

Road to Recovery Salmon Restoration: The Regional Approach

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Background

In December 1995, the National Marine Fisheries Service (NMFS) proposed to list the coastal coho salmon as threatened under the federal Endangered Species Act. The listing proposal included the entire Oregon Coast, separated into two evolutionarily significant units (ESUs): the Southern Oregon/Northern California ESU, and the Oregon Coast ESU. Other evolutionarily significant units along the California coast were proposed as well.

Wishing to restore the salmon, and if possible, avoid the federal oversight and bureaucracy of a listing, Oregon Governor John Kitzhaber directed the state natural resource agencies, the Oregon Department of Transportation, the Economic Development Department, the Oregon State Police and several other state agencies, to collectively and collaboratively develop a coastal coho restoration plan. The hope was that by developing and implementing a comprehensive restoration plan, the NMFS would defer listing of the coastal coho.

In April of 1997, following 18 months of development of the Oregon Plan and negotiation (including a six month extension based on differing scientific information), the National Marine Fisheries Service listed the coastal coho Southern Oregon/Northern California ESU as threatened under the Endangered Species Act. The coastal coho Oregon Coast ESU was placed on the candidate list under the Endangered Species Act. The candidate status of the Oregon Coast ESU was based on a commitment by the State of Oregon to implement the Oregon Plan, and an understanding that listing could occur at any time.

The initial success of the Oregon Plan led the State of Oregon to look at incorporating other declining fish species into the Plan, and to look outside the state, for a more regional approach to recovering aquatic resources.

The Oregon Plan

The Oregon Plan is a radical change from the norm for implementing species recovery. Comprised of the Healthy Stream Partnership and Salmon Restoration, the Oregon Plan looks at watershed health and ecosystem management with the goal of restoring salmon populations and fisheries to productive and sustainable levels based on their natural, cultural and economic value to Oregonians. The Plan consists of four essential elements:

Coordinated agency programs: many agencies, both state and federal, administer laws, policies, and management programs that have an impact on salmon. Under the Oregon Plan, all government agencies that impact salmon are accountable for coordinating programs in a manner that is consistent with conservation and restoration efforts.

Community based actions: government alone cannot conserve and restore salmon across the landscape. The Plan recognizes the need for local solutions by local communities, such as landowners

using local knowledge of the problems, and taking ownership in solutions.

Monitoring: several components make up this effort:

Annual reports on work accomplished and results.

Work plans to determine if goals have been achieved.

Biological and physical sampling to determine whether populations and habitat respond as expected to restoration and conservation efforts.

Appropriate corrective measures: the Plan is based on adaptive management to allow for learning and modifications, as well as a commitment to enforcing existing environmental laws rather than creating new ones.

Several principles guided the development of the Oregon Plan:

Grass Roots Effort: rely on local solutions with local landowners, individuals and agencies.

Voluntary Compliance: enforce existing laws, rather than impose new laws.

Shared Solutions: avoid blame, concentrate on restoration.

Hatcheries: recognize the important role in supplementing stocks.

Fisheries: the overriding goal is to return salmon to sustainable levels.

Partnerships: public/private collaboration and partnerships will be the only way to restore habitat.

Cultural Value: keep salmon a part of Oregon's identity.

Habitat Conservation: emphasize wild populations.

Each of the agencies was asked to review existing programs to identify ways to improve condition within watersheds and in addition, to identify new actions that could improve salmon conditions. Several hundred action items were originally organized into four distinct groups: Hatcheries, Harvest, Habitat and Hydropower.

A peer review of the first draft of the Oregon Plan identified two significant shortcomings: little connection between the proposed action items and the factors of decline for the fish populations; and a lack of biological objectives for the factors. Following these preliminary reviews, the Oregon Plan was restructured. The National Marine Fisheries Service identified 11 environmental conditions, or factors, responsible for the declining salmon populations.

Factors of Decline:

- Channel Morphology Changes
- Substrate Changes
- Loss of Large Woody Debris
- Loss of Estuarine Rearing Habitat
- Loss of Wetlands
- Loss/Degradation of Riparian Areas
- Water Quality Degradation

- Changes in flow
- Blockage/Passage Impediments
- Elimination of Habitat
- Fishing Mortality and other direct loss

These 11 factors were then consolidated into four sections: Water Quality; Physical Habitat; Water Quantity, Fish Passage and Screening; and Fish Management. The State's implementation team developed biological objectives for each section and factor, and matched the biological objectives to agency action items. This correlated factors of decline and biological objectives with respective agency action items. Any gaps that were identified were filled with either expanded action items, or new action items.

Examples of the over 200 action items include:

Water Quality:

- Implement a 303(d) list priority for Total Maximum Daily Load development;
- Provide technical assistance and monitoring support to all functioning, sanctioned watershed councils;
- Apply for additional instream water rights;
- Implement Senate Bill 1010, agriculture water quality management plans.

Physical Habitat:

- Add preference for bioengineering in General Authorization permits for road construction, erosion control, wetlands restoration and enhancement;
- Provide workshops on watershed issues;
- Review existing forest practices rules on hardwood conversions in core habitat areas;
- Provide an information database for restoration of salmon spawning and rearing habitat.

Water Quantity, Fish Passage and Screening:

- Inventory, assess and prioritize for remediation county and state road culverts;
- Review all new water rights in coastal basin by interagency team for adverse impacts to fish habitat;
- Solicit input from district fish biologists on water right transfers within coastal basins.
- Inventory water diversions.

Fish Management:

- Determine predator impacts from pinnipeds and sea birds;
- Manage estuary and river salmon fisheries to minimize impacts;
- Establish new escapement targets.

The U.S. Forest Service and Bureau of Land Management were asked to contribute actions addressing the factors of decline as well.

Monitoring and Adaptive Management

A scientific team representing various state and federal agencies was assigned to develop, implement and document the Oregon Plan. This team will be asking two key questions:

Is the Oregon Plan contributing to a positive change in the productive capacity and resilience of Oregon's aquatic ecosystems as indicated by salmon and the cultural values and ecological processes dependent upon salmon?

Is the Oregon Plan promoting recovery of naturally reproducing populations of salmon in sufficient abundance and across a sufficient geographic and temporal range, proximity (spatial organization), and diversity of habitats to insure that salmon species can persist in a variable environment?

In addition, an Independent Multidisciplinary Science Team (IMST) was appointed to oversee the scientific assessments. The IMST is comprised of scientists from various disciplines including, range, wildlife, forestry, and agriculture.

One foundation of the monitoring program is the watershed assessment. By providing the baseline conditions, the watershed assessments will track the implementation of the action items and effectiveness of the action items in addressing the factors of decline. The watershed assessments will allow the local conditions to direct restorations.

As new information is obtained, and success and failure are observed, the Oregon Plan will adapt to the conditions of the watershed.

Leadership, Accountability and Funding

Implementation of the Oregon Plan is contingent on leadership, accountability and funding. The Oregon State Legislature enacted three bills that provide the foundation for implementation: committed the state to the Oregon Plan, defined a funding package, created the science team, and created a joint legislative oversight committee responsible for overseeing the Plan.

A Salmon Strategy Team (SST) comprised of state agency directors, the Native American Tribes, federal agencies, local government, legislators, environmental groups and the governor continue to meet regularly. This team met every other week for over two years. In addition, for the past two years, state agencies produced biweekly 'Progress Reports' for the governor.

An initiative of this magnitude carries an extraordinary price tag. The Oregon State Legislature identified \$30 million dollars in General Funds to implement the Oregon Plan. Of this \$30 million, over two thirds will be available through grants to watershed councils. The rest will provide staff for some of the agencies to implement the Oregon Plan. The Forest Products Industry Council has identified over \$130 million for upgrading legacy roads in the coastal coho ESUs. This commitment has since expanded to correct legacy roads across the state. The cost of fishing licenses has increased. The aggregate industry has committed resources to the Oregon Plan. A salmon license plate is expected to generate \$450 thousand for the Governor's Watershed Enhancement Board to be used for county and city transportation improvements in watersheds.

The annual report to the National Marine Fisheries Service, the independent science review and the oversight by the legislative committee all serve to provide accountability.

The Oregon Department of Transportation (ODOT) Salmon Recovery Program

As the state road authority, ODOT constructs, operates, maintains, and administers the state transportation network that parallels many of the state's rivers, the Columbia River, and the Pacific Ocean. ODOT's routine and extraordinary maintenance, construction and operational activities have the potential to negatively impact salmonids and their habitat. ODOT's role in this initiative is to minimize, to the extent practicable, the impacts associated with its activities.

In December 1995, ODOT identified seven goals that would direct the development and implementation of the ODOT Salmon Recovery Program:

- Remove barriers, where appropriate, to adult and juvenile fish passage caused by state transportation authorities' activities and structures.
- Identify and minimize transportation impacts on fisheries habitat and water quality
- Enhance fish habitat where and when feasible

Protect habitat by preserving right-of-way or property, where appropriate

Participate in watershed planning

Partner with other agencies, local governments and stakeholders

Develop an informed work force on the needs and requirements of salmon

To meet these goals, ODOT reviewed five existing programs and created 19 action items. Each of the 19 action items fall into the four major components of the ODOT Salmon Recovery Plan:

Environmentally friendly designs

Culvert remediation

Integrated Pest Management

Clean Water

The agency has developed a series of tools to meet the action items and goals:

Maintenance Management System Water Quality and Habitat Guide
Best Management Practices

Programmatic Biological Assessments for construction projects and maintenance activities resulting in incidental take permits

Salmon, Natural Resource and Sensitive Area Maps for ODOT roads with restricted activity zones

Speaking points on major action items for field managers

Memorandum of Understanding with regulatory agencies for a standard set of guidelines for fish passage designs

Partnerships with the National Marine Fisheries Service and the Oregon Department of Fish and Wildlife to provide staff dedicated to providing technical assistance to ODOT

Intergovernmental agreements with Oregon Department of Fish and Wildlife to inventory, assess and prioritize state and county culverts for fish passage

Intergovernmental agreements with U.S. Forest Service on winter maintenance activities.

The 'Golden Scupper Award' for creative solutions and innovation in solving the agency problems. (Awarded, and named, in 1997 for the design of a scupper cartridge that collects run-off from structures.)

A video "Road to Recovery: Transportation Related Activities and Impacts on Salmon" shown to all ODOT employees and shared with counties, cities and other states.

ODOT is a small, but significant, player in the Oregon Plan. ODOT immediately understood the implication of a coho federal listing in the coastal streams. The Oregon Plan impacts the entire agency: project selection and development, construction, maintenance, operations, Right of Way. What ODOT does will not change as a result of the Oregon Plan. How ODOT does it will.

Regional Outreach

Originally developed for the coastal coho salmon, the Oregon Plan has been expanded to address other species, evolving into an aquatic resource recovery plan. Washington, Idaho, British Columbia, Montana, and the Native American Tribes have been invited to participate in developing a regional Plan to address the recovery of aquatic resources. Governors of the northwest states meet regularly to determine strategies and directions for the regional Plan.

The regional look at recovery brings in new and distinct challenges: the hydro power and flood control dams located throughout the Pacific Northwest, population centers, cultural differences, the vast federal land holdings throughout the region.

Participants in the Oregon Plan have been directed to work with their counterparts from other states to coordinate and provide assistance in developing resource recovery plans.

The Oregon Plan is a framework for restoring watersheds based on one state's commitment. Recovery will be long term, and will impact how everyone does business. The consequence of not acting is to lose a cultural icon: the salmon of the Pacific Northwest.