

# The Oregon Plan for Salmon and Watersheds: A Perspective

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Institute for Natural Resources

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by

**Kaush Arha  
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## EXECUTIVE SUMMARY

The Oregon Plan is a state-led strategy for restoring and conserving native salmonids and the watersheds within which they spend all or parts of their lives. It evolved from work that began in the 1980s on watershed health and salmon conservation and was propelled into high gear by proposed and eventual listings of native salmonids in Oregon under the federal Endangered Species Act during the mid-1990s.

The Plan has expanded in scope and activities since then, and now encompasses all native salmonids and all watersheds in the state. It has spawned new commitments and investments from private landowners and generated significant improvements in state-agency coordination related to salmonids and watershed health. With the passage of Ballot Measure 66 in 1998, the Plan generated substantial financial resources from the state's lottery funds to support both agency work on behalf of salmon and watersheds and work by local watershed councils and soil and water conservation districts. The plan, in short, has achieved dramatic and significant results for salmon, watersheds, agency effectiveness, and voluntary conservation actions of the private sector. It is a model worthy of emulation.

The Plan has room for improvement. Roles for federal agencies—those with responsibilities for federal public lands and the Clean Water Act and Endangered Species Act in particular—are still being improved. Work is needed to make the Plan sufficient as a conservation strategy for listed and proposed salmonids under the ESA. Ambiguities with regard to the Plan's applicability to native species beyond salmonids, and with regard to watershed health beyond those conditions most directly related to fish, should be clarified.

The accomplishments of the Oregon Plan create an unparalleled foundation for state-led species conservation. The work remaining creates abundant opportunity for new leaders to add their embellishments to the fine work of others to date.

## PREFACE

Relationships between salmon and people in the Pacific Northwest began at least 12,000 years ago. While ever-changing, these relationships were sustainable and significant; that is, they were until the most recent 175 years. With the arrival of fur traders in the early 1800s, and then the arrival of European-American settlers following the discovery of gold, people have dramatically transformed Oregon's landscapes, riverscapes, and the great and abundant fisheries that characterize our place. And they have largely displaced and eroded the rich cultures and linkages that have existed between salmon and people for more than 10 millennia.

These transformations of the Pacific Northwest have been widespread and pervasive, affecting salmon habitats, the salmon themselves, and the people who live here. First came the decimation of beavers that removed nature's river engineers beginning in 1824; beavers were essentially extinct in the state by 1900. Then came the effects of mining on river bottoms and channels in the mid- to late 1800s. Following and simultaneous with mining were early logging practices and their devastating effects on hillsides and streamside vegetation, the effects of mills that used streams and rivers to remove sawdust and other mill debris, and the effects of using streams and rivers to transport logs to mills on the waterways.

Livestock grazing and actions taken by ranchers to open more forage to cattle and sheep destroyed steambanks and streamside vegetation and lowered water tables from the late 1800s through the mid-1900s. Irrigation diversions sucked water from rivers and streams beginning in the late 1800s, often with no attention to the fish that spilled onto crops and pastures with the water. Small streams were straightened and ditched. Roads blocked fish passage and added sediments to streams.

Dams, small in the beginning and massive by the mid-1900s, blocked fish passage, changed river hydrology, and churned up fish in hydropower turbines. Fish harvests to supply canneries took millions of salmon every year from a humble beginning in 1866 to its peak in 1895. With the arrival of gasoline engines, fishing went to the ocean in the early 1900s with yet another round of heavy harvest layered on populations already impacted by habitat change and harvest. Industrial developments found rivers a convenient way to dispose of waste and pollutants. Salmon suffered heavily from these human transformations of land and resources. And hatcheries were offered as the solution, a solution that initially paid no attention to the effects of egg transfers on population genetics or local adaptations and whose record of success was not evaluated until well into the 1900s.

In his book *Salmon Without Rivers: A History of the Pacific Salmon Crisis*, Jim Lichatowich characterizes this history as the effects of an industrial economy imposed on a natural economy. In attempts to address undesired consequences of the industrial economy on nature's bounty, various boards, commissions, and councils were established



to address the declines and reverse the trends. Some were in place as early as the late 1800s; others were established as recently as the 1990s. Science was added to the mix, but research conducted beginning in the 1920s often did not find its way into management schemes and policies until decades after the findings were known.

The basic biology of salmon, the varied life-history strategies that are key to their sustainable productivity and survival, and the implications of scientific knowledge for conservation and management were generally known by the 1940s. Salmon managers by the 1930s had recognized the crossroads they faced in society's choice between dams and hatcheries or free-flowing rivers and wild fish. The choice was made for dams and hatcheries, and more than \$3 billion have now been spent in the Columbia River system alone trying to restore salmon, largely through hatcheries that were intended to mitigate the effects of the dams, but with little benefit to wild salmon to show for that investment.

Though trying valiantly and repeatedly, our various institutions of governance have failed to arrest the salmon declines, and on more than one occasion they have ducked the actions that could have reversed trends.

There were some successes along the way, however. Beginning as early as 1971 and as recently as 2002, forest practices were modified to better protect water quality and fish habitat. Hatcheries began working better in the 1950s, and their practices have recently changed to incorporate genetic and life-history considerations. Harvest regulations have been modified to better protect wild stocks. We cannot attribute the condition of salmon populations today to only one of the factors that have transformed their world—often characterized as the 4 Hs; harvest, hydropower, hatcheries and habitat. Each of these factors plays a role, and those roles vary by place and time. We understand a lot more about salmon biology, about the various ecosystems on which they depend, and about the effects of ocean cycles and climates on population behaviors. But the wild salmon are still in trouble, and we, the people who want to share this place with salmon, are the ultimate cause of the trouble.

Some things are getting better, but much work remains to bring wild salmon back from the brink of extinction, to restore the health of our rivers and watersheds, and to bring people into a more harmonious relationship with our natural heritage. That was the history when the National Marine Fisheries Service (NMFS, now NOAA Fisheries) considered listing coastal coho salmon in Oregon in the mid-1990s. That is the history that the Oregon Plan for Salmon and Watersheds emerged to address, at least in part. Some challenges still elude effective action and may be beyond the capacity of one plan to achieve.

Pacific Northwest salmon have survived, declined, recovered, and adapted to change countless times over their 10-million year history. Scientists believe many remaining wild stocks still have the genetic capacity to recover much of their productivity and vitality if given the opportunity. The Oregon Plan's mission is to give them that opportunity in ways that also serve goals for economic and community vitality.

## INTRODUCTION AND METHODOLOGY

We begin with a brief review of the historical, legal, and political context of the Oregon Plan (a more-detailed review is given in the Appendix). Following the historical review is a description of the Oregon Plan to date, an articulation of how it works, and assessments of its strengths and weaknesses. We conclude with some thoughts on options to secure the strengths and address the weaknesses in future refinements of the Plan. The intended audience for this paper is policy-makers at state and federal levels, agency managers, and opinion leaders with interest in the Oregon Plan and in the state's role for species conservation.

This paper is a perspective on the Oregon Plan and what it offers for state leadership in species conservation. It is the perspective of the authors, influenced by feedback from reviewers. It is not a comprehensive program review of the Plan. The views in this paper were developed primarily by the senior author and augmented by the assisting coauthors to gain a fuller understanding of what Oregon is trying to accomplish with the Oregon Plan and what the possible next steps might be. The Institute for Natural Resources saw an opportunity to independently develop this perspective to inform incoming government leaders at state and federal levels about the strengths and weaknesses of the Plan, and initiated this study to capitalize on the timely availability of the senior author to deliver an “outside view.”

The paper is based on materials in the binders of documents that constitute the Oregon Plan and discussions with individuals noted in the acknowledgements section above. The authors fully acknowledge that there may be other perspectives on the Plan and that this paper does not attempt a comprehensive assessment of the Plan. Due to insufficient time to address all aspects of the Plan, this perspective focuses more on governance matters and less on implementation through voluntary actions.

## A BRIEF HISTORY OF THE OREGON PLAN

The Oregon Plan began as a state-led strategy for conserving salmonid species listed or headed for listing under the federal Endangered Species Act. The strategy was intended to solve three vexing problems. First, listing a species as threatened or endangered under federal statutes and processes rarely leads to recovery and conservation because federal agencies lack the means to effect positive action on private lands. Second, the absence of state leadership on species conservation means that federal agencies responsible for ESA enforcement have no choice but to exert their species-focused regulatory authority, often with severe local and regional economic and social impacts. Third, Oregon was facing lawsuits over its failure to develop water-quality improvement plans (Total Minimum Daily Loads or TMDLs) for water-quality-limited streams. The Oregon Plan evolved, in part, to address these problems.

Oregon began developing what eventually became known as the Oregon Plan in 1995. The original strategy, called the Oregon Coastal Salmon Restoration Initiative (OCSRI), was focused on recovery of coastal coho salmon and improvement of water quality statewide. In 1997, the Oregon Legislature funded the strategy by investing in agency staff to complete water-quality planning and to develop fish restoration activities, and by creating a fund for local restoration efforts on private lands. The Governor renamed OCSRI the Oregon Plan for Salmon Recovery and Watershed Enhancement—the full name for what is now commonly known as the Oregon Plan for Salmon and Watersheds, or the Oregon Plan. Since 1997, the Plan has expanded to address native salmon, steelhead, and native fish in all watersheds of the state. These species typify the species conservation and water-quality problems facing the state, and, in addition, they are icons of Oregon’s natural heritage. Some hold the opinion that the Oregon Plan has moved beyond conservation of salmonid species and is presently directed at addressing watershed health in all its complexity.

The Oregon Plan is often explained as the Oregon alternative to federal regulations under the Endangered Species Act (ESA), as an attempt to address both ESA and Clean Water Act requirements, and as a state-led conservation strategy for restoring salmonid populations. As such, it presents a very comprehensive state strategy for restoration and management of salmon, steelhead, and native trout and the watersheds on which they depend—a strategy perhaps unique in the nation. However, when the question “What is the Oregon Plan?” is asked of most Oregonians, professional and laypersons alike, a wide range of answers ensues. The answers usually vary in describing the perceived scope of the Plan and how it complements state efforts to emphasize and better manage its watersheds. One common theme, however, that resonates among most respondents, is that the Plan presents an “Oregon approach,” as opposed to a federal regulatory approach, to salmon recovery and management in the state.

## THE OREGON PLAN TODAY

Since 1997, the Plan has made possible more than 4,000 restoration projects in forests on private and state forestland as well as numerous habitat improvement projects on private lands (Table 1, Table 2). The foregoing brief history describes the evolution of the Oregon Plan from OCSRI. OCSRI originally focused primarily on Oregon coastal coho salmon, while the Oregon Plan now addresses all native fish populations and watersheds statewide. The Oregon Plan includes four strategic elements:

- 1 *Coordination among agencies*** (primarily state but also federal) to pursue salmon recovery and watershed enhancement (Table 3). In a state with independent state agencies, coordination is a critical first step to achieving common goals. Several state agencies and their constituencies affect the various life stages of wild salmon. Different state agencies deal with harvest and habitat (water quality, water quantity, fish passage, etc.) of wild salmon. Any effective state initiative directed towards conservation and restoration of salmon populations has to ensure a coordinated effort among the various agencies. Such coordination is a top priority of the Oregon Plan.
- 2 *Local community-sponsored action***. The most effective conservators are the private citizens and users of land and water who share the landscape with salmon and whose activities have a direct impact on salmon. More than 60% of the core or historically best habitat for coastal coho salmon is in and around streams that flow through private lands. For that reason, local watershed councils, soil and water conservation districts, and other groups are to take the lead in implementing watershed improvement projects. The state agencies are directed to provide regulatory, technical, and funding assistance to these local groups so that necessary projects can be implemented with local knowledge and ownership.
- 3 *Monitoring***. Developing and implementing a statistically sound monitoring strategy to document status and trends in fish populations and environmental conditions is necessary to evaluate changes, causes of changes, and effects of management decisions. Monitoring must include annual appraisal of the effects of state agency programs to assess whether stated tasks are completed and with what result, as well as to evaluate the relationship between agency activities and policies. A new sampling strategy was developed to monitor the fluctuations in salmon populations more accurately.
- 4 *Adaptive management***. The Plan outlines a process by which, based on information gathered from its monitoring element and input provided by an independent science review panel (Independent Multidisciplinary Science Team or

Table 1. Restoration work in the forest.

| Projects on Private Forestland |                    |                     | Projects on State Forestland |                    |                     |
|--------------------------------|--------------------|---------------------|------------------------------|--------------------|---------------------|
| Year                           | Number of Projects | Money Spent         | Year                         | Number of Projects | Money Spent         |
| 1997                           | 559                | \$6,709,948         | 1997                         | 99                 | \$5,925,772         |
| 1998                           | 690                | \$9,662,444         | 1998                         | 117                | \$4,191,331         |
| 1999                           | 790                | \$10,261,926        | 1999                         | 83                 | \$2,169,291         |
| 2000                           | 821                | \$12,108,001        | 2000                         | 76                 | \$6,482,777         |
| 2001                           | 799                | \$10,002,371        | 2001                         | 56                 | \$3,219,492         |
| <b>TOTAL</b>                   | <b>3659</b>        | <b>\$48,744,690</b> | <b>TOTAL</b>                 | <b>431</b>         | <b>\$21,988,663</b> |

Private forest landowners were early supporters of the Oregon Plan, committing to voluntary restoration work on their land estimated at \$130 million over 10 years. From 1997 to 2001, they spent nearly \$50 million on nearly 4,000 habitat restoration projects. The second set of numbers shows similar work in state forests. (Source: OWEB)

Table 2. Improving habitat in forest streams.

| Year   | Private Forest Industrial<br>Landowners Summary |      |      |      |      | State Forests Summary |      |      |      |      |
|--|---|------|------|------|------|-----------------------|------|------|------|------|
|  | 1997  | 1998 | 1999 | 2000 | 2001 | 1997                  | 1998 | 1999 | 2000 | 2001 |
| Miles of road surveyed   | 2677  | 6817 | 3671 | 1091 | 827  | 658                   | 691  | 2    | 23   | 32   |
| Miles of road vacated, closed, or relocated                          | 27  | 50   | 94   | 89   | 86   | 8                     | 12   | 15   | 11   | 8    |
| Miles of road improvements   | 263   | 381  | 414  | 375  | 351  | 197                   | 118  | 65   | 220  | 98   |
| Number of peak flow improvements                                     | 489   | 889  | 1071 | 1105 | 1045 | 528                   | 238  | 168  | 299  | 91   |
| Number of surface drainage improvements                              | 972   | 1896 | 2302 | 2739 | 2531 | 655                   | 462  | 129  | 847  | 256  |
| Number of stream crossings and culverts<br>improved for fish passage | 129   | 202  | 195  | 175  | 188  | 16                    | 30   | 21   | 10   | 37   |
| Instream wood placement projects                                     | 118   | 104  | 57   | 49   | 25   | 23                    | 32   | 21   | 14   | 10   |

The more than \$70 million spent by private landowners and the state since the Oregon Plan began in 1997 have resulted in thousands of miles of roads surveyed and improved or vacated. Fish passage has been enhanced by culvert improvements and the placement of in-stream structures. (Source: OWEB)

Table 3. The Oregon Plan: State agencies working together.

|   |              |
|---|--------------|
| Oregon Watershed Enhancement Board              | \$32,462,682 |
| Oregon Department of Forestry                   | \$18,986,588 |
| Oregon Department of Transportation             | \$5,265,839  |
| Oregon Department of Fish and Wildlife          | \$2,268,450  |
| Oregon Department of Environmental Quality      | \$638,282    |
| Oregon Department of Agriculture                | \$225,910    |
| Oregon Department of Parks and Recreation       | \$67,150     |
| Oregon Division of State Lands                  | \$60,000     |
| Willamette Restoration Initiative               | \$35,000     |
| Oregon Water Resources Department               | \$11,090     |
| Oregon Economic and Community Development Dept. | \$6,000      |
| Oregon Department of Corrections                | \$500        |

Since the Oregon Plan began in 1997, state agencies have collaborated in long-range planning and prioritized their own contributions in the context of the larger goals of the Plan's program. Above are the investments by state agencies in restoration activities in the Plan's first 5 years. (Source: OWEB)

IMST), appropriate modifications are made in agency work plans and management practices. Following the framework described in its four strategic elements, the Oregon Plan uses the best scientific information and existing laws, combined with voluntary actions at the local level, to implement a coordinated and comprehensive state strategy for restoring salmon populations and the natural systems they depend on.

The entire text of the Oregon Plan was developed and written in a short time by a few dedicated key individuals. As such, it illustrates the features characteristic of a product so formed. Precision and coherence are usually compromised for comprehensiveness, which is probably the case with the Oregon Plan. The Plan comprises four thick volumes, with 17 chapters and 6 appendices.

The comprehensive nature of the Oregon Plan reflects, to some degree, the concerns of the NMFS that all factors contributing to the decline of the Oregon Coastal Coho Evolutionarily Significant Unit (ESU) be addressed. Some factors for decline were better understood than others. The broad scope of the Oregon Plan also reflects the desire of some state agencies to include a large portion of their routine, traditional, or planned actions under the mantle of the Oregon Plan to gather support and recognition for their efforts. Given the short time frame in which the Oregon Plan was developed, most state agencies, with the possible exception of the Department of Forestry (DOF), were unable to engage their constituents in a dialogue about the Oregon Plan, the key factors for decline of salmonids, or the voluntary measures that would be feasible in addressing the factors for decline.

## CONTENTS OF THE OREGON PLAN DOCUMENTS

The first volume of the Oregon Plan includes 16 chapters. The first chapter, Appraisal of the OCSRI Conservation Plan, asserts that the purpose of Oregon Plan is to recover salmonid populations.

**Chapter 2**, Guide to the OCSRI, describes the mission and key tenets of the Plan, which are to:

- Take an ecosystem approach that requires a systematic consideration of the full range of attributes of aquatic health.
- Focus on reversing factors for decline and taking actions to address those factors.
- Practice adaptive management and implement a comprehensive monitoring strategy.
- Fully involve citizen and constituent groups into the restoration process.

**Chapter 3**, Risk Agents Responsible for the Decline of Oregon Coastal Coho Salmon, describes the factors that have contributed to the decline in coho salmon. These factors are lumped into two broad categories: management decisions and habitat alteration. Under management decisions, the main factors include recreation and commercial harvest levels and the use of hatcheries to artificially supplement natural wild stocks. Habitat alterations can be further divided into freshwater and saltwater habitats. Under freshwater habitats, main factors include water quality and quantity, habitat complexity, and fish passage. Under saltwater habitat, main factors are associated with variations in ocean productivity. The factors affecting salmonid populations are commonly referred to as the four Hs: harvest, hydropower (dams and turbines), hatcheries, and habitat.

**Chapter 4**, Essential Elements of a Conservation Plan, briefly describes the components of a conservation plan for ESA listed species. These components could conceivably result in a federally sanctioned recovery strategy. They include:

- Identify the major factors that have contributed to the decline in the specific ESU.
- Establish priorities for action.
- Establish objectives and timelines for recovering populations.
- Establish criteria and standards to measure progress towards objectives.
- Adopt measures (actions) needed to achieve the explicit objectives.
- Provide high levels of certainty that actions will be implemented.
- Establish a comprehensive monitoring program.
- Integrate activities and projects to recover salmon populations and their habitat.
- Utilize adaptive management in the recovery process.

**Chapter 5**, Pacific Salmon Restoration: A Historical Perspective, provides a brief and instructive discussion about various efforts undertaken by local, state, regional, and federal entities since the late 1800s to manage and conserve Pacific salmon populations.

**Chapter 6**, Conceptual Foundation, briefly describes the theories, principles, and assumptions underlying the scientific assessment and the direction for salmon management and restoration activities. It describes the paradigm behind the OCSRI, which contains three primary tenets:

- 1** Restoration of salmonids in Oregon must address the entire natural and cultural ecosystem, which encompasses the continuum of freshwater, estuarine, and ocean habitats where salmonids complete their life histories.
- 2** Sustained salmonid productivity requires a network of complex and interconnected habitats, which are created, altered, and maintained by natural processes in fresh water, estuaries, and the ocean.
- 3** Life history diversity, genetic diversity, and meta-population organization are ways salmonids adapt to their complex and connected habitats.

**Chapter 7**, Goals and Strategies, identifies eight goals of the OCSRI. Goals are defined as desired outcomes of the OCSRI; strategies are defined as the processes through which the goals are to be achieved. The eight goals are:

- 1** Provide an infrastructure for long-term continuity in leadership, direction, and oversight of salmon restoration.
- 2** Enhance opportunities to use natural resources in a wide range of ways consistent with salmon restoration.
- 3** Implement existing laws more efficiently, rather than enacting new ones.
- 4** Provide adequate funding for OCSRI.
- 5** Increase Oregonians' awareness of the physical and biological constraints of the ecosystem, so that their expectations of sustainability are based upon scientific knowledge.
- 6** Make sufficient freshwater and estuarine habitat available to support healthy populations of anadromous salmonids.
- 7** Help populations of salmonids achieve levels of natural production consistent with overall restoration goals.
- 8** Use a science-based system to evaluate the progress of OCSRI and recommend future changes in programs.

**Chapter 8**, Outreach and Education, describes education objectives and the materials developed to achieve those objectives. An Outreach and Education Team identified 14 stakeholders, including landowners, conservation groups, local government,



state and federal government, civic groups, education (schools), seniors, youth groups, the media, and recreational, business, cultural, religious, and other organizations.

**Chapter 9**, Strategy for Improving Compliance with Environmental Protection Laws, points out the importance of enforcement in protection of natural resources and describes the enforcement practices of various state natural resource agencies. The second part of the chapter describes a strategy for achieving a coordinated enforcement program.

**Chapter 10**, Funding and Possible Economic Incentives, briefly describes funding sources for OCSRI, including available federal funding and other potential funding sources.

**Chapter 11**, Changes in Management Related to Risk Agents, describes the changes that have already occurred in management of harvest, hatchery production, and habitat. Coho salmon have been harvested in Oregon since the mid-1800s. Overharvest of coho salmon, particularly from the 1940s to the 1980s, contributed to population decline. While historic harvest had been as much as 80% of the adult population, the present harvest rate is between 7% and 12% of the estimated adult population. Hatchery management also has been altered to accommodate restoration of wild coho salmon populations.

**Chapter 12**, Accountability and Coordination of Effort Among Contributors, describes an organizational structure for leadership and support of OCSRI. It recognizes that the Governor's personal leadership has been integral and important to the development of OCSRI.

**Chapter 13**, Independent Scientific Assessment of the Plan, describes a structure and function for the scientific team proposed to review the progress of OCSRI and recommends modification if needed.

**Chapters 14 through 16** are the technical section of the Oregon Plan. Chapters 14 and 15 specifically address Oregon Coast coho salmon, their population trends, and their core habitat areas. Chapter 16 describes the framework for a collaborative and comprehensive monitoring program, including objectives and major components, and lists 15 distinct tasks, ranging from monitoring habitat, fish abundance, and ocean productivity to establishing adaptive management work groups and cumulative effects/watershed assessment teams.

**Chapter 17** contains the action items proposed by different state and local agencies to restore coho salmon populations. This chapter is divided into sub-chapters A – K as follows:

- 17A, Watershed Councils: a description of the history, structure, and function of watershed councils. In addition, 17A describes a watershed council's interaction with the Governor's Watershed Enhancement Board (GWEB), technical review committees, and soil and water conservation districts.

- 17B, State Agency Measures: context, rationale, and objectives. 17B identifies four major causes of coho salmon decline—water quality, water quantity (including fish passage and fish screening), physical habitat, and fish management. This sub-chapter then describes the actions to be taken by appropriate agencies to address these four factors.
- 17C, State Agency Work Plans: descriptions of plans and timelines by agencies, under their existing authority and budgets, for implementing actions and measures to restore coastal coho. In addition, 17C presents details for proposed actions contingent on additional funding.
- 17D, Federal Agency Work Plans: the commitment, actions, and contributions of 12 federal agencies to OCSRI. Most of federal commitments are related to oversight (NMFS), enforcement (NMFS), resource management (USDA Forest Service, USDI Bureau of Land Management, U.S. Army Corps of Engineers), and technical assistance (USDA Natural Resource Conservation Service).
- 17E, Actions to Reduce Risk to Core Areas: eight key actions within core areas of coho salmon.
- 17F, Southwest Oregon Salmon Restoration Initiative: a description.
- 17G, Evaluation of City and County Actions: descriptions of existing programs implemented by members of League of Oregon Cities and Association of Oregon Counties assisting salmon restoration.
- 17H, Oregon Port Measures: a list of actions that Oregon ports can take to assist implementation of OCSRI.
- 17I, Oregon Land Use: describes foundation of land use planning in Oregon.
- 17J, Habitat Restoration Guides: description of the program and its accomplishment. It was developed as a joint project between Oregon Department of Fish and Wildlife and Oregon Wildlife Heritage Foundation.
- 17K, Summary of Statutes and Administration Rules related to OCSRI.

The six appendices at the end of the Oregon Plan include 14 issue papers related to salmon restoration, monitoring program documentation, a coho salmon population dynamics model, coho salmon core area mapping documentation, documentation of the Southwest Oregon Coastal Salmon Restoration Initiative, and watershed council documentation.

This summary of the chapters and appendices describes all the information contained in the original OCSRI, now called the Oregon Plan. A new, fully revised edition of OCSRI, or Oregon Plan, has not been published; however, major additions and upgrades that have occurred during the past 5 years—for example, the Steelhead Supplement, the Willamette Restoration Initiative, and Executive Order 99-01 (explained in greater detail in the Appendix) all updated the original OCSRI. While many portions of

the OCSRI are applicable to the new and expanded mission of the Oregon Plan, some have since been replaced. The overwhelming amount of loosely linked information presented in the Plan could present the uninitiated with a tough challenge to fully comprehend its message or discern how it translates into action. However, the results of the Plan over the past 5 years are many and are documented in biennial reports and in the recent Special Report from the Oregon Forest Resources Institute, titled “Oregon’s Bold Plan for Salmon Recovery: A Unique Oregon Approach To Restoring Fish Population And Watersheds.” The document may be viewed at [www.oregonforests.org](http://www.oregonforests.org).

## HOW DOES THE OREGON PLAN WORK?

The Oregon Plan works through interagency coordination of dollars and activities (Figure 1 and Table 4) and through voluntary actions taken by private landowners (Figure 2). “Oregon’s Bold Plan for Salmon Recovery (OFRI 2002) describes some of the many voluntary actions taken by private landowners.

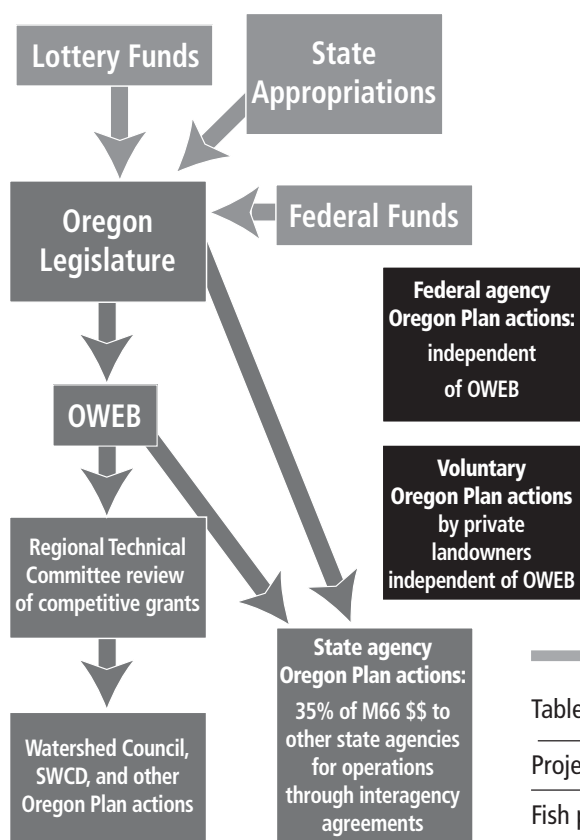


Figure 1. Oregon Plan Functions: Empowerment of Local Groups. Dollars flow from state and federal sources to local groups and state agencies.

Federal land management agencies fund their work on salmon and watershed improvements through their own appropriations and dollars received from grants. Federal funds allocated in the Wyden Amendment and Title II and III funds can be used on private lands.

Oregon Plan funding from the Watershed Improvement Fund created by a 1998 ballot measure (explained in more detail in the

Table 4. Restoration expenditures.

| Project Type                             | Number / | %  |
|--|----------|----|
| Fish passage improvement                 | 66       | 21 |
| ODFW fish screen program                 |          | 17 |
| Land acquisition                         | 6        | 13 |
| Riparian area enhancement                | 114      | 9  |
| Irrigation efficiency                    | 35       | 8  |
| Stream habitat enhancement               | 49       | 7  |
| Upland erosion control                   | 58       | 7  |
| Wetland enhancement                      | 16       | 5  |
| Channel and bank alteration              | 35       | 3  |
| Grazing management                       | 38       | 3  |
| Vegetation management                    | 18       | 3  |
| Estuarine restoration/enhancement        | 10       | 2  |
| Conservation Reserve Enhancement Program | 46       | 1  |
| Fish screen improvement                  | 7        | 1  |
| Water acquisition                        | 4        | 1  |

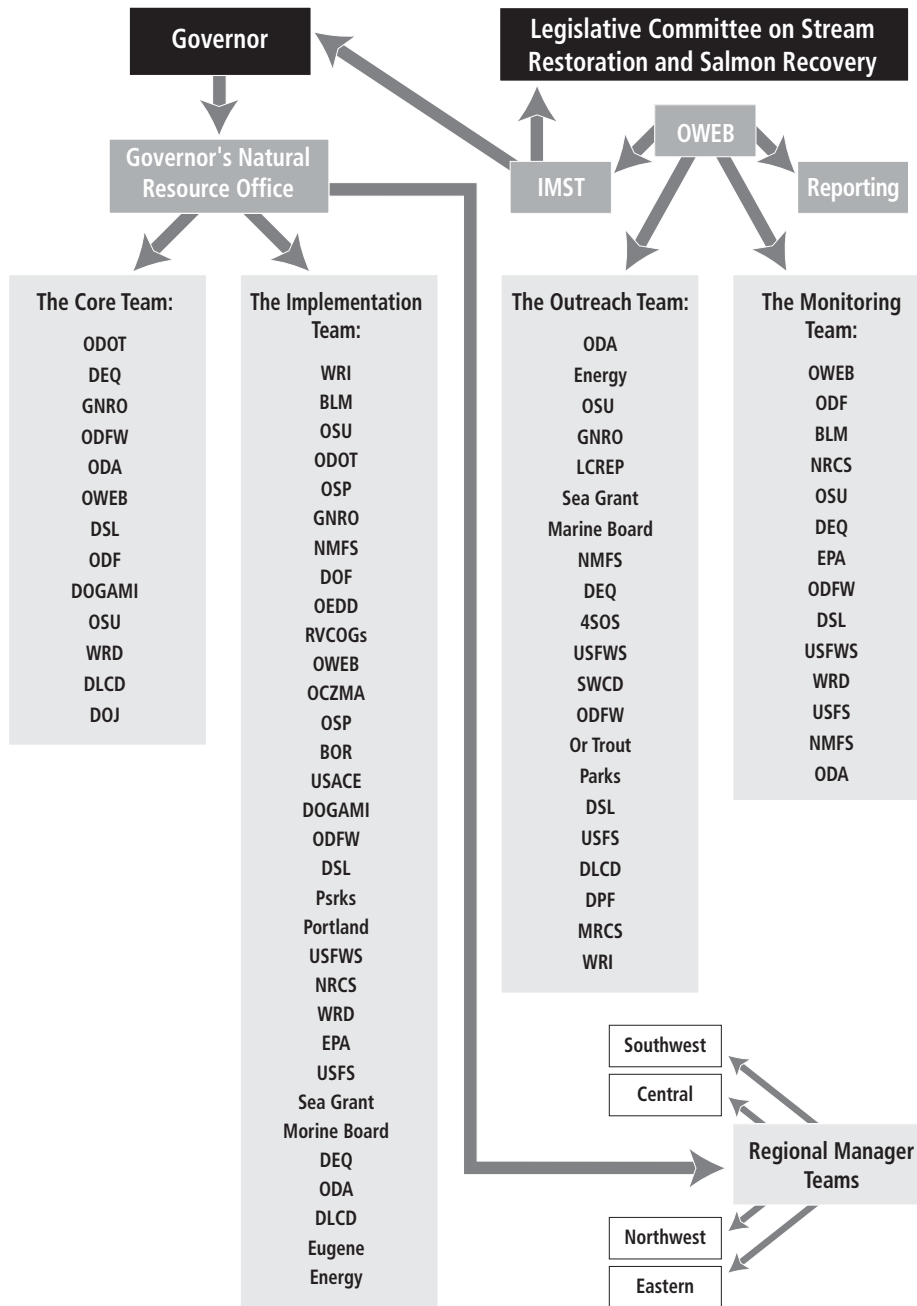


Figure 2. Oregon Plan Functions: Coordination, Monitoring, and Outreach.

Appendix) is awarded through a competitive grant program by OWEB. Funding is made available for council support, watershed assessment and monitoring, education and outreach, technical assistance, and watershed restoration and protection projects (Figure 3). OWEB funding has been used to provide locally based conservation capacity (watershed council support, support for Soil and Water Conservation Districts, and technical assistance). OWEB and state natural resource agency staff work with landowners to assess

local conditions and develop restoration and conservation projects to be implemented in each local watershed (Figure 4). Watershed assessment has been a tool used to focus efforts and identify local priorities and conditions needing treatment. The Governor's Natural Resources Office sets up interagency Regional Manager Teams in coordination with the agency directors.

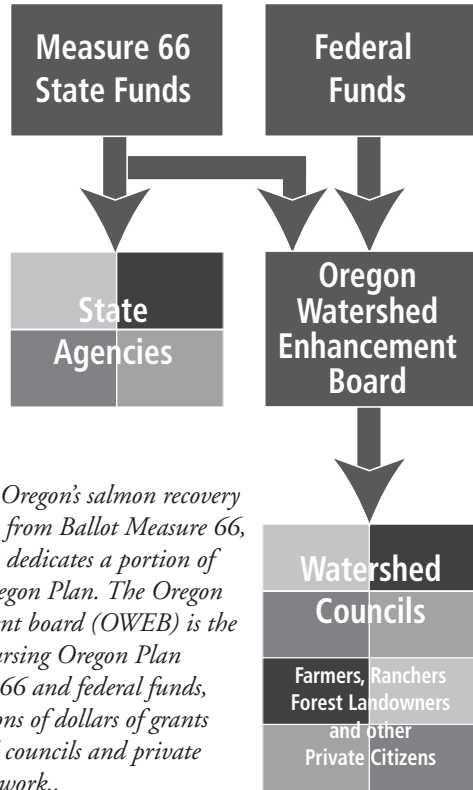


Figure 3. Funding for Oregon's salmon recovery efforts comes primarily from Ballot Measure 66, passed in 1998, which dedicates a portion of lottery funds to the Oregon Plan. The Oregon Watershed Enhancement board (OWEB) is the clearinghouse for disbursing Oregon Plan funds. Using Measure 66 and federal funds, OWEB provides millions of dollars of grants each year to watershed councils and private citizens for restorative work..

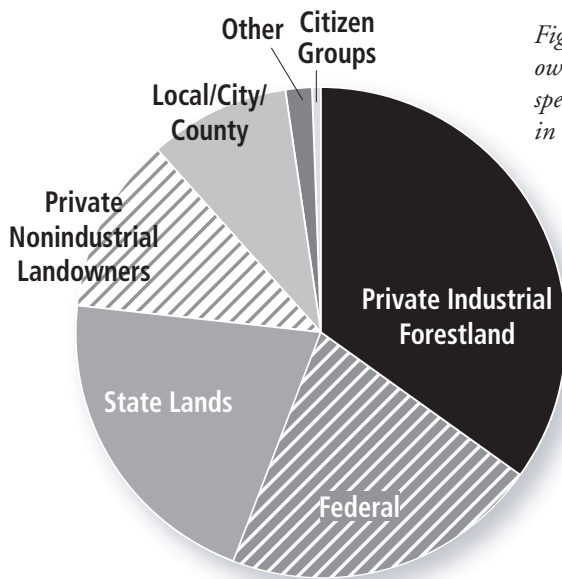


Figure 4. OWEB restoration investments by land ownership, 1997-2001. About \$140 million has been spent on restoration work since the Oregon Plan began in 1997.

## WHAT ARE THE STRENGTHS OF THE OREGON PLAN?

The Oregon Plan puts forth a comprehensive strategy for addressing a very complex and confounding natural resource issue—enhancing watershed health, meeting water-quality requirements, and recovering salmon populations. The plan acknowledges that salmon are affected by a host of activities, including commercial and recreational fishing, forest practices, hydropower dams, agriculture, industries, and urban discharge. It is necessary to address all of these activities comprehensively to achieve salmon restoration: That is the ambitious and unprecedented task the Oregon Plan sets out to achieve. It attempts to accomplish this task by coordinating state agency efforts at both state and local levels. The Plan also recognizes that the way to address salmon recovery is to address the factors causing the decline in fish populations—salmon management policy, which includes harvest and hatcheries; and salmon habitat and watershed health, which incorporates water quality, water quantity, and other habitat attributes such as hydropower dams, fish passage, and biophysical characteristics of rivers and streams. The overall focus of the Plan is on improving watershed health and treating salmon populations as a key indicator of watershed health. This focus reflects sound ecological thinking.

An endeavor of this magnitude requires unprecedented coordination throughout the state. Natural resource agencies in Oregon all have independent policy boards and commissions. This independence from the Governor makes coordination more important than it would be in a state where agency directors are all appointed and directly accountable to the Governor. Initially, the Salmon Strategy Team (now replaced by the Core Team) coordinated by the Governor's office provided a venue for all affected state agencies to deliberate actions needed to address watershed health and salmon recovery and decide which agencies will do what. The Implementation Team, also coordinated from the Governor's office includes entities beyond state agencies. In addition, the Monitoring Team, coordinated by OWEB, is charged with developing a comprehensive and integrated protocol for collecting, analyzing, and disseminating information relevant to evaluating the effectiveness of restoration measures. At the local level, state agencies are encouraged to assist and support watershed councils and Soil and Water Conservation Districts in implementing local watershed assessment and action plans.

Four main accomplishments of the Oregon Plan should be mentioned:

*First*, the Plan is a state-led species conservation strategy designed to address a natural resource issue of great magnitude that affects the lives of all Oregonians. The Plan provides unprecedented coordination among state agencies in putting forth an overall strategy that could deliver a result greater than the sum of its parts. Furthermore,

the Plan contributes to forging or improving relationships among field representatives of various state agencies and their constituent industries or individuals.

*Second*, the Plan stimulates significant voluntary conservation activity by private landowners.

*Third*, the Oregon Plan establishes local groups, such as watershed councils, and it charges these and the existing soil and water conservation districts with the main tasks of developing and implementing watershed improvement projects. This alone is a substantial contribution of the Plan. By ensuring technical assistance and funding to local watershed councils, the Plan enables a local constituency to take the lead in improving the environment. Because of this local empowerment, the Oregon Plan has significantly improved Oregonians' awareness of natural resource issues related to salmon populations.

*Fourth*, the Oregon Plan has invested significant resources in developing the science of watershed health and salmon restoration. The Plan created the Independent, Multidisciplinary Science Team to provide scientific review of activities directed at improving watershed health and fostering salmon recovery. Perhaps most importantly, the Oregon Plan has initiated a process for developing statewide protocols for collecting, analyzing, and disseminating the information needed to monitor the progress of restoration measures. The lack of relevant and accurate information represents the biggest deficiency in decision-making related to threatened or endangered species.

Significant achievements by state agencies under the Oregon Plan include:

*Oregon Department of Fish and Wildlife* – changes in harvest levels and hatchery management; screening irrigation diversions; survey of in-stream and riparian conditions on many forestland streams, development of priority in-stream restoration projects based upon the in-stream surveys.

*Department of Environmental Quality* – progress toward developing statewide total minimum daily levels (TMDLs) for 50 basins by 2003.

*Oregon Department of Transportation* – comprehensive inventory of fish passage barriers and significant progress in addressing areas where passage is hindered; modification of best management practices for highway maintenance to be consistent with ESA and watershed health concerns.

*Oregon Department of Agriculture* – significant progress toward developing statewide agricultural water-quality management-area plans for 41 basins by 2003.

*Oregon Department of Forestry* – review of Forest Practices Act and recommended revisions; survey of state and private road and culvert systems and repair or upgrade of roads and culverts on state and private forests; monitoring of the effectiveness of the implementation of the Forest Practices Act requirements statewide.

*Division of State Lands* – strengthened fill and removal permitting rules and continued random checks for compliance.



*Water Resources Department* – increases in water allocations instream from 25 cfs to 143 cfs under a water-rights lease program; approval of 148 cfs in permanent allocations of water to in-stream uses through water rights transfers and allocation of conserved water; partnership with ODFW to prioritize watersheds for stream-flow restoration statewide.

*Cooperative efforts* – guidelines for designing and implementing in-stream restoration projects; guidelines (treated as rules under the Forest Practices Act) for fish passage through stream-crossing structures; watershed assessment manual and monitoring protocols for use by watershed councils; significant progress in developing a biologically based set of criteria for prioritizing fish passage barriers for removal, including trial prioritization efforts for Scappoose Bay, the Rogue basin, and the Hood River basin, and initiation of efforts on the Siuslaw basin. Development of these criteria has been a cooperative effort among OWEB, ODF&W, the Oregon Department of Forestry, the USDA Forest Service, NOAA Fisheries, and the U.S. Fish and Wildlife Service.

Significant achievements by private parties and local watershed and soil conservation groups include:

- Completion of watershed assessments for all coastal drainages and most of the Willamette and Deschutes drainages, and significant efforts in other drainages.
- Forest road repairs to reduce sediment delivery to streams.
- Culvert replacements to improve fish passage.
- Riparian-zone management for enhanced productivity of aquatic ecosystems.
- Placement of large wood (logs) in streams and riparian zones for fish habitat.
- Abatement of invasive species.
- Wetland restoration.
- Reestablishment of stream channel sinuosity.
- Reduction of sheet and rill erosion from fields.

The Oregon Plan encompasses all natural resource laws and regulations related to salmon and water in the state of Oregon. It thus can take credit for all benefits associated with this regulatory baseline. However, important questions to be considered include:

- Has the Oregon Plan resulted in actions on the part of state agencies that they would not have undertaken in its absence?
- Has the coordination of state agency activities related to salmon and watersheds enhanced the efficiency and effectiveness of the proposed actions, or has it contributed to further inefficiency and ineffectiveness?
- What have been the transaction costs of imposing additional coordination on state agencies?

- Has the Oregon Plan, by encouraging coordination among state agencies, gone beyond enhanced efficiency and added more value to the activities than they would have had if undertaken independently? As a corollary, have the benefits outweighed the transaction costs?
- What have been the opportunity costs of marshalling state resources toward salmon and watersheds?
- Has the Oregon Plan stimulated action on the part of watershed councils, individual landowners, and other private entities that would not have occurred in its absence?
- How has the Oregon Plan influenced federal agency activities related to salmonids and watersheds?

The strengths of the Oregon Plan are its comprehensive approach, its effort to coordinate activities across agencies and land ownerships, and its reliance on local conservation actions. Its most lasting legacy will be the leadership that private landowners, watershed councils, and soil and water conservation districts are taking in improving local watershed conditions.

## WHAT ARE THE WEAKNESSES OF THE OREGON PLAN?

The weaknesses of the Oregon Plan are related to its strengths. As previously stated, the Plan presents a comprehensive and somewhat coordinated state strategy for addressing salmon and watershed concerns. But it lacks coherence and precision, and some may contend this is by design.

The Oregon Plan is now understood to be the document that was submitted as OCSRI to the Legislature in 1997, plus the Steelhead Supplement, the Willamette Restoration Initiative, and Executive Order 99-01. Many portions of these have been rewritten and modified in the years since 1997. The OCSRI was geared towards coastal coho. The Oregon Plan is actually much broader in scope than OCSRI, covering all watersheds and native salmonid populations in the state. A revised edition of the Oregon Plan for Salmon and Watersheds is sorely needed—in particular, regular updates to Chapter 17, which describes the specifics of what is being done under the plan. Some questions to address include:

- Have any specific action items been proposed in relation to the various salmonid populations found in Oregon?
- What are the action items that apply to all salmonid populations and that deal with basic, universal characteristics of watershed health?
- Is there a prioritization as to which salmonid populations and watershed health issues should be dealt with before others at either state or basin scales?
- If these decisions are left to local watershed councils, then is there any coordination of statewide recovery efforts and, if so, who does the coordination?

The biggest accomplishments of OCSRI were to stimulate voluntary conservation work on private lands and to get all state agencies to coordinate their activities in proposing a strategy to manage coho salmon. The present Oregon Plan implies that similar coordination exists in managing all salmonid populations and watersheds in the state. Managing watersheds is inherently a more complex task. To coordinate is to use collective resources to achieve mutually accepted goals. What are the mutually accepted goals for management of all salmonid populations and watersheds in the state? Such goals would imply knowledge of the status of salmonid populations and watershed health within the state and, based on that knowledge, a prioritizing of state efforts to address issues in a hierarchical order. In the absence of such mutually accepted goals, and of any prioritization of efforts, each agency tends to do what it believes is best to improve overall watershed health and salmon numbers in its jurisdiction. Thus it is unclear what exactly is being coordinated.

There was unprecedented coordination among state agencies in the development of the OCSRI, and it can be credited largely to the personal leadership and interest of Governor Kitzhaber. He personally presided over the Salmon Strategy Team and asked agency directors to report on the actions their agencies were taking to address the plight of coho salmon. Under the present administration of the Oregon Plan, the responsibilities of the Salmon Strategy Team have been passed to the Core and Implementation teams, chaired by staff members of the Governor's Natural Resources Office. In the absence of institutional responsibility for coordination, personal leadership skills of individuals chairing the teams determine their effectiveness. This model is prone to inconsistent performance, especially with transitions from one governor to the next and changes in staff personnel.

There clearly is a need for documenting the basic components of the Oregon Plan in precise terms. Documentation should state the need, purpose, and scope of the Plan and explain how it plans to achieve its goals. If the Plan is to be viewed as a framework, then what is that framework and how do agency activities fit into it? At the moment, the Plan is a wide cape that covers all statutes and activities in the state related to salmon and water, including portions of the Oregon Forest Practices Act and the federal Northwest Forest Plan. These plans and rules include an array of approaches based on interpretations of existing science and application of different scientific assumptions or principles. This field of choices creates many opportunities to learn which approaches work best in different places, but it can lead, and has led, to confusion and at times contention over what the best approach is. It will eventually be necessary to document how the different state and federal approaches are working and reconcile them if needed.

## CLOSING OBSERVATIONS

To an outside observer, the Oregon Plan is the result of extraordinary activity by landowners, businesses, and state-agency personnel. In a short period of time, under the leadership of the Governor's office, the resources of the entire state were rallied to develop a conservation strategy for coho salmon. The worthy effort was unable to prevent the listing of coastal coho under the ESA. The Governor then expanded the scope of the Oregon Plan to address all native salmonids and watershed health throughout the state, and by doing so, enabled Oregon to take a lead role in species recovery. However, during the course of the transition from a focus on coho salmon to consideration of all native salmonid populations and watersheds in the state, the energy, focus, direction, and momentum that were evident in 1997 may have dissipated to some extent. This is to be expected, as it is difficult to maintain consistent focus on any topic in the political world of competing priorities. Political focus is often related to a perceived emergency; for example, the petition to list coho salmon, or a water-quality concern. The emergency provides a target towards which an initiative can be launched, such as preventing the listing of coho salmon. In the absence of a perceived emergency and precise objectives, or a clear and compelling reward for taking action, it is possible that well-intentioned initiatives could disappear from the political radar screen and from public interest.

This is not likely for the Oregon Plan given the profiles of native salmonids and water quality in the state. However, the Oregon Plan runs the risk of being so broad and inclusive in its scope—addressing almost all state activities and statutes related to salmonids and watersheds—that it could collapse under its own weight. The Plan could be perceived as being everywhere and nowhere. A comprehensive and coherent document should be produced that describes the purpose, scope, and approach of the Oregon Plan in a clear and precise manner that any interested Oregonian can comprehend. Some questions that could focus refinements in the plan include:

- What precisely does “fisheries and watersheds statewide” mean, as stated in EO-99.01?
- Does it mean that the Oregon Plan will address only watersheds in Oregon where salmonids are found, or does it address all watersheds?
- Are salmonid populations to be the only, or primary, indicator by which watershed health is measured?
- Does the Oregon Plan limit itself only to watersheds and fisheries, or does it include terrestrial flora and fauna as well?
- If the Oregon Plan does include terrestrial flora and fauna as components of fish

and wildlife habitat, to what extent does it do so?

- Are terrestrial ecosystems to be judged on their own merits, or to the extent they impact watershed health and fisheries?

Several persons closely associated with the Oregon Plan probably have answers to these questions, but it would be fruitful to publish the answers in a document available to all Oregonians.

A primary activity of the Oregon Plan is to coordinate state the activities of state agencies to address watershed health and salmon recovery. This coordination is to be carried out through a set of teams. No established institution or institutional structure exists to ensure this coordination. Currently, staff members from the Governor's Natural Resource Office facilitate the primary Core, Implementation, and Outreach teams. As such, the effectiveness of the teams is directly related to the specific interest of the Governor and the personal leadership qualities of his staff members. It is difficult to ensure the effectiveness of these teams, and by extension the coordination of state actions under the Oregon Plan, unless a particular office or individual is responsible and held accountable for achieving the stated task.

Some assume this to be the responsibility of OWEB. OWEB is responsible for coordinating the development of a statewide monitoring protocol, reporting on progress made under the Oregon Plan, and providing technical assistance and funding support to local watershed councils and soil and water conservation districts. But it is not OWEB's responsibility to coordinate the implementation of the Oregon Plan; that is, to coordinate the activities of other state agencies as they relate to the Oregon Plan and, by extension, to fisheries and watersheds. That task belongs to the Core Team and the Implementation Team. If given to OWEB, such a responsibility would require OWEB to do a job very different from the one it has been doing, which is to serve primarily as a grant-issuing agency with additional responsibilities for collecting and disseminating information regarding the Oregon Plan. Insofar as it disburses funds, OWEB may influence some actions of agencies and other organized groups.

The current situation of the Oregon Plan brings forth key issues affecting most state and federal natural resource agencies. The natural resource issues of the 21<sup>st</sup> century, such as water-quality remediation and recovery of salmon populations, are complex and affect citizens across the entire spectrum of social and economic conditions. These issues are no longer restricted to sectors of society directly dependent on natural resources for their livelihood or recreation. When a particular species of salmon is listed in Oregon, that listing affects not only commercial and recreational fisheries, but also foresters and farmers, industries, and urban dwellers. The present and traditional structure of all state and federal natural resource agencies—not just those in Oregon—is ill-equipped to

address natural resource issues this broad in scope. Various attempts have been made, such as the federal land planning in the Interior Columbia Basin and Cascade and Coast Ranges, and for Columbia River fisheries, but these attempts at joint governance have mixed results and are not viewed by all as successful or even desirable models.

Each natural resource agency is by statute and tradition limited in its scope to addressing its particular constituents and following its specific statutory mandate. The situation in which these agencies find themselves in facing such complicated and far-ranging issues is reminiscent of the old parable of seven blind men and the elephant. The elephant is the natural resource issue that transcends traditional constituencies; it could be salmon or owls or water quality in a major system such as the Willamette River. Jurisdictions and agencies, under the present structure, are the blind men, each agency understanding its own piece of the issue but none of them able to comprehend it in its entirety, let alone make significant progress toward resolving it. In the long term, the situation calls for new institutions and structures of governance.

The Oregon Plan provides a model for state-led species conservation and watershed health through the novel use of Core and Implementation teams. For Oregon to address its other complex, broad-scope natural resource issues more effectively in the future, a more permanent framework or governance structure might be needed. Achieving this structure calls for modification of existing institutions or perhaps creation of new ones.

For a state to take a lead in conservation of species listed under the federal endangered-species law, it is imperative that the state speak with one voice. Most listed species affect more than one constituency or state agency. Coordination among all affected parties and state agencies is imperative, if corrective measures are to be implemented. It is both ineffective and inefficient for each state agency to negotiate individually with federal agencies responsible for administering the ESA. A single state office coordinating the state's conservation strategy for a sensitive species would be positioned to represent state interests more effectively with the appropriate federal regulatory agencies.

The Oregon Plan is best viewed as a chapter, albeit a very important one, in the evolving effort of the people of Oregon to better manage their watersheds and all the creatures that depend on them. Most of Oregon's major natural resource challenges are related to watershed health—specifically, water quality, water quantity, and aquatic habitat. A host of state laws and regulations address watershed health. Two of the most powerful federal laws, the Clean Water Act and the Endangered Species Act, dictate that watershed health be addressed. Salmon occupy a special place in the hearts and minds of Oregonians. For a large part of the state, the salmon is an indicator species reflecting watershed health. The Oregon Plan has tried to make this connection, and for that reason it too occupies a special place in the hearts and minds of Oregonians. It carries a powerful message that resonates with Oregonians. The specific components of the Plan

and its implementation strategies need to be clarified and communicated so that future efforts can build upon its success.

The Oregon Plan in its present form is well positioned to address two important short- and long-term objectives. First, it provides a powerful medium for collaborating with NOAA Fisheries (old NMFS) in determining the appropriate role of state agencies in managing threatened salmon populations. Collaboration could be achieved through developing and modifying the guidelines of the so-called 4(d) rule of the ESA. Second, the Oregon Plan presents a fine opportunity for Oregon to collaborate with NOAA Fisheries and USF&WS in determining tangible recovery goals for listed salmon and trout populations and to establish and coordinate state activities toward achieving those goals.

In hindsight, the original objective of the Oregon Plan to prevent listing of the Coastal Coho Salmon ESU was unrealistically optimistic. If a Plan were being put together today to prevent the listing of a species, or if the Oregon Plan were modified, a more realistic and effective goal of it might be to determine, negotiate, and execute the appropriate responsibilities of a state in managing salmon populations at risk, and furthermore, to define objectives for and achieve the recovery of these wild salmon populations.

The Oregon Plan has made significant strides toward forging a framework for state and local action to improve watershed health and recover endangered salmonid species. In the process it has captured the imagination of Oregon's people. What it requires now is continuity of dedicated leadership to continue improving its effectiveness for salmon and watersheds.



## APPENDIX: A HISTORICAL REVIEW OF THE OREGON PLAN

The Oregon Plan has its genesis in the context of other state water-related efforts (Table 5). Here is a more detailed chronology of events leading up to the Plan’s present situation:

### GOVERNOR’S WATERSHED ENHANCEMENT BOARD (GWEB)—1987

In 1987, the Oregon Legislature created the Governor’s Watershed Enhancement Board (GWEB) to coordinate and direct state investments to improve water quality and water quantity. SB 23 placed some emphasis on improving management of riparian and associated upland areas. Understanding that each watershed is unique and requires different management techniques and programs, the Legislature wished to empower local

Table 5. Oregon legislation related to the Oregon Plan.

|      |         |   |
|------|---------|---|
| 1987 | SB 23   | The Governor’s Watershed Enhancement Board (GWEB) is created  |
| 1993 | HB 2215 | Creates Watershed Councils  |
| 1993 | SB 1010 | Requires agricultural water-quality management planning   |
| 1997 | HB 5042 | Appropriates funds to execute the Oregon Plan   |
| 1997 | SB 924  | Establishes Independent Multidisciplinary Science Team (IMST), Health Stream Partnership (HSP), Coastal Salmon Restoration and Production Task Force (CRPTF), and Joint Legislative Committee on Salmon and Stream Recovery (JLCSSR)                            |
| 1997 | HB 3700 | Approves timber severance tax to help fund the Oregon Plan  |
| 1997 | SB 372  | Creates Salmon License Plate program  |
| 1999 | HB 3225 | Approves modifications to Oregon Plan; disburses lottery funds according to Measure 66; changes Governor’s Watershed Enhancement Board (GWEB) to Oregon Watershed Enhancement Board (OWEB); etc.  |
| 2001 | HB 3002 | Creates Salmon Recovery Task Force and provides guidelines for fish passage   |
| 2001 | SB 945  | Incorporates all key statutes into the Oregon Plan. Assigns responsibility to OWEB to prepare a biennial report on the execution and effectiveness of the Oregon Plan and to coordinate the monitoring and education and outreach components of the Oregon Plan |
| 2001 | SB 946  | Assigns responsibility to OWEB for coordinating collection, storage, and dissemination of information for state natural resource agencies with State Service Center   |

groups, public or private, that were interested in watershed restoration and management by providing grants and technical assistance. GWEB was created for this purpose; it placed a strong emphasis on funding local watershed enhancement projects.

The initial GWEB had 10 members, five voting, five nonvoting. The five voting members chaired the state's Environmental Quality Commission, Fish and Wildlife Commission, Board of Forestry, Soil and Water Conservation Commission, and Water Resources Commission. The five nonvoting members were agency executives—Director of Oregon Department of Agriculture, Director of Agriculture Extension Service at Oregon State University, and representatives from the USDA Forest Service, USDI Bureau of Land Management, and USDA Soil Conservation Service (now known as the Natural Resource Conservation Service). The Legislature budgeted approximately \$500,000 each biennium to support GWEB. These funds were distributed to local groups for watershed improvements. The initial recipients often were local soil and water conservation districts. The Water Resources Department provided staff for project oversight and day-to-day operation of the Board.

### **WATERSHED COUNCILS—1993**

In 1993, the Oregon Legislature, upon review of the report entitled, "Proposal: A Watershed Management Strategy for Oregon, Final Report and Recommendations of the Strategic Water Management Group Policy Work Group (August 11, 1992)," directed GWEB and the Strategic Water Management Group to initiate a watershed management program (HB 2215). Pilot watershed council projects were implemented to focus state resources on achieving sustainable watershed health within selected basins. The Legislature again emphasized voluntary programs initiated at the local level and asked state agencies to cooperate and coordinate their functions to facilitate local watershed protection and enhancement efforts. Local government bodies (county commissions, city councils, and councils of government) were encouraged to form voluntary local watershed councils. These councils could then request state assistance in implementing watershed improvement projects. Evaluation of a watershed council project was based on whether it reflected the various interests in the affected watershed and would protect and enhance the quality of the watershed in question.

### **WATER QUALITY MANAGEMENT PLANS—1993**

Also in 1993, the Legislature passed SB 1010, directing the State Department of Agriculture to describe the boundaries of agricultural and rural lands subject to water quality management plans and then develop and implement plans for preventing and controlling water pollution from agricultural activities and soil erosion. The need to develop water quality management plans was driven in part by requirements of the state's

Environmental Quality Commission to establish total maximum daily load (TMDL) targets for Oregon waters under the federal Water Pollution Control Act (33 U.S.C. 1313). Local soil and water conservation districts and management agencies were closely involved in plan development.

## **PROPOSED SALMON LISTINGS UNDER ESA—1995**

In 1995, two evolutionary significant units (ESU) of coho salmon on the Oregon coast were proposed for listing under the federal Endangered Species Act: the Oregon Coastal Coho ESU and the Southern Oregon-Northern California Coastal Coho ESU. The coho is an important commercial salmon species in Oregon. The state had already experienced the effects of a federal ESA listing on its social and economic base, in the case of the northern spotted owl. It was thought that the listing of coastal coho salmon could have an even more debilitating impact on communities along the Oregon coast, yet be ineffective at restoring the species. The Governor's office decided to confront the problem by taking steps to develop a state-led alternative to restore coastal coho salmon populations.

Governor John Kitzhaber directed state natural resource agencies and his staff to develop a state salmon restoration initiative. He personally chaired bi-weekly meetings with directors of state natural resource agencies to advance the collaboration and cooperation needed to advance a state salmon restoration initiative that would work. A scientists' panel from state and federal agencies was created to evaluate the scientific premises of the proposed initiative. In autumn 1996, a draft of the Oregon Coastal Salmon Restoration Initiative (OCSRI) was made available for public review. The Initiative specifically addressed coho salmon restoration in a manner designed to make the National Marine Fisheries Service (NMFS) listing of the two coastal coho ESUs unnecessary.

Under the ESA, the determination to list must take into account any other conservation efforts being undertaken by a state or other entity to protect the species in question. Using the best available scientific and commercial data, in conjunction with an assessment of any non-federal conservation measures, the Secretary of Interior or Commerce is required to determine whether a species is endangered or threatened because of any of the following factors:

- Present or threatened destruction, modification, or curtailment of its habitat or range
- Over-utilization for commercial, recreational, scientific, or educational purposes
- Disease or predation
- Inadequacy of existing regulatory mechanism
- Other natural or human-caused factors affecting its continued existence

The OCSRI gave NMFS an opportunity to explore and clarify their legal responsibilities in judging whether a state conservation plan can provide the needed basis for not listing a species at risk. The U.S. Fish and Wildlife Service, the other federal agency responsible for administering the ESA, had attempted to determine the legal requirements of “other conservation efforts” on several previous occasions with little or no success. Understandably, the NMFS entered these untested waters with caution. The NMFS insisted that, to the extent possible, all factors in the decline of coastal coho salmon should be considered in any state-led effort. Some factors were better understood than others. The OCSRI, in its effort to address the parameters set out by the NMFS, grew to exceed several hundred pages. The issues not addressed to the satisfaction of the NMFS were documented in a Memorandum of Understanding (April 22, 1997) between the State of Oregon and NMFS, with mutual commitment on the part of the two parties to continue to work on resolving the outstanding issues.

### **SB 924 AND THE OREGON PLAN—1997**

In early 1997, the draft OCSRI was presented to the Legislature for review. In March, the Oregon Legislature endorsed the proposed OCSRI and changed its name to The Oregon Plan for Salmon and Watersheds. The forest industry played a substantial role in securing legislative support for the Oregon Plan. With SB 924, the Legislature recognized that the Oregon Plan provided an Oregon-based solution to salmon restoration and healthy streams and that the programs and activities described in the OCSRI (February 24, 1997) constituted the Oregon Plan. SB 924 also created a Joint Legislative Committee on Salmon and Stream Enhancement.

In addition, SB 924 called for the creation of a 15-member Healthy Streams Partnership, consisting of representatives of those involved in local implementation of the Oregon Plan and other watershed restoration and enhancement projects (industry, local government, and environmental interests). The duties of the Partnership include informing the Joint Legislative Committee on Salmon and Stream Enhancement about the implementation of the Plan, from local and regional perspectives, and recommending changes to facilitate efficient implementation of local projects.

SB 924 also created an independent, multidisciplinary science team (IMST) consisting of seven members with recognized expertise in fisheries, artificial propagation, stream ecology, forestry, range, watershed, and agricultural management. IMST’s main responsibility was to review the implementation of the Plan from a scientific perspective and report to the Joint Legislative Committee on Salmon and Stream Enhancement. Thus, IMST serves as the independent scientific peer review panel for state agencies responsible for developing and implementing the Plan. SB 924 also extended the timeframe of the Coastal Salmon Restoration and Production Task Force (CSRPTF), and

gave it additional responsibilities for developing a fisheries-sustaining coastal salmon restoration and production strategy consistent with Oregon Plan goals.

For the biennium starting July 1, 1997, the Legislature appropriated \$15 million for the grants and staff necessary to implement the Oregon Plan (HB 5042). The funds were distributed among Oregon Department of Agriculture, Oregon Department of Fish and Wildlife, Oregon Department of Environmental Quality, Oregon Department of Forestry, Oregon Department of Water Resources, GWEB, and the Department of Land Conservation and Development.

### **WATERSHED IMPROVEMENT GRANT FUND, TIMBER TAX—1997**

Because \$30 million was needed to fully fund the Plan for the first 2 years, HB 3700 assessed a one-time tax on harvested timber, designed to raise up to \$15 million. The Oregon Forest Industries Council (OFIC) supported the tax as a way to help provide the funding needed to avoid the listing of the coastal coho salmon. The proceeds from the timber tax were to be deposited in the Watershed Improvement Grant Fund as long as the coastal coho was not listed. If a listing occurred, the timber tax was to be suspended under the terms of HB 3700. Separate and distinct from the general fund, the Watershed Improvement Grant Fund would consist of all monies provided by law to fund watershed improvement grants. GWEB was given responsibility for administering the fund and providing grants. Funds also were used for IMST expenses, and for watershed and riparian conservation activities, watershed and riparian education efforts, implementation of watershed enhancement plans developed by watershed councils, and water-quality improvement plans approved by the Department of Agriculture and the Department of Environmental Quality.

### **SALMON LICENSE PLATE—1997**

In 1997, SB 372 directed the Oregon Department of Transportation (ODOT) to establish a salmon license plate option for an additional surcharge of \$15. Revenues from the surcharge, after administrative costs are deducted, are equally divided between GWEB and the Oregon Parks and Recreation Department.

### **NMFS LISTS THE SOUTHERN OREGON-NORTHERN CALIFORNIA COASTAL COHO ESU—1997**

On April 25, 1997, the NMFS listed the Southern Oregon-Northern California Coastal Coho ESU as threatened. However, NMFS stated that the Oregon Coast Coho ESU was not warranted for listing in light of the Oregon Plan and the Memorandum of Agreement signed by the Governor and the NMFS Regional Director addressing outstanding issues in the Plan. It seemed that the Plan had achieved one of its primary objectives: to prevent Oregon Coast Coho from being listed.

Implementation of the Plan began in summer 1997, and the Governor's Office also began work on a supplementary strategy to recover steelhead. With the Steelhead Supplement, the geographic scope of the Oregon Plan expanded from coastal regions to include the lower Willamette, lower Columbia, and Snake steelhead ESUs. In August 1997, NMFS published a 4(d) rule for the Southern Oregon-Northern California Coho ESU. In February 1998, the Governor's office released the Steelhead Supplement to the Oregon Plan. Then NMFS lost a lawsuit filed by the Sierra Club Legal Defense Fund challenging its decision not to list the Oregon Coast Coho ESU. NMFS was directed by the court to reconsider its decision. When an appeal of this decision was denied by the Ninth Circuit Court of Appeals in August 1998, NMFS listed the Oregon Coastal Coho ESU as threatened. However, the Oregon Plan lived on.

### **BROADENING THE OREGON PLAN TO INCLUDE ALL NATIVE SALMONIDS AND ALL WATERSHEDS—1999**

Attempting to maintain state leadership in species conservation, the Governor outlined a new purpose and scope for the Oregon Plan through an executive order in January 1999 (EO 99-01). The Oregon Plan was broadened to address water quality, watershed health, and native salmon populations statewide.

In March 1999, NMFS listed the Lower Columbia Chinook ESU, Upper Willamette Chinook ESU, Upper Columbia Spring Chinook ESU, Columbia Chum ESU, Upper Willamette Steelhead ESU, and Mid-Columbia Steelhead ESU as threatened. Accordingly, the Oregon Plan became a statewide initiative for improving watershed health and salmon habitat in order to recover threatened stocks of wild salmonids in Oregon.

The governor's executive order reaffirmed the purpose of the Oregon Plan: to restore Oregon's wild salmon and trout populations and fisheries to sustainable and productive levels that would provide substantial environmental, cultural, and economic benefits. The Governor described the plan as a long-term, ongoing effort whereby factors contributing to the decline in wild salmon populations would be appropriately considered and addressed. In the order, the Governor acknowledged that an initial purpose of the Oregon Plan—to prevent the listing of the coho salmon on the Oregon Coast—had not been achieved. However, the Governor also asserted that the Plan was still important because the federal regulatory agencies lacked the resources to develop and implement effective recovery plans for listed fisheries.

An effective species recovery effort requires a strong state role and voluntary citizen participation when a significant portion of the species' habitat occurs on private lands. Thus, Governor Kitzhaber redefined the purpose of the Oregon Plan from preventing the listing of coho and steelhead to protecting and restoring all at-risk salmonid popula-

tions in the state. In just 2 years, the Oregon Plan evolved from a preventive exercise limited in scope to the Oregon coast, to a comprehensive restoration and recovery initiative covering watersheds and fisheries statewide.

The Steelhead Supplement was prepared to address four ESUs proposed for listing: Oregon Coast, Klamath Mountain Province, Upper Willamette, and Snake River Basin. The first two were not listed because of information provided by the Supplement.

The Governor's executive order stated that the overall mandate to state agencies under the Oregon Plan was to protect and restore salmonids and to improve water quality. He directed state agencies to fully implement the components of the Plan. He directed each agency to prioritize measures needed to protect and restore all at-risk salmonid populations. One of the proposals put forth was to organize state natural resource agency field operations along hydrologic units. The Governor's order identified monitoring as a key element of the Oregon Plan and directed each state agency to support the monitoring strategy included in the Plan, which called for coordinating data collection and conducting an integrated analysis.

In 1998, Oregonians approved Ballot Measure 66, which called for dedicating 15% of net state lottery proceeds for the next 15 years to restoring and protecting Oregon's parks, beaches, watersheds, and critical fish and wildlife habitats. Measure 66 benefited from the strong support of business and environmental organizations. Some of its primary supporters included Oregon Business Council, Defenders of Wildlife, Oregon Trout, and The Nature Conservancy. The measure passed by a two-thirds majority.

Measure 66 dedicates one-half of the 15% of net lottery proceeds to the protection and restoration of native salmonid populations, watersheds, fish and wildlife habitats, and water quality. The measure requires these funds to be administered by one state agency. At least 65% must be used for capital expenditures. The funds can be used for:

- Watersheds, fish and wildlife, and riparian and other native species; habitat conservation activities, including but not limited to planning, coordination, assessment, implementation, restoration, inventory, information management, and monitoring
- Watershed and riparian education efforts
- Development and implementation of watershed and water-quality enhancement plans
- Agreements to obtain from willing owners determinate interests in lands and waters that protect watershed resources, including but not limited to fee-simple interests in land or conservation easements
- Enforcement of fish and wildlife and habitat protection laws and regulations

## FURTHER WORK IN THE LEGISLATURE—1999

In 1999, HB 3225 provided a more formal legal framework for the Oregon Plan. It defined watershed councils as voluntary local organizations, designated by a local governmental group and convened by a county governing body, that were to help sustain natural resources and provide watershed protection, restoration, and enhancement. The Legislature declared that the Oregon Plan's approach for integrating regulatory efforts while fostering incentives and voluntary action for environmental stewardship should be founded upon the following principles:

- Promote partnership and collaboration among local, state, regional, tribal, and federal governments and private individuals and organizations
- Establish clear, technically defensible, practicable, and achievable recovery and restoration objectives
- Assess watershed conditions; determine environmental quality; identify causes of decline in habitat, fish and wildlife populations, and water quality; assist and coordinate locally integrated watershed action plans
- Monitor and ensure implementation of watershed plans by practicing adaptive management
- Establish funding priorities across basins based on watershed health and habitat recovery

HB 3225 expanded GWEB membership to 17 members (ORS 541.360), with 11 voting members, and renamed it the Oregon Watershed Enhancement Board (OWEB). OWEB became the designated management agency for distribution of Measure 66 funds.

HB 3225 established the purpose of the Oregon Plan as enhancing, restoring, and protecting Oregon's native salmonid populations, watersheds, fish and wildlife habitat, and water quality, while sustaining a healthy economy. HB 3225 states that the Plan is to be used to coordinate local, state, federal, and tribal agency responsibilities and authorities for native salmonid, watersheds, and habitat restoration throughout Oregon. Watershed councils and soil and water conservation districts were directed to assess and develop watershed action plans. OWEB administers the lottery funds for the purposes set out in Measure 66.

HB 3225 also established the following administrative guidelines for OWEB:

- Establish a framework for a locally based integrated watershed planning and management process designed to assist watershed councils and soil and water conservation districts without duplication of planning effort
- Provide guidance and protocol for watershed assessments to encourage consistent assessment methods across all watersheds and agencies in the state



- Provide guidance on how to prepare watershed action plans
- Establish statewide and regional goals and priorities for allocation of grants, based on the Oregon Plan and considering local economic and social impacts
- Develop and implement a system that enables standardized collection, management, and reporting of natural resources information in Oregon;
- Promote the availability of information on the effects of watershed enhancement

## LATEST EVENTS—2001

The Oregon Plan was further institutionalized by the 2001 legislature. HB 3002 charges the director of Oregon Department of Fish and Wildlife with establishing a Fish Passage Task Force. This Task Force is to advise the Director and the Department on matters related to fish passage in the state, including funding, cost sharing, and prioritization of efforts. HB 3002 also created a 13-member Salmon Recovery Task Force, whose responsibility is to help define recovery of anadromous salmonid populations to a point at which the populations can be removed from the endangered or threatened status under the ESA. In addition, the Task Force was asked to develop and coordinate a scientific workshop with the IMST, establish criteria for evaluation of salmon recovery, and develop legislation for recommendation to the 2003 Legislature. The Task Force consists of one member of the state Senate, two members of the state House of Representatives, and one representative each from Oregon's Departments of Environmental Quality, Agriculture, Forestry, Fish and Wildlife, as well as OWEB, Indian tribes, the sportfishing community, the commercial fishing community, local governments, and the environmental and conservation community.

SB 945 further clarified the responsibilities of OWEB and the implementation of the Oregon Plan. SB 945 asked OWEB to submit a report by January 15 of each odd-numbered year, assessing the implementation and effectiveness of the Oregon Plan in the state. This report is to include:

- Status of watershed and key habitat conditions by drainage basins
- Assessment of data and information needs deemed critical to monitoring and evaluating watershed and habitat enhancement programs and efforts
- Overview of state agency programs addressing watershed conditions
- Overview of voluntary restoration activities addressing watershed conditions
- Summary of investments made by OWEB
- Recommendations of the board for enhancing the effectiveness of Oregon Plan implementation in each drainage basin

SB 945 further clarified the mission of the Oregon Plan, stating that it is to restore the watersheds of Oregon and to recover the fish and wildlife populations of those watersheds to

productive and sustainable levels in a manner that provides substantial environmental, cultural, and economic benefits. The goals for achieving this mission are to:

- Establish and maintain an infrastructure that provides long-term continuity in leadership, direction, and oversight of watershed restoration and species recovery
- Provide continued opportunity for a wide range of natural resource uses that are consistent with watershed restoration and species recovery
- Implement existing laws and environmental regulations to achieve the mission before enacting new laws and environmental regulations
- Develop and maintain funding for programs to protect and restore watersheds
- Develop expectations for the sustainability of interrelated natural resources that accurately reflect a scientific understanding of the physical and biological constraints of the ecosystem
- Enhance habitat available to support healthy populations of fish and wildlife in the state
- Increase production of populations of threatened or endangered species to achieve levels of natural production consistent with overall restoration goals
- Establish a science-based system that supports evaluation of the Oregon Plan and provides a basis for making appropriate future changes to management program
- Coordinate activities and programs among federal, state, and local governments and other entities.
- Use voluntary and collaborative processes to achieve the mission of the Oregon Plan whenever possible

The Oregon Plan combines the regulatory programs of state and federal agencies and local governments with voluntary watershed restoration by private landowners and others. SB 945 formally incorporated the statutory and regulatory baseline of the Oregon Plan directly into the enabling law of the Plan itself, including programs and policies in the following statutes:

ORS 196.600 to 196.905: Wetlands

ORS 197: Land Use Planning Coordination

ORS 274: Submerged and Submersible Lands

ORS 366: State Highways

ORS 390: State and Local Parks; Recreational Programs; Scenic Waterways; Recreational Trails

ORS 465, 466, 468, and 468B: Hazardous Waste and Materials; Environmental Quality; Water Quality

ORS 469.300 to 469.563, 469.590 to 469.619, 469.930, and 469.992: Energy Facilities

ORS 477: Fire Protection of Forests and Vegetation  
ORS 496, 497, 498, 501, 506, 507, 508, 509, and 511: Fish and Wildlife Laws  
ORS 517.702 to 517.989: Mineral Exploration  
ORS 527.310 to 527.370, 527.610 to 527.770, 527.990(1), and 527.992: Insect  
and Disease Control; Forest Practices  
ORS 530: Acquisition and Development of State Forests  
ORS 536 to 543A: Water Resources Administration  
ORS 543A.005 to 543A.415: Hydroelectric Projects  
ORS 568.210 to 568.808, 568.900 to 568.933: Soil and Water Conservation  
Districts

The Plan now also includes commitments by state agencies in the form of (1) agency actions, (2) actions by local governments and federal agencies, taken in coordination with the state and consistent with the purposes of the Oregon Plan, (3) voluntary activities undertaken by watershed councils, soil and water conservation districts, landowners, and other entities, consistent with the purposes of the Oregon Plan, and (4) scientific review by the IMST.

Finally, in 2001, SB 946 directed the OWEB to establish protocols, policies, and procedures necessary to integrate and organize geographic information and make it available to persons and entities involved in the implementation of the Oregon Plan.



