include at least 10 independent reviewers. This number is based on the disciplines required to develop the feasibility products and the draft and final FR/EA.

11. PRIMARY DISCIPLINES AND EXPERTISE NEEDED FOR THE ITR

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

TABLE 2
INDEPENDENT TECHNICAL REVIEW TEAM

<u>Discipline</u>	<u>Reviewer</u>
Review Team Leader	TBD
Plan Formulation	TBD
Environmental	TBD
Cultural Resources	TBD
Geotechnical	TBD
Economic Evaluation	TBD
Cost Engineering	TBD
Real Estate	TBD
Geomorphology	TBD
Civil Design	TBD
Structures	TBD
Hydraulics and Hydrology	TBD
Sponsor(s) – Eugene / Springfield / Lane County	TBD

This information will be updated as the study progresses. These specific disciplines were selected based on the scope of the study and the expertise required to develop ecosystem restoration solutions.

Policy Review. Policy review of the FR/EA will be conducted primarily at the Division and Headquarters level. External peer review is for technical matters only, and is not used to resolve policy issues.

Quality Control will be maintained by the resource managers for the separate Seattle District technical offices. The PDT and the sponsor will also review products for technical excellence.

The Independent Technical Review Team will be selected on the basis of having the proper knowledge, skills, and experience necessary to perform the task and their lack of affiliation with the development of the FR/EA and associated appendixes (through the

NWD nomination and selection from all division districts). The review team will be approved by the Ecosystem Center of Expertise to ensure that the technical work and products from each discipline achieve a quality product. Funding of reviewers may include travel to Portland District for the review conference. All ITRs will be completed through DRCHECKS where comments and comment resolution are captured.

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

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

12. EXTERNAL PEER REVIEWERS

External peer review is conducted by nationally recognized technical experts outside of the Corps of Engineers. They may be from the National Academy of Sciences, Oregon and Oregon State Universities, or other scientific institutions per recommendations by the local sponsor with Corps guidance. Peer review is required when projects utilize new scientific methods, have high risk, are large in scale, or have significant controversy. A panel of peer reviewers will be selected with input from the general public, Corps Centers of Expertise, stakeholders, and the sponsor. External peer review will use appropriate analytical methods for each technical area. The Peer review panel will meet with the study PDT and the public to determine areas of controversy in the feasibility report, and will review the written feasibility report documentation and files, including the technical appendices. The panel will tour the study area and interview participants as needed. The external peer review team will ensure:

- Scientific data used in the study was accurate and complete.
- Modeling methods used were pertinent to the type of study results required, and sound modeling methodology was used
- The analysis contained clearly justified and valid assumptions
- concepts, features, analytical methods, analyses, and details are appropriate, fully coordinated, and correct
- Problems/issues are properly defined and scoped
- Conclusions and recommendations are reasonable and justified.

The disciplines and expertise required for the EPR panel are presented in Table 3. The majority comments on and issues with similar multi-purpose studies focus on these areas of expertise as well as comments received during the first two public meetings in Eugene and Springfield. Although controversy beyond these disciplines is not expected, the composition of the EPR panel will be flexible to best respond to stakeholders.

TABLE 3
EXTERNAL PEER REVIEW PANEL

<u>Discipline</u>	<u>Reviewer</u>
Hydraulic Engineer	TBD
Hydrologic Engineer	TBD
Environmental Specialist	TBD
Cultural Resources Expert	TBD
Geomorphologist	TBD

13. PUBLIC SELECTION OF PEER REVIEWERS

The public will be asked to participate in the selection of external peer reviewers after the Alternative Formulation Briefing, contingent on FY 08 funding. The public will have an opportunity to review and comment on the revised Project Management Plan and Peer Review Plan prior to initial approval, and through out the study process.