

**Oregon Plan for Salmon and Watersheds**  
**Oregon Coastal Coho Assessment**  
**Watershed Restoration**  
**Prepared by Oregon Watershed Enhancement Board**

**Introduction**

The Oregon Plan for Salmon and Watersheds (Oregon Plan) is often described as consisting of the following 4 key elements.

1. Agency action
2. Monitoring
3. Science oversight
4. Non-agency action

The term *non-agency action* refers to a variety of on-the-ground work that result in preservation, conservation, or restoration of watershed function that will support sustainability of native fish species, water quality, and watershed health. This category of action may occur on private, state, tribal, county, or federal land. Actions on private lands are especially significant to efforts to restore the Oregon Coast coho ESU because the species is primarily distributed on private rather than public lands in the ESU. Restoration work is ultimately useful by providing sufficient amount and quality of habitat to support the needs for spawning, rearing and migration of the listed coho ESU. In this report, the term *restoration* refers to actions that will actively or passively result in conservation or re-establishment of watershed function that is consistent with sustaining native species (including the Oregon Coast coho ESU) and water quality.

Restoration action is organized and conducted through many entities in Oregon. The following programs apply specifically to the Oregon Coast coho ESU.

1. Watershed Councils
2. Soil and Water Conservation Districts (SWCDs)
3. Oregon Department of Fish and Wildlife Western Oregon Stream Restoration Program
4. Federal Lands Restoration (USFS and BLM)
5. State Lands Restoration (Oregon Department of Forestry)
6. State Roads fish Passage Restoration (Oregon Department of Transportation)

Work on private lands is typically organized by one of the following: Watershed Councils; Soil and Water Conservation Districts; or the ODFW Western Oregon Stream Restoration Program. Any restoration work conducted with OWEB administered funds must be reported to the OWEB restoration database. Work done on Private Industrial Forestland is voluntarily reported to the OWEB Restoration Database, even if funds are entirely privately contributed. Work done through the SWCDs is often not reported in a manner that can be tabulated or located within a watershed. Restoration work done on

private lands with design assistance from ODFW is usually reported as part of collaboration with Watershed Councils, SWCDs, or private forest landowners. Work on federal lands is typically initiated by either the USFS or BLM. Work on federal lands is reported to a federal database and the information is made available to the OWEB Restoration Database on request.

Work on State Forest lands is initiated and conducted by The Oregon Department of Forestry and reported to the OWEB Restoration Database.

Work on state roads is typically organized by The Oregon Department of Transportation and is reported to the OWEB Restoration Database. Restoration work done by ODOT includes improving fish passage at road crossings.

### **Threats Addressed by Restoration work in the Oregon Coast coho ESU**

Restoration work on private, state, and federal lands address the following threats to the Oregon Coast coho ESU.

- Stream complexity (increasing wood, decreasing fine sediment, increasing off-channel rearing and shelter opportunity, increasing pool depth, etc.)
- Riparian condition (providing shade, lowering summer stream temperature, providing opportunity for future wood recruitment)
- Fish passage (allowing access to streams by adults and juveniles at a greater range of stream flows)
- Water quality (reducing fine sediment, lowering summer water temperature)
- Water quantity (providing additional flow in summer)

### **Description of Restoration Programs**

Providing for the habitat needs of the Oregon Coast coho ESU requires a landscape approach to management because the fish require suitable habitat to support their life history needs from headwater streams to the ocean - a range of habitats that is crisscrossed by multiple ownership and land use characteristics. Providing for the habitat needs of the fish can not be accomplished within any single agency's administrative jurisdiction or within any single land ownership or land use category. Sustainable coho populations require suitable habitat networks (watersheds) simultaneously regulated by several state and federal agencies that support economic activities including forestry, agriculture, and urban development.

#### **Local Watershed Councils (LWC)**

In 1993 Oregon created an LWC program under House Bill 2215. Since that time approximately 95 watershed councils have formed across the state. In the Oregon Coast coho ESU there are 16 councils currently in existence as shown in the next table. Watershed Councils are well distributed across the Oregon Coast coho ESU and the functionally independent populations within each of the 4 Monitoring Units in the ESU.

<b>Monitoring Unit</b>	<b>Watershed Council</b>
North Coast	Necanicum, Lower Nehalem, Upper Nehalem; Ecola; Tillamook; Nestucca-Neskowin
Mid Coast	Salmon & Drift Creek, Yaquina, Alsea, Siletz; Siuslaw
Umpqua	Umpqua; Elk; Smith
Mid-South Coast	Tenmile Lakes; Coos; Coquille; Floras/New; and Elk-Sixes

Watershed councils bring together representatives of the various interests in a local watershed to assess past and current watershed conditions, develop watershed action plans to address watershed function concerns, monitor both for baseline information and to evaluate the effectiveness of restoration efforts, and engage in public outreach and education in an effort to expand local citizen understanding of watershed health issues in their local area. Most councils meet monthly and operate using a consensus decision making model.

Councils are staffed by part time or full time watershed coordinators, using funding provided by OWEB for watershed council support grants. The amount of funding available for these grants has not grown in recent biennia, even though the number of councils has grown, resulting in reduction of coordinator hours in several councils. This has affected the ability of these groups to fully carry out their work plans.

Councils seek funding for projects and ongoing operations from OWEB and other grant making entities. Many have become 501(c)3 organizations in order to seek funding from foundations as well as the government grant programs.

### **Soil and Water Conservation Districts (SWCDs)**

Oregon's 45 Soil and Water Conservation Districts (SWCDs) are organized under Oregon Revised Statutes (ORS) Chapter 568 and are governed by an elected board of directors. SWCDs identify and address natural resource concerns within their respective boundaries and work with local, state, federal and private interests to deliver conservation services. SWCDs provide direct technical assistance to landowners to plan, design, survey, and implement conservation practices and systems.

SWCDs also serve as Local Management Agencies for the department and assist with development and implementation of agricultural water quality area management plans. The coastal SWCDs include Clatsop, Curry County, Lincoln, Siuslaw, Tillamook County, and Umpqua SWCDs. The coastal SWCDs have provided assistance to landowners that have contributed to streambank stability and improvement in riparian condition, livestock manure management, and education and outreach related to salmon and watersheds.

Through these means the SWCDS effectively address riparian condition, sediment, water temperature, pH, dissolved oxygen, bacteria, and excessive nutrients from agricultural and rural lands.

SWCDs have contributed to addressing natural resource issues associated with agriculture that affect coastal coho in a number of ways. These include assessments of natural resource conditions, providing education and public information, conducting outreach, and working with landowners and managers, community groups, and citizens to implement measures that reduce soil erosion, protect and improve water quality, enhance fish and wildlife habitat, and address other natural resource concerns. The coastal SWCDs have provided assistance to landowners that have contributed to streambank stability and improvement in riparian condition, livestock manure management, and education and outreach related to salmon and watersheds. Table 2 summarizes the outreach activities, conservation planning, and conservation practices reported by SWCDs as accomplishments for the period July 2003 to June 2004 from state technical assistance funds administered by ODA. Table 3 summarizes the conservation practices installed between July 2003 - June 2004 using SWCD Watershed Technical Assistance Funds. This is not a complete listing of all SWCD activities but only those accomplished using state Technical Assistance funds. This is an example of what is accomplished at a minimum in any one year given the existing support to SWCDs.

#### **ODFW Western Oregon Stream Restoration Program**

This program provides trained fish biologists to assist private landowners in the design and accomplishment of restoration work. The Program is described in a separate report provided as part of this overall assessment. Work accomplished is reported to the OWEB restoration database and is summarized as work accomplished in this ESU.

#### **Federal lands restoration Program**

Restoration work on federal lands consists of both passive and active restoration work. Specifically, the Riparian Reserve program as part of the Key Watershed Program contributes passive restoration of watershed function that supports the sustainability of the Oregon Coast coho ESU. Active restoration on federal lands in this ESU is also provided by activities that include placement of wood, culvert improvements, and road upgrades and de-commissioning. The contribution of restoration work on federal lands is described in a separate report provided as part of this overall assessment. Work accomplished is reported to the OWEB restoration Database and is summarized as work accomplished in this ESU.

#### **State lands restoration program**

Restoration work on state lands consists of both passive and active restoration work. Active restoration on federal lands in this ESU is provided by activities that include placement of wood, culvert improvements, and road upgrades and de-commissioning. The contribution of restoration work on state lands is described in a separate report provided as part of this overall assessment. Work accomplished is reported to the OWEB restoration Database and is summarized as work accomplished in this ESU.

### **ODOT Fish Passage Restoration Program**

The Oregon Department of Transportation has inventoried all road crossings on state highway right-of-ways, evaluated fish passage at each road crossing, and prioritized each of these road crossings for relative need for improvement. The prioritization was done with assistance of ODFW fish biologists. Work accomplished by ODOT related to improving fish passage is reported to the OWEB Restoration Database.

## **Effort That Supports Effective Restoration**

### **Monitoring**

Oregon Plan Monitoring Programs have gained broad acceptance around the Pacific Northwest as good examples of how to plan monitoring, and outstanding examples of how to actually do the monitoring. In a complex environment of often differing and frequently competing salmon recovery programs, initiatives, and legally mandated actions, a remarkable acceptance of Oregon's approach has taken place. Oregon's success at implementing status and trend monitoring has been recognized by NOAA Fisheries, the EPA, and by independent scientific review panels. Also, by participating in regional partnerships, Oregon has influenced the development of monitoring programs designed for Federal Agencies as part of the Columbia Basin Power System Bi-Op and for salmon recovery programs in the states of Washington and California. Coordination of monitoring through this regional partnership holds the potential for more efficient application of monitoring resources, and to create the ability to better understand salmon populations without regard to program jurisdictions or political boundaries.

Monitoring of certain restoration activities has demonstrated that the activities and protocols do generally produce results that are expected. Examples include instream wood placement projects, road improvements to reduce sedimentation, and road crossing work designed to improve fish passage. The effectiveness of these restoration treatments is discussed in separate papers.

### **Watershed Assessments**

Watershed assessments are a fundamental basis for the conduct of effective restoration work. When the Oregon Plan was first implemented in 1997, assessments had been completed for about 30% of the ESU. At the time of this report (2004) assessments have been completed for about 97% of the ESU. These assessments have employed OWEB protocols or federal assessment protocols (on federal lands), and watershed action plans have been completed for most of the watersheds covered by Watershed Councils.

### **Adaptive Management**

The Oregon Plan recognized the importance of incorporating Adaptive Management Principles; however this (2004) Oregon Plan Assessment is the first attempt to develop a comprehensive analysis of status and trend for all the data related to coho and their

supporting habitat and management programs. The Assessment will provide a basis to re-evaluate the viability of the Oregon Coast coho ESU, interpret available data to judge the effectiveness of conservation and restoration efforts, and establish priorities for future conservation and restoration work with coho in the ESU

### **PECE: Certainty That Conservation Efforts Will be Implemented**

#### ***1. Describe the staffing, funding level, funding source, and other resources necessary (and available) to implement the conservation effort or regulatory program.***

A consistent sequence of state legislation provides a track-record and pattern of legislative support for implementation of the Oregon Plan (in general) and of restoration efforts (specifically). This track record provides certainty that the Oregon Plan will continue well into the future. This legislative history is abstracted following.

Information supporting certainty of implementation. In 1997 the Oregon Legislature passed a series of bills implementing and funding the Oregon Plan. In HB 5042 \$30 million was initially provided to fund new state agency staff at several natural agencies, watershed council capacity building, and on the ground project work. HB 3700 established a timber tax rate to provide \$14.6 million of the \$30 million with the condition that the tax would only apply if no coastal salmonids were listed in ESUs wholly within Oregon's borders. The Oregon Concrete and Aggregate Producers' Association (OCAPA) provided \$400,000. The remaining funding came from the state's general fund. When Oregon Coast coho were listed in 1998, repealing the timber tax, the Emergency Board stepped in and filled the remaining funding gap with additional general fund resources.

SB 924 defined the Oregon Plan as the OCSRI program and activities and the Healthy Stream Partnership Agreement (to meet Oregon's CWA responsibilities). The bill also established an oversight framework that included the Joint Legislative Committee on Salmon and Stream Enhancement, the Independent Multidisciplinary Science Team, the Healthy Streams Partnership and the Coastal Salmon Restoration and Production Task Force. In addition the bill strengthened GWEB's statutes.

Since the listing decisions were made in the late 90s several things have occurred that make the certainty of the funding and state regulatory framework more assured into the future.

Ballot measure 66 and several pieces of legislation have passed since 1997 that further codify the Oregon Plan and provide assurance that it will be funded and implemented over time, reviewed periodically, and adapted as needed to ensure the effectiveness of the actions taken under the Plan to recover at risk species, restore watershed health and improve water quality statewide.

In 1998 Oregonians voted in favor of Ballot Measure 66 by the two to one margin. This measure, amending the Oregon Constitution, dedicates 15% of the net proceeds of the lottery revenue to parks and salmon and watershed restoration. The funding is split with 7.5% to parks and 7.5% to salmon and watershed restoration. The measure became effective July 1, 1999 and continues until 2014 at which time voters will be asked whether they want to continue to dedicate these funds for these purposes. This measure provides a continuous source of funding for the Oregon Plan.

In order to implement Measure 66 the legislature passed House Bill 3225 during the 1999 session. The measure required that a single agency administer the salmon and watershed restoration funding. HB 3225 amended the GWEB statutes to create OWEB as that single agency. The Board was expanded to include 6 citizen representatives and non-voting representation from the National Marine Fisheries Service and the Environmental Protection Agency. The bill also expanded the responsibilities of OWEB to include such things as setting statewide and regional goals and priorities for funding decisions, reporting biennially to the legislature on the expenditure of Measure 66 funds, developing guidance and protocols for watershed assessments and watershed action plans, and supporting the development and implementation of a standardized data collection, management and reporting system.

In 2001 three additional pieces of Oregon Plan legislation passed, Senate Bills 945 and 946 and House Bill 3002. SB 945 assigned OWEB with the responsibility for reporting biennially to the legislature and governor on implementation and effectiveness of the Oregon Plan. In addition OWEB was charged with developing a statewide monitoring program for the Plan. The bill codified the mission statement and goals for the Plan. It also added a list of the Oregon Revised Statutes (the regulatory framework), and federal and local government efforts to the description of the Plan. Those ORS are listed in the table below.

#### **Oregon Statutes included in OPSW under SB 945**

<b>ORS Chapter</b>	<b>Topic</b>
1996.105 to 1996.125	Columbia Gorge Protection
196.600 to 196.905	Wetlands
197	Land Use Planning Coordination
274	Submerged & Submersible Lands
366	State Highways
390	State & Local Parks; Recreational Programs; Scenic Waterways; Recreation Trails
465,466, 468 and 468b	Hazardous Waste & Materials; Environmental Quality; Water Quality
469.300 to 469.563, 469.590 to 469.619, 469.930 and 469.992	Regulation of Energy Facilities
477	Fire Protection of Forests & Vegetation
496, 497, 498, 501, 506, 507, 508, 509, and 511	Fish & Wildlife Laws

517.702 to 517.989	Mineral Exploration
527.310 to 527.370, 527.610 to 527.770, 527.990 (1) and 527.992	Insect & Disease Control; Forest Practices
530	Acquisition & Development of State Forests
536 to 543A	Water Resources Administration
543A.005 to 543A.415	Hydroelectric Projects
568.210 to 568.808 and 568.900 to 568.933	Soil & Water Conservation Districts

SB 946 made OWEB responsible for coordinating data and data needs of agencies related to the Plan and disseminating that data to local, state and federal agencies and others working on the Plan.

HB 3002 created a 13 member Salmon Recovery Task Force with the charge to define recovery for the purposes of restoring anadromous salmonid populations to a point that they may be removed from ESA status. The Task Force was also directed to establish criteria to evaluate salmon recovery.

In 2003 House Bill 2138 passed, implementing the Task Force report by defining recovery, listed unit, native fish, naturally produced, population and self-sustaining. In addition the bill directs the Governor to work with federal officials to make sure the Oregon Plan satisfies the requirements of the ESA.

Funding for the Oregon Plan has grown significantly since 1997. In the 1997-99 biennium \$30 million was budgeted for the Plan, with \$10 million for additional state agency staffing and monitoring to carry out state measures and \$20 million to fund local efforts including staffing for watershed councils, assessment and action plan development, outreach and education efforts and restoration projects. In the current biennium \$88.5 has been appropriated from all sources to fund the Plan. This track-record of providing funds to implement the Oregon Plan and restoration work statewide has been consistent. Investment in restoration work in the Oregon Coast coho ESU has been over 107 million dollars from all sources combined during 1997-2003. Additional details regarding restoration investments are shown in the table following. This record and the legislative basis for the investments establishes a high level of certainty that funding for restoration work will continue.



<b>Key Facts Regarding Restoration in the Costal Coho ESU 1997 -- 2003</b>	
<b>Total Investment - \$107 million</b> <ul style="list-style-type: none"> <li>• Road work –\$52 M</li> <li>• Fish Passage - \$25M</li> <li>• Instream - \$13M</li> <li>• Riparian - \$7M</li> <li>• Other &amp; Combined - \$10M</li> </ul>	<b>Typical annual restoration investment</b> <ul style="list-style-type: none"> <li>• \$12 - \$22M</li> </ul>
<b>Distribution of Restoration across the ESU</b> North Coast - \$40M Mid Coast - \$31M Umpqua - \$27M Mid-south Coast - \$19M	<b>Source of restoration funds</b> <ul style="list-style-type: none"> <li>• Federal – 31%</li> <li>• State – 34%</li> <li>• Private – 30%</li> <li>• Other – 4%</li> </ul>
<b>OWEB grants – total \$23 million</b> <ul style="list-style-type: none"> <li>• Restoration - \$13M</li> <li>• The remaining \$10 M was distributed among Assessments, Council Support, Education, Monitoring, and Acquisition</li> </ul>	<b>Monitoring Investment – total \$16 million</b> (State funds only)

Information supporting certainty of funding. In 1997, in addition to passing a \$30 million budget for the Plan, the legislature passed Senate Bill 372 that created a Salmon License Plate with a special surcharge dedicated to parks and salmon restoration efforts. There is \$30 biennial surcharge for these special plates, with 50% net of expenses going to OWEB for salmon restoration projects. The Board has dedicated these revenues, currently about \$30,000 per month, to road related projects such as culvert work and road decommissioning that help improve fish habitat and water quality.

Ballot Measure 66 passed in November 1998 with 7.5 percent of the net proceeds of the lottery dedicated to fish and wildlife protection, restoration, and enforcement efforts. This has provided a stable source of funding even in a period of declining budget revenues. For the 2003-05 biennium it is projected that \$54.7 million will be available to fund Oregon Plan efforts with these revenues.

Beginning in federal fiscal year 1999 the Pacific Coastal Salmon Restoration Fund was created to provide annual appropriations from Congress to help with ESA recovery efforts in the Pacific Northwest states with ESA listings. For the 2003-05 biennium it is projected that \$33.8 million will be available to the State of Oregon for its salmonids recovery efforts.

***2. Describe the legal authority to implement and the commitment to proceed with the conservation effort or regulatory program.***

All the various avenues of conducting restoration work on private, state, and federal lands (e.g., Watershed Councils; SWCDs; ODFW Habitat Restoration Program; ODF, USFS, and BLM restoration work, ODOT road crossing work) are conducted within existing state and federal laws and established programs.

***3. Describe the legal procedural requirements (e.g. environmental review), if any exist, necessary to implement the effort or regulatory program.***

As a consequence of the Coho ESU listing, federal permits are required to conduct restoration work on private, state, and federal lands in the ESU. Any restoration work funded by OWEB is subject to technical review and competes in a grant application process that selects the most worthy projects to fund. Restoration work is guided by the Restoration Guidelines developed by state and federal partners. These guidelines help ensure that work accomplished makes good technical and biological sense.

***4. Describe the authorizations (e.g., permits, landowner permission), if applicable, necessary to implement the conservation effort or regulatory program. Describe the level of certainty that these authorizations will be obtained.***

Restoration work in the Oregon Coast coho ESU primarily occurs on private, state, or federal lands. Federal permits are required for any restoration project, regardless of landownership, because of the listing. Landowner permission is required for any restoration work done on private lands. The 8 year implementation record (7 years of restoration data analyzed) for restoration work in the ESU demonstrates a consistent pattern of commitment by private, state, and federal land owners to conduct on-the-ground work – therefore, there is a high level of certainty that authorizations and required permits will continue to be obtained to continue restoration work, as needed, in this ESU.

***5. Describe the type and level of voluntary participation necessary to implement the conservation effort or regulatory program. Describe the level of certainty that this level of voluntary participation will be achieved.***

The dominant distribution of coho salmon on private lands in this ESU makes participation by private landowners a crucial element of efforts to sustain and restore the productive capacity of the species. Coho salmon require access and suitable habitat conditions throughout significant portions of their distribution in coastal watersheds at key times throughout their life-cycle. Such conditions could not be met entirely on state land, federal lands, or both state and federal lands. Thus, participation by private

landowners is needed, ultimately, to ensure sustainability of this Oregon Coast coho ESU. Habitat conditions on state and federal lands, also, are crucial to sustainability of the Coho ESU because their (usual) location upstream from coho habitats contribute to the water quality and watershed and instream conditions where coho spawn and rear on private lands.

So, sustainability of the Oregon Coast coho ESU requires participation of private, state, and federal landowners. Now, the 8 year track-record of implementing restoration work on all 3 land ownerships in the Coho ESU speaks highly of the certainty that the restoration work will continue.

***6. Are necessary regulatory mechanisms (e.g., laws, regulations, ordinances) to implement the conservation effort or regulatory program in place?***

Yes, as described at pages 6-8, Oregon has existing laws that authorize conservation efforts under the Oregon Plan.

***7. Is there a high level of certainty that Oregon will obtain the funding necessary to implement the conservation effort or regulatory program?***

Yes. Oregon has an 8 year track-record of implementing restoration work in the Coho ESU. Here is a capsule from an analysis of 7 years of restoration data. ~\$107 million invested in restoration, one-third of the funds each from private, state, and federal sources; restoration investments distributed throughout the ESU. In addition, Measure 66 legislatively (statutorily) assigns a fixed percentage of State Lottery receipts to fund restoration, administered through the Oregon Watershed Enhancement Board. At present, these funds are dedicated through the 2011-2013 Biennium (until June 30 2014), when the Oregon Legislature will consider whether to continue or modify the dedication. See also additional detail under question 1 above.

***8. Is an implementation schedule (including incremental completion dates) for the conservation effort established? If so, provide the schedule.***

An implementation schedule is not needed because the organizational frameworks (Watershed councils; ODFW habitat restoration Program; SWCDs; ODF, USFS, and BLM restoration programs) are already in place and have been active throughout the duration of the overall Oregon Plan conservation effort.

**PECE: Certainty That the Conservation Effort Will be Effective.**

***1. Describe the nature and extent of threats being addressed by the conservation effort or regulatory program and explain how the conservation effort or regulatory program reduces the threats.***

Restoration efforts primarily address the following threats to the Oregon Coast coho ESU.

- Stream complexity (increasing wood, decreasing fine sediment, increasing off-channel rearing and shelter opportunity, increasing pool depth, etc.)
- Riparian condition (providing shade, lowering summer stream temperature, providing opportunity for future wood recruitment)
- Fish passage (allowing access to streams by adults and juveniles at a greater range of stream flows)
- Water quality (reducing fine sediment, lowering summer water temperature)
- Water quantity (providing additional flow in summer)

***2. Describe explicit incremental objectives for the conservation effort or regulatory program and dates for achieving them.***

OWEB does not have explicit incremental objectives for the restoration programs implemented in the Oregon Coast coho ESU. State agencies in Oregon develop and monitor Performance Measures to assess progress in delivering products and service to Oregonians. OWEB recently developed new performance measures which were approved by the Joint Legislative Audit Committee in October 2004. These new measures are ambitious, and the data collection systems necessary to track some of the new measures must be developed over the next year. These measures will help OWEB to measure its performance in customer service, strategically investing public funds in watershed enhancement, and in the effect OWEB's investments have on water quality, and native fish and wildlife habitat. The new performance measures are available by clicking the link below.

[http://oregon.gov/OWEB/docs/other/OWEB\\_2005\\_Performance\\_Measures.pdf](http://oregon.gov/OWEB/docs/other/OWEB_2005_Performance_Measures.pdf)

In addition, OWEB has outcomes and strategies outlined in "A Strategy for Achieving Healthy Watersheds in Oregon, OWEB's Strategic Plan" which more fully describe the agencies program for addressing watershed health statewide ([http://oregon.gov/OWEB/publications.shtml#OWEB\\_Investments\\_Strategies\\_and\\_Accomplishments](http://oregon.gov/OWEB/publications.shtml#OWEB_Investments_Strategies_and_Accomplishments)). Objectives specific to the Oregon Coast coho ESU will be developed in the conservation plan that is being developed jointly by NOAA Fisheries and the State of Oregon.

***3. Describe the steps necessary to implement the conservation effort.***

The conservation effort has an 8 year track record of implementation; 7 years of on-the-ground restoration work have been reported and evaluated for the Oregon Coast coho Oregon Plan Assessment. OWEB's program for achieving healthy watersheds in

described in the agencies strategic plan (see link above) and statutes guiding the implementation of these programs can be found at ([http://arcweb.sos.state.or.us/rules/OARS\\_600/OAR\\_695/695\\_tofc.html](http://arcweb.sos.state.or.us/rules/OARS_600/OAR_695/695_tofc.html)).

***4. Describe quantifiable, scientifically valid parameters to demonstrate achievement of objective, and standards for parameters by which progress will be measured.***

The restoration work conducted so far has been designed to address the physical factors that are thought to be important to generally improving watershed function and water quality. e.g., road improvements and de-commissioning to reduce sediment inputs; culvert replacements to improve fish passage, in-stream and riparian restorations to improve stream complexity and increase wood recruitment.

***5. Describe provisions for monitoring and reporting progress on implementation (based on compliance with the implementation schedule) and effectiveness (based on evaluation of quantifiable parameters) of the conservation effort or regulatory program.***

The OWEB Restoration Database and the Federal restoration reporting systems provide data on restoration work accomplished. Data available include spatial location of work, type of work done, cost of work done, source of funds to do the work, amount of work done (miles of stream bank treated, miles of instream structure treated number of culverts replaced, and so on).

***6. Describe how principles of adaptive management are incorporated.***

The current Assessment marks the first time that sufficient information has been available to prioritize threats to the status of this ESU and bottlenecks to coho recovery. When this review is complete, the recommendations of the Assessment will provide guidance to policy makers regarding future restoration investments, including guidance related to the geographic areas (populations) that need the most work and the type of restoration work most likely to materially increase sustainability and productivity of the ESU.