

Fish Habitat

The Coos Bay District Fishery Program during FY 2000 continued the on-going work of implementing the aquatic portion of the NFP. The District is staffed with seven full-time Fishery Biologists and one term position. Major duties are divided among the following workloads: watershed restoration, watershed analysis, NEPA documentation, timber sale and other project reviews, inventory and data collection, biological assessment preparation and Section 7 consultation with the National Marine Fisheries Service (NMFS). Additionally the District has been very active in providing fisheries expertise to four local watershed councils in support of the State's Plan for Salmon and Watersheds.

Fisheries Inventory and Assessment

Smolt and Adult Trap Operation

The District in coordination with Oregon Department of Fish and Wildlife (ODFW) supported the operation of a smolt and adult trap on the West Fork of the Smith River. This facility will be helpful in assessing the population of adult coho and chinook salmon and steelhead trout in a non-key watershed (17,100 acres) with mixed federal and private ownership. Incidentally caught coastal cutthroat trout were counted, but not marked. Reports for the 1999-2000 operating season show the following: coho smolts 14,851; coho fry 3,605; chinook smolts 3,789; steelhead smolts 4,704 and trout fry 5206. Adult trapping showed that 17 adult chinook, 97 adult coho, and 404 adult steelhead were caught.

Spawning Surveys

Fisheries personnel in the Myrtlewood Resource Area conducted numerous spawning surveys for fall chinook salmon, coho salmon, and winter steelhead trout. This information is used for general monitoring purposes, as well as for analyzing population trends. Throughout the spawning season 10 separate stream reaches, totaling approximately 8.0 miles, were surveyed on a weekly basis. Surveyors observed 10 chinook salmon, and 11 chinook redds; 311 coho salmon and 355 coho redds; and 46 steelhead and 185 steelhead redds. This information will be summarized in a report, and distributed to the ODFW, and other resource management agencies. The Umpqua Resource Area reported conducting numerous surveys including 2 long term index reaches (7.25 miles) and restoration project monitoring (3.2 miles).

Aquatic Habitat Surveys

The Myrtlewood Resource Area conducted 18 miles of aquatic habitat inventory under contract with the ODFW. This information will be used in various watershed analysis efforts, as well as helping focus our individual watershed restoration efforts. The Umpqua Resource Area conducted 13 miles of aquatic habitat inventory on Tioga Creek a Tier 1 Key watershed under contract with the ODFW.

Aquatic Habitat Restoration

Fish Passage Restoration

One culvert was replaced within the Myrtlewood Resource Area to improve anadromous and resident fish passage. This work improved passage to roughly 1.0 mile of habitat upstream. This project was located on private land, and was done using the Wyden Amendment spending authority. In addition in FY 2000, several other culverts were determined to have passage problems, and are now planned for replacement in FY 2001 and FY 2002.

One fish passage culvert was replaced within the Umpqua Resource Area, and 3 fish passage culverts were modified to pass juvenile fish on BLM lands. Survey work was completed on 5 culvert sites for future replacement. The Fitzpatrick Creek ERFO “low water crossing” was completed this year and implemented designs to pass fish without the need for a new culvert.

Instream Habitat Restoration

Within the Myrtlewood Resource Area, large wood was placed in two separate stream channels, increasing the habitat complexity in over 1.5 miles of anadromous fish bearing waters. In total, over 200 pieces of large wood were placed in stream channels. The large wood structures were designed and installed in nick-points, to mimic naturally occurring wood accumulations seen in healthy stream environments. No cable or epoxy anchoring techniques were necessary. Both of these projects were done using an innovative road-based yarding machine - in an attempt to minimize riparian impacts. Because of their expertise, fisheries personnel from the Myrtlewood Resource Area were also instrumental in helping to implement a large in-stream restoration project with the US Fish and Wildlife Service in Alaska. This specialized project was done using teams of draft horses.

The projects mentioned above were enhanced by adding large amounts of thinning slash and brush bundles to individual structure sites in order to mimic the small and medium sized organic material found on natural logjams. This work will increase structure complexity and overall effectiveness.

Within the Umpqua Resource Area, the West Fork Smith River Restoration Plan was in it's second year of implementation in FY 2000. One boulder weir was constructed on a splash dam river reach to collect gravel for spawning and create pool habitat for rearing juvenile salmonids, 120 boulder clusters were placed to reduce river energy and provide cover, and 15 whole conifer trees were lined to the channel to provide complex structure and cover.

Over 40 large conifer logs were placed in a critical habitat stream reach for coho salmon to enhance overwinter cover. Steelhead trout, and resident and sea-run cutthroat trout will also benefit.

A Wyden partnership with a private timber company made it possible to construct 4 step weirs to enhance in-stream habitat and ease migration for juvenile salmonids.

Table 12 summarizes the of Instream Habitat Restoration projects completed in the Umpqua

Resource Area.

Watershed/Ownership	Number of Structures	Stream Miles Enhanced
Umpqua Watershed BLM	1 boulder weir, 7 step weirs, 120 boulder clusters, 15 whole trees	5.0 mi.
Coquille Watershed BLM	43 logs	1.5 mi.

Sediment Reduction and Road Decommissioning

Road related restoration activities to reduce sediment contributions and restore natural hydrologic function continued to be a focus on the District. The Myrtlewood Resource Area decommissioned and/or closed approximately 17.4 miles of road. This work is expected to restore natural hydrologic function and reduce the potential for future road failures that could damage fish habitat. The Umpqua Resource Area fully decommissioned 3.1 miles of valley bottom floodplain roads.

Fisheries and Aquatic Education

Myrtlewood fisheries personnel continued to educate local school students, teachers, professional societies, special interest groups, and the general public on aquatic resources and watershed related issues. Numerous grade school classes from around the state were taken to intertidal areas, where they learned important aspects of the marine environment. In addition, teachers and volunteers were given instruction on how to interpret the intertidal environment as part of the Shoreline Education Awareness (SEA) program.

Fishery biologists in the Umpqua Resource Area gave presentations to local schools on salmon life histories and habitat requirements, and participated in “Careers Day” at the local community college. Fishery biologists participated in middle and high school field trips conducted through the annual Tsalila celebration at Reedsport. Other Tsalila activities included a habitat restoration booth and fish-painting demonstrations. Area fishery biologists participated with the ODFW in the Free Fishing Day angler education event; a booth at the Umpqua Fly Fishers Expo; and fishing and outdoor environmental awareness and ethics demonstrations at the Loon Lake Celebration. Umpqua Resource Area fishery biologists organized and participated in tidepool education field trip for several hundred students of the Jackson County school district.



Figure 1: A BLM Fisheries Biologist helping elementary school students identify an intertidal organism

Technical Expertise and Support

In support of the Oregon Plan for Salmon and Watersheds, fisheries professionals on the District have worked closely with local watershed associations. These biologists have provided technical guidance and support for four separate watershed associations. This is an ongoing effort that occurs throughout the year, and one that can have a large influence on the quality and effectiveness of aquatic restoration projects being designed and implemented on private lands in our area. This continues to be a priority for the District.

ESA Section 7 Consultation

Two Evolutionarily Significant Units (ESU's) for anadromous fish are listed on the Coos Bay District. The Umpqua River cutthroat trout was de-listed as an endangered species this year. The Oregon Coast and Southern Oregon/Northern California coho salmon remain listed as threatened. All "may affect" projects were consulted on and the Biological Assessments (BAs) included major categories such as timber sales, restoration activities, recreation activities and routine program support actions. Umpqua Resource Area fishery biologists completed three BAs for larger projects in the range of the Oregon Coast coho salmon during the fiscal year. Fishery Biologists in the Myrtlewood Resource Area completed one BA for a large project.

Project Monitoring

Three in-stream restoration projects were monitored in the Myrtlewood Resource Area to determine effectiveness, and record the actual channel changes that took place after having been in place for a year or more. Monitoring methods included long-term photo points and channel cross section transects to record substrate deposition, scour, and other channel alterations (See Figures 2-4). In addition, pre and early post project monitoring was done for a in-stream projects implemented in FY 2000. This monitoring included the establishment of long-term photo points and channel cross-section transects.

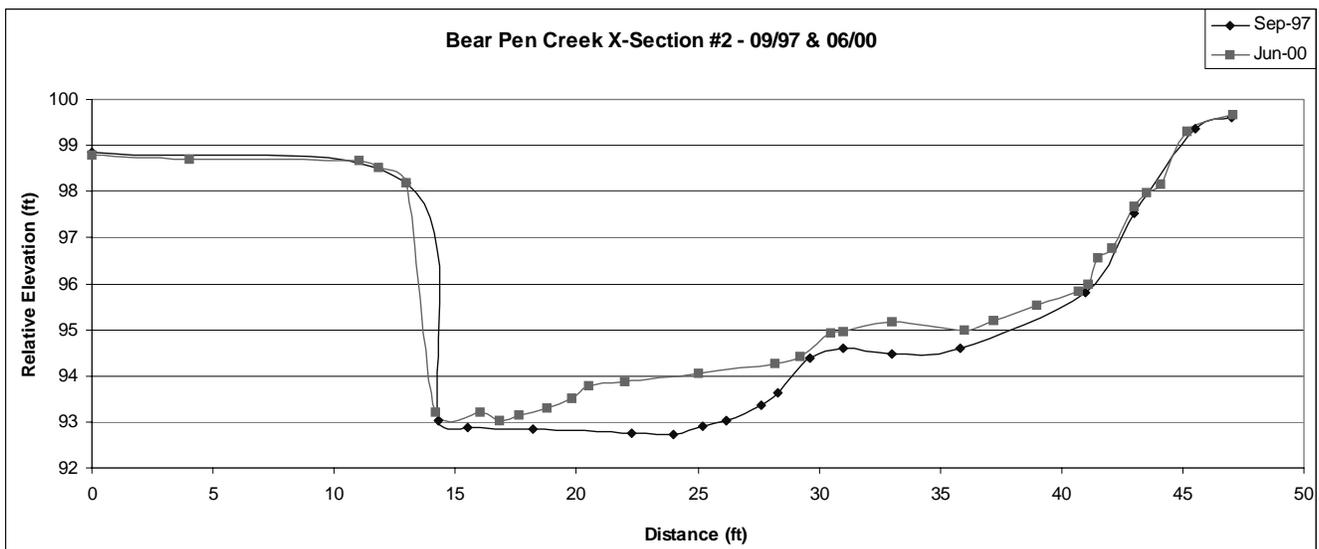


Figure 2. An example of before (1997) and after (2000) channel cross section data for the Bear Pen Creek in-stream restoration project. Notice the channel bed elevation increasing as a result of gravel deposition caused by the large wood additions.

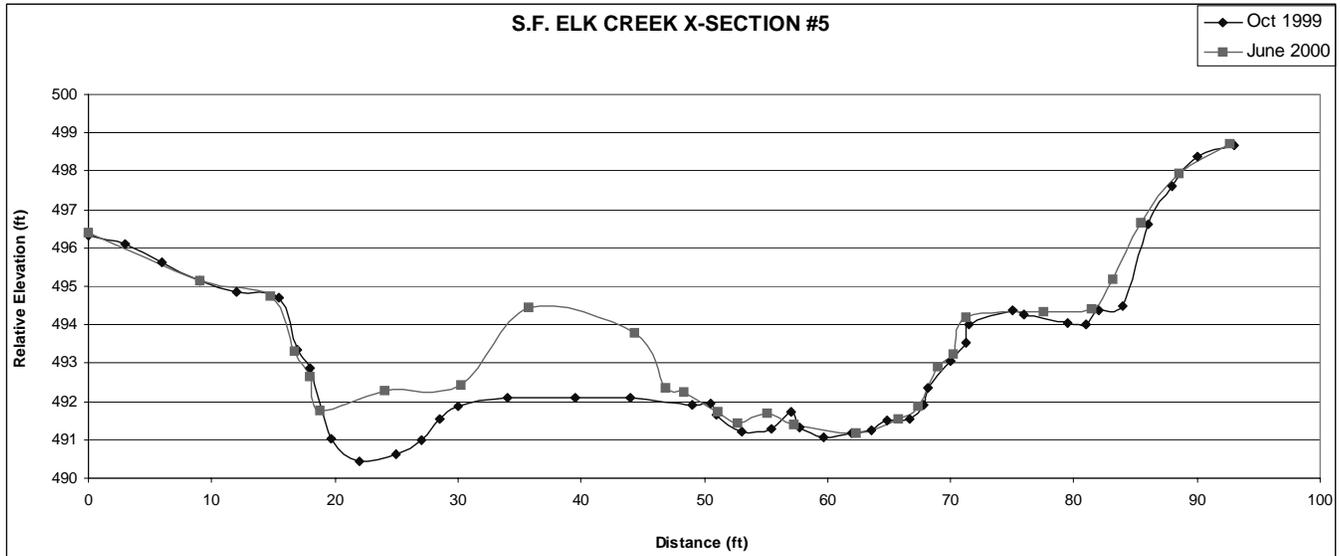


Figure 3. An example of before (1999) and after (2000) channel cross section data for the South Fork Elk Creek in-stream restoration project. Notice that there has been substantial gravel deposition as a result of



the large wood additions.

Figure 4: Photo point monitoring of the Steel Creek in-stream restoration project.

Pre- and post- project monitoring was completed in the Umpqua Resource Area for 5 habitat restoration projects and 7 culvert replacement/retro-fit projects. Monitoring methods included conducting pebble counts, stream mapping, habitat inventories, and establishing photo points (Table 13). Data collected will be compared with reference reaches and baseline information to determine the effectiveness of each project and to monitor changes in habitat condition.

Table 13. Monitoring completed for 2000/2001 restoration projects

Project	Photo Points	Pebble Counts	Spawning Surveys	Stream Mapping
Big Creek LWM/Clusters, FY 2001	X	X	X	X
West Fork Smith R. LWM, Weir, and Clusters	X	X	X	
Fitzpatrick Creek ERFO Low-water-crossing.	X		X	
House and Bear Wallow Step Weirs	X		X	
Alder Creek LWM	X		X	X
FY 01 Culverts - WF Buck Cr. Hog Ranch Cr. Clabber Cr. Slideout Cr. Cedar Cr. Moon Cr. Cherry Cr.	X		X	

Abbreviations used in this Table:

LWM - Large Woody Material
ERFO - Emergency Relief Federally Owned