

August 26, 2005

## **MEMORANDUM**

**TO:** Oregon Watershed Enhancement Board

**FROM:** Greg Sieglitz, Monitoring Program Manager

**SUBJECT: Agenda Item I: Effectiveness Monitoring Program  
September 13-14, 2005 OWEB Board Meeting**

### **I. Introduction**

This update provides an overview of the effectiveness monitoring program activities that have taken place between March and September 2005.

### **II. Background**

In September 2004, the Board approved an implementation plan for the effectiveness monitoring program. This program is designed to fulfill specific needs identified within the Monitoring Strategy of the Oregon Plan for Salmon and Watersheds. (Attachment A) In March, the Board was presented with a schedule of anticipated activities for the following year. There have been a number of tasks undertaken and staff changes so far this summer.

### **III. Juniper Clearing Projects -- Wheeler and Crook Counties**

Hugh Barrett, former BLM rangeland manager, was hired under contract to initiate a preliminary assessment of western juniper clearing projects funded by OWEB since 1999 through both the small grant and restoration grant cycles. Projects range in size from a few acres to several thousand acres and investment costs are in the low thousands to approximately \$130,000. Mr. Barrett evaluated most juniper clearing projects that were funded by the OWEB Board in Wheeler and Crook counties. Generally, projects were implemented well and treatments were successful at targeting encroaching western juniper and setting back succession. The work was designed as a prototype project and important observations and findings resulting from it will be used to inform future stages. Collaboration with research project leaders and other juniper clearing studies will be an important component of our next steps.

### **IV. Partnerships and Collaboration**

Monitoring Program staff have been working with three groups in particular during the developmental stages of the effectiveness monitoring program.

#### **PNAMP -- Pacific Northwest Aquatic Monitoring Partnership**

PNAMP is a regional effort comprised of several workgroups that are generally guided by the PNAMP work plan and steering committee. The work plan was adopted earlier this year and monitoring program staff assisted with its development and continue to work on implementation. OWEB staff are active in the steering committee, data management, effectiveness monitoring, and high level indicators workgroups. Funding was provided to supplement the John Day protocol testing which occurred earlier this summer. Specific work

with Washington State, Northwest Power and Conservation Council, and Bonneville Power Administration representatives on high level indicators is especially useful for integration into the OWEB performance measure reports that are being generated for the National Marine Fisheries Service and the Oregon Progress Board.

**OPMT -- Oregon Plan Monitoring Team**

The Monitoring Team, led by OWEB's Monitoring Program Manager, met on four occasions over the past nine months. Effectiveness monitoring is an important and timely subject for many of the agencies participating in the Oregon Plan. Discussion and planning for coordinated effectiveness monitoring has taken shape in the form of better data and information management, needs assessment, sampling design, and training.

Agency representatives concur that one of the first steps in implementing the Oregon Plan effectiveness monitoring program is to make available existing information and data collected to date. From that, organized grouping of information into a clear set of needs will be articulated. The location and number of Intensively Monitored Watersheds (IMWs) and their relationship to existing paired watershed studies is one example. The team is planning, organizing, and participating in two workshops over a six month period that will provide a mix of training and educational opportunities related to sampling design and the implementation of effectiveness monitoring. The recently completed workshop included a lessons learned section relating to the Coastal Coho Assessment.

**IMST -- Independent Multidisciplinary Science Team**

The Monitoring Program Manager has been working with representatives from the IMST and the Department of Environmental Quality on the jointly sponsored Effectiveness Monitoring Workshop to be held early in 2006. The workshop is intended to be a forum for scientists to present findings and to engage in a discussion with project and program managers about methods, tools, scales, and lessons learned. A poll will be sent to local representatives and agency managers prior to holding the workshop in an attempt to capture the most relevant topics as seen by the prospective audience.

**V. Recommendation**

This is an informational item. No Board action is requested at this time.

Attachment

- A. Excerpt from Monitoring Strategy for the Oregon Plan for Salmon and Watersheds

**Oregon Plan for Salmon and Watersheds Monitoring Framework**

Outcomes	Questions	Strategies	Sample Data Types/Information
<p><b>Outcome One: Provide a scientific assessment of watershed conditions and salmon populations.</b></p> <p>Identify the appropriate indicators of population and watershed condition, the appropriate scales of inquiry, and the appropriate level of precision needed.</p>	<p><b>What is the condition of aquatic habitat and watershed systems?</b></p> <ol style="list-style-type: none"> <li>1. What is the condition of salmon populations at the ESU, Sub-Basin and watershed scale?</li> <li>2. What is the status and what are the trends in aquatic habitats, water quality, and stream flow?</li> <li>3. What are the critical factors that limit watershed function and salmon productivity?</li> <li>4. What constitutes detectable and meaningful changes in habitat condition and populations?</li> </ol>	<ol style="list-style-type: none"> <li>1. Assess general status and trends for physical habitat, salmon populations, , and biotic conditions in Oregon sub-basins and ESU regions at appropriate scales.</li> <li>2. Monitor habitat capacity, salmon survival and productivity, and biotic processes in selected watersheds within each sub-basin or ESU region.</li> <li>3. Analyze habitat trends and salmon populations in the context of local or regional effects, landscape influences, and ocean productivity.</li> </ol>	<p>Landscape Characterization:</p> <p>Riparian Condition: canopy composition, site potential, Habitat Condition: channel morphology, fish passage. Salmon: abundance, geographic distribution, life history, diversity, and productivity Biotic Condition: invertebrate communities, , toxics. Water quality:: temperature, DO, pH, sediment, bacteria Stream flow: duration, peak flow events, minimum flows</p>
<p><b>Outcome Two: Provide an evaluation of Oregon Plan restoration actions and conservation measures</b></p> <p>Evaluate the relative importance of restoration activities as a contribution to watershed health. Develop analytical models to evaluate changes produced by the Oregon Plan to target conditions and recovery goals.</p>	<p><b>What is the benefit of Oregon Plan restoration projects, management practices, and conservation programs relative to adverse impacts and natural ecosystem variability?</b></p> <ol style="list-style-type: none"> <li>5. What changes are occurring in watersheds that improve stream habitat quality?</li> <li>6 What are the management practices and programs that enhance or restore watershed functions and salmon populations?</li> <li>7. What habitat changes and biotic responses result from these projects, practices, and programs?</li> <li>8. What are the impacts of land use and land management practices on watersheds?</li> </ol>	<ol style="list-style-type: none"> <li>4. Document implementation of restoration projects, conservation activities, and agency programs.</li> <li>5. Evaluate the local effectiveness of restoration efforts by monitoring representative samples of specific project, activity, and program types.</li> <li>6. Evaluate the combined effectiveness of restoration efforts by monitoring habitat and population response in a structured sample of watersheds.</li> </ol>	<p>Broad Scale Indicators :--land use/land cover, road density --wetland change --ocean productivity cycles</p> <p>Instream, riparian, road, and upland project type, number and location. Habitat and biotic indicators of project effectiveness.</p> <p>Compliance rates and effectiveness measures of policy guidelines and rules (i.e. Forest Practices Act Monitoring)</p> <p>Component and cumulative analysis of restoration actions and management program benefits</p>