Coos Watershed Monitoring 2000
Oregon Watershed Enhancement Board
Grant #99-469
Final Grant Report
Grant Administered by: Coos Watershed Association

(1) A description of the project including background on the problem which generated the project.

The purpose of this project was to continue ongoing monitoring of project implementation and effectiveness in accordance with standard project monitoring protocol previously approved by OWEB. Data was used to refine project planning and implantation techniques. This included projects completed up since 1994 by this watershed association through projects for the 2000 field season.

Monitoring work included pre-post project photo-documentation from established photo points, surveys for fish presence (adult and juvenile) above corrected passage barriers, habitat surveys to evaluate change over time in selected enhanced reaches, and a report entitled Effectiveness Monitoring of Large Wood, Boulder Weirs, and Culvert Replacement Projects in Selected Streams of the Coos Watershed. A copy of this report was previously provided to OWEB. The focus of this report, the first of a series of effectiveness monitoring reports, evaluated a set of CWA's culvert replacement, boulder weirs, and large wood placement projects. This is part of an adaptive management strategy to test promising new management practices.

From 1994 - 1999, the Coos Watershed Association (CWA) has completed at least 310 in-stream structures (logs, boulder placements, and "pull trees"), created 4 off-channel ponds, replaced 16 culverts, removed 27 culverts, built 21 small jump pool weirs to facilitate fish passage, and planted and fenced at least 5 miles of lowland stream bank. To effectively monitor these sites, CWA developed and received OWEB approval of a comprehensive project monitoring strategy (see Attachment A), which ensures cost-effective monitoring at a level of detail and frequency tailored to various project types.

As indicated in more detail in attachments, the protocol incorporates photo documentation and individual monitoring during the first years after project completion. Thereafter, projects are grouped by type and age, and a representative sample is randomly selected each year for effectiveness monitoring.

In addition to this standardized project monitoring, the Association conducted more intensive monitoring of some of its in-stream structure sites, working in close coordination with ODFW representatives and utilizing information from past habitat surveys and from reference sites to permit more meaningful evaluation of project effectiveness.

(2) A list of the volunteers who participated in the project including the work accomplished and total hours worked.

Private landowners provided technical and in-kind assistance.

(3) A list of other participants who assisted with the project.

ODFW and BLM regularly assisted the watershed association with implementation and effectiveness monitoring via site visits and evaluations.

(4) The materials and methods used in the project.

Salmon habitat restoration projects completed by the Coos Watershed Association, or individually y any of its private or public members, are reported to the Oregon Watershed Enhancement Board (OWEB) using the Oregon Plan for Salmon and Watershed's Restoration Reporting Form.

Projects requiring an understanding of hydrology, forestry, or engineering (e.g. barrier corrections, sediment reduction, marsh restoration, in-stream habitat) typically were developed and implemented in close collaboration with appropriate staff from ODFW, ODF, and BLM personnel; from time to time, the services of professionals from the private sector may also donated.

Those involved in project design also participate in post-installation inspection and follow-up evaluation. For example, barrier correction projects are inspected prior to winter flows, and again in the spring, by the BLM, ODF, and ODFW personnel who participated in the project design. Marsh restoration with South Slough National Estuarine Research Reserve is monitored by South Slough staff, using protocols the Association adopted for any full marsh restorations it will undertake in the future.

The Association undertook intensive monitoring of selected projects to provide more detailed information regarding project results and effectiveness on large wood boulder weirs, and culvert replacement projects (see Effectiveness Monitoring of Large Wood, Boulder Weirs, and Culvert Replacement Projects in Selected Streams of the Coos Watershed). In this report, habitat features along five streams in the Coos Watershed were recorded and analyzed according to *Intermediate Level Methods for Stream Habitat Surveys* developed by the Oregon Department of Fish and Wildlife (ODFW). Streams chosen for project effectiveness monitoring were those that had pre-implementation habitat surveys done by either CWA or ODFW. Summer 2000 post-project habitat surveys by CWA were compared with pre-project surveys, completed between 1993 and 1997, and with established ODFW Aquatic Inventory Project benchmark stream habitat values. Changes in habitat quantity and quality were used to evaluate project

effectiveness to assess changes in rearing and spawning habitat and to identify effects of the November 1996 flood. The quality and quantity of rearing habitat was evaluated based on pool volume (area and depth) and pool complexity. Spawning habitat is judged no the percent riffle gravel.

(5) The results shown or expected from the completed project.

Information derived from this monitoring allowed for better understanding of habitat change over time in response to projects, and assisted in evaluation f cost-effectiveness of different techniques. Success of project monitoring was determined by achievements of objectives outlined in Coos Watershed Association monitoring strategy (Attachment A) which include integrating monitoring of all habitat restoration projects completed by the Coos Watershed Association into a single, watershed-scale program that satisfied grantors' expectations and permitted meaningful project evaluation. Another determination of project success is the creation of data record.

(6) Such other information as would be helpful in evaluating the strengths and weaknesses of project methods, materials or assumptions.

See report entitled: Effectiveness Monitoring of Large Wood, Boulder Weirs, and Culvert Replacement Projects in Selected Streams of the Coos Watershed.