Oregon Plan for Salmon and Watersheds
2011-2013 Biennial Report

This report on the Oregon Plan for Salmon and Watersheds (Oregon Plan) provides an update on the accomplishments and continuing efforts of Oregonians to protect and improve clean water and maintain and recover healthy populations of fish and wildlife and their habitats.

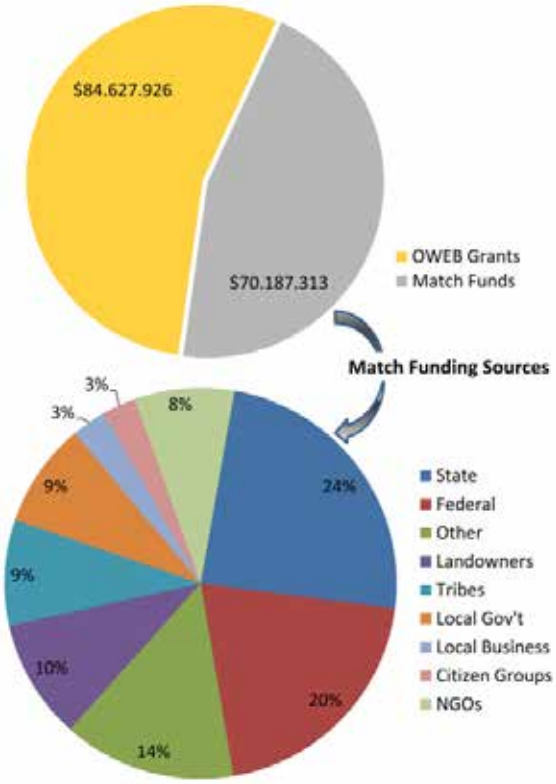
The Executive Summary (PDF) provides a high-level overview of the report, describes OWEB Board observations and recommendations, and highlights key accomplishments of the past two years.

The Oregon Plan is an initiative where all Oregonians join in to help restore healthy watersheds that support the economy and quality of life in local communities. The Oregon Plan has a four-legged foundation attained only through the implementation of all elements:

- Voluntary restoration actions by private landowners - individuals and industry, rural and urban - with support from citizen groups, businesses, and local government.
- Coordinated state and federal agency and tribal actions to support private and voluntary restoration efforts, effectively implemented regulatory programs, soundly managed public land, and promoted public education and awareness about watersheds and salmon.
- Monitoring of watershed health, water quality, and salmon recovery to document existing conditions, track changes, and determine the impact of programs and actions.
- Scientific oversight by the Independent Multidisciplinary Science Team, an independent panel of scientists who evaluate the plan's effectiveness, identify needed changes, and guide research investments.

More information about the history of Oregon Plan for Salmon and Watersheds can be found on the Oregon Plan web site.

Oregon Watershed Enhancement Board Funds Awarded 2011-2013



The Oregon Plan Funding diagram is a comprehensive view of all grants awarded by OWEB from January 1, 2011 – December 31, 2012. The data includes all grant types and grant statuses (i.e., includes grants that have not yet been completed). Match funding to OWEB grants from all sources is also shown in the diagram. Funding to watershed restoration projects in 2011-2013 exceeds $150 million. These data were pulled from the OWEB Grant Management System (OGMS). OGMS is an online grant management system and provides instant, real-time information about OWEB grants.

While overall revenues declined this biennium, total funding for watershed restoration projects in Oregon exceeded $154 million. This includes grant funds awarded through OWEB and other contributions from partner organizations. Partners under the Oregon Plan are as important and diverse as the actions that they undertake to benefit salmon and watersheds. The partners include landowners, non-profit organizations, local businesses, individuals and all levels of government all of whom worked

together the last two years to expend resources on priority actions across the state. Total funding for each major watershed in Oregon can be found here.

While funding was more limited this biennium, the accomplishments under the Oregon Plan remain impressive. In 2010 and 2011, restoration work resulted in the improvement of more than 2,900 road/stream crossings and the removal of 180 push-up dams in streams to allow fish to access 4,500 miles of stream habitat. Other projects addressing the loss of streamside vegetation included livestock fencing and planting of native species over 6,000 miles of stream. This work would not have been possible without the more than 70,000 hours of time dedicated by local volunteers.

Some watershed restoration actions are focused on issues unique to each region of the state such as wetland loss and estuary degradation on the coast and western juniper expansion on the east side of the Cascade Mountains. Others actions occur across regions such as removing barriers to fish migration and reestablishing forested river banks.

A Boost to the Oregon Plan

In November of 2010, Ballot Measure 76 was passed by voters to make the portion of Lottery funds dedicated to parks and natural resources permanent. The measure received more than 69% of the vote statewide and passed in every county of the state. The overwhelming support of the measure reaffirmed the goals and intent of the Oregon Plan. At the same time, Governor John Kitzhaber—who championed the Oregon Plan during his first term initiated the Governor's 10-Year Plan for Oregon. The Governor's plan ties state investments to specific outcomes, including those implemented under the Oregon Plan that will address goals for a healthy environment.

From the OWEB Board

The Oregon Plan for Salmon and Watersheds is in the strongest position it has ever been. With more than 10 years of experience and accomplishments recognized nationally and internationally, and permanent watershed improvement funding approved by Oregon voters with the passage of Ballot Measure 76, opportunities abound for the Oregon Plan.

Recognizing this, the OWEB Board is crafting a Long-Term Investment Strategy focused on core elements of the Oregon Plan infrastructure as the cornerstone of its funding portfolio. The Board also believes the Governor's 10-year vision for a healthy environment dovetails nicely with investments centered on ecological outcomes over the coming 10 years.

The Board anticipates adopting the strategy by the end of the 2011-2013 biennium. Central themes include:

- continued economic investment in local communities through, among others, watershed councils and soil and water conservation districts;
- nurturing and strengthening strategic partnerships and grant opportunities; and
- an increased opportunity to implement proven methods of watershed restoration.

All of these elements will be framed in an adaptive management architecture to allow performance and effectiveness to guide future decisions. Balancing revenue fluctuations and increasing demands for grant opportunities while maximizing the return on restoration investments will remain an important challenge for the Board.

From the OWEB Board's perspective, the Oregon Plan is alive and thriving!

Restoration Issues Common to all Regions of the State

Fish Passage Barriers. Barriers to fish migration include push-up dams, tidegates, dams, culverts and natural barriers. Push-up dams are a common problem on the east side of the state while culverts and tidegates are the major problem on the west side of the state.

Loss of Riparian Cover. Species native to Oregon's riparian areas do vary across the state, but a common concern is that a reduction in cover contributes to increased water temperatures and increased sediment loads.

High Stream Temperatures. Rising stream temperatures are a concern for multiple reasons including the effects warm water has on endangered salmon and other species. While the contributing factors vary in different parts of the state, the overall decline in habitat quality due to warm stream temperatures occurs throughout Oregon.

Reduced Stream Complexity. Historical logging methods, other land use practices, and a poor understanding of the need for channel complexity is a legacy not unique to Oregon. For many years logs and other habitat were being removed from stream for navigability and the impact of these practices remains.

Noxious Weed Species. Invasive weed and animal species are a common threat to watershed conditions across the state though the species of concern in each region varies.

Watershed Restoration Project Accomplishments: projects completed and reported in 2010-2011

The following table highlights the results over a two-year period of projects implemented and completed with Oregon Plan dollars.

Activity	2010-2011
Riparian stream miles treated	811
Roads: miles of road closed and decommissioned	31
Roads: miles of roads improved	64
Fish Passage: number of road/stream crossings improved	152
Fish Passage: miles of stream made accessible to fish migration	356
Fish Passage: number of push-up dams retired	31
Fish Screens: number of fish screens installed on diversions	124
Instream projects: miles of stream habitat treated	202
Uplands acres treated	173,999
Wetlands acres treated/created	4,374
Total number of stream miles monitored	7,161
Total number of volunteer hours	3,884
Total number of volunteers	70,577

Highlights of Completed Projects by Region

North Coast Region

Photo Credits: Scappoose Bay Watershed Council pre and post photos of riparian planting.

The North Coast Region includes the North Coast basins and the western portion of the Lower Columbia River basin. Major restoration issues in this region include loss of floodplain and estuarine habitats, flow changes due to management of hydroelectric projects, change of tidal inundation in tide-gated areas. Other issues include urban encroachment, water availability and fine sediments inputs from farm and forest road.

In the Lower Columbia River basin, a number of relatively small streams drain onto floodplains and into the tidal reaches of the Columbia River. These streams generally have heavily forested hillsides in headwater areas and steep valleys. Nearly the entire Columbia River floodplain has been diked to protect farms and urban areas. Un-diked areas of the floodplain support high species diversity.

The North Coast basin is composed of eight modestly sized, unobstructed tributaries to the Pacific Ocean. Rivers in this basin are underlain by basalt or sandstone geology with lush forest cover, and are primarily privately owned and managed with some state owned public forest land as well. The Douglas fir and Western hemlock forests of the Coast Range support a strong forest industry. The estuaries support recreational fishing and some are a home base for commercial fishing fleets. Anadromous fish species listings under the federal Endangered Species Act include coho, chum and Chinook salmon, and steelhead. Maritime shipping, commercial

fishing, forestry, tourism, and wood processing are key elements of the economy in this region. A targeted effort to address the limiting factors affecting salmon and steelhead has significantly improved habitat through instream habitat improvement and up-slope road removal. And in recent years, there has been a significant effort to restore tidal flooding to estuaries in several of the North Coast and Lower Columbia River basins.

Click the icon for a video clip about North Coast Region completed projects.

Southwest Region

The Southwest Region of the state includes the Umpqua, Rogue and South Coast river basins. Major restoration issues in this region of the state include fish hatchery influences, sediment delivery from forest fires and roads, and loss of estuarine, low gradient floodplains and wetlands along the coast.

Photo Credits: Partnership for the Umpqua River pre and post photos of a culvert replacement.

The Umpqua River is one of only two Oregon rivers that have headwaters in the Cascade Mountains and cut through the Coast Range to the Pacific Ocean. Douglas fir forests of the Umpqua basin are legendary for their productivity and provide a foundation for the timber industry, local economies, and communities in this basin. Spring Chinook and summer steelhead runs to the North Umpqua River are relatively healthy and support world famous fisheries. Lowland meandering interior valleys support considerable ranching activity. Whitetail deer have recovered and have been delisted from the federal Endangered Species Act. The Umpqua River enters the Pacific Ocean in the heart of Oregon's sand dune country near Reedsport.

The headwaters of the Rogue River originate in Crater Lake National Park in the Southern Cascade Mountains, this basin has a complex geologic structure and corresponding vegetation patterns. From the lava and pumice of the southern Cascade volcanoes, the Rogue River flows through the relatively populated Medford-Ashland area with its orchards and irrigated agriculture and expanding urban base. Forestry is also a significant economic sector in the basin with some mining occurring as well. Fisheries for Chinook salmon and steelhead in the Rogue are world famous. Coho salmon in the Rogue are identified as part of the Southern Oregon/Northern California Evolutionary Significant Unit and listed as "threatened" under the Federal Endangered Species Act. The Wild and Scenic Rogue River cuts through the Coast Range and enters the Pacific Ocean at Gold Beach, where mail boat tours take visitors upriver and salmon fishing is a yearly ritual.

Two types of drainages lie in the South Coast basin. At the north end of the basin, the medium-sized Coos and Coquille rivers have headwaters in the Coast Range and flow to the ocean through Coos Bay. Further south, a number of relatively smaller streams (Floras, Sixes, Elk, Winchuck, and Hunter creeks and Chetco and Pistol rivers) have origins in the Klamath Mountains. The southern portion of this basin is also in the Southern Oregon/Northern California Evolutionarily Significant Unit for coho salmon that are listed as "threatened." Forestry, ranching, agriculture, commercial and recreational fishing, and tourism are significant factors in the economy of communities in the basin. Significant portions of ancient marine terraces in this basin have been converted to cranberry and lily production. The Coos and Coquille valleys historically were large timber producers along with cattle and dairy industries. Several of the watersheds in the southern part of this basin have been affected by large and severe wildfires in the past decade.

Click the icon for a video clip about Southwest Region completed projects.

Eastern Region

The Eastern Region of the state includes the Grande Ronde, Powder and Malheur and Owyhee river basins. Major restoration issues in this region of the state include loss of late summer flows, altered fire regime, bacteria inputs from livestock production, groundwater quality degradation from agricultural activities, loss of sagebrush steppe habitat, juniper encroachment, unscreened irrigation diversions and effects of historic dredge mining.

The Wallowa, Grande Ronde, and Imnaha Rivers flow from the majestic Wallowa Mountains to the Snake River. The Wallowa Mountains frame the Grande Ronde Valley. Mountain headwater streams in subalpine forests transition through deep canyons and meander through agricultural communities in the lowlands before flowing through deep canyons. This basin is the historic homeland of the Chief Joseph band of the Nez Perce Tribe.

Ranching, agriculture, and forest products are key to the economy in this basin. Nestled between the Imnaha and Grande Ronde rivers, Zumwalt Prairie supports the highest density of raptors in Oregon. Bull trout, spring Chinook salmon and summer steelhead in this basin are listed as "threatened" under the federal Endangered Species Act. Significant efforts to restore the Wallowa River have improved habitat for these species.

Draining south and east from the Blue Mountains, the Powder and Burnt Rivers flow to the middle Snake River. This ranching country contains remnants of the original Oregon Trail traveled by settlers in covered wagons. Mining is still important in this basin, but agriculture and ranching are the key elements of the economy. Bull trout in this basin are listed as "threatened" under the federal Endangered Species Act.

The upper Owyhee and Malheur River drainage is a very sparsely populated portion of the state. The lower portions of both basins, the western edge of the Treasure Valley, support rich irrigated row-crop agriculture. Cattle ranching is the dominant use of the upper Owyhee basin that includes the stark beauty of Leslie Gulch and the Jordan Craters. The upper Malheur basin includes cattle ranching, large winterfeeding operations and other agricultural activities. Bull trout in this basin are listed as "threatened" under the federal Endangered Species Act. Recent efforts to use irrigation water more efficiently in the Willow Creek drainage, a tributary to the Malheur River, has sediments and water use in the basin. These activities have made significant progress towards addressing the factors that affect water quality in the Willow Creek drainage. The largest wildfire recorded in Oregon occurred in this basin in 2012.

Click the icon for a video clip about Eastern Region completed projects.

Willamette Region

Photo Credits: Calapooia Watershed Council pre and post photos of a large woody debris jam.

The Willamette Region of the state includes the Willamette River basin and the eastern portion of the Lower Columbia River basin. Major restoration issues in this region of the state include loss of floodplain connectivity, loss of oak savanna, oak woodlands and prairie habitats, significant nutrient and chemical inputs which result in water quality degradation, impacts from hydropower infrastructure, urbanization, and a legacy of floodplain and channel alteration.

The Willamette River basin is bounded on the west by the Coast Range and on the east by the Cascade Range, with the Willamette Valley and surrounding forested foothills. Streams that flow from the Coast Range to the Willamette River are lower gradient and rainfall-dependent systems that support native cutthroat trout, lamprey, and winter steelhead. Streams that drain from the Cascades are higher gradient rain and snowmelt-fed systems that support native cutthroat, rainbow and bull trout, and lamprey, spring Chinook salmon, and winter steelhead. Large dams on most Cascade tributaries control valley flooding, but significantly alter fish passage and streamflow regimes throughout the basin. Much of the Willamette basin was originally bottomland riparian hardwood forests, wet prairies, oak savannas, and oak woodlands. Extensive agricultural areas, urbanization, and fire suppression have greatly reduced these habitats. Today, the basin supports concentrated areas of high technology, diverse agricultural production, forestry and wood products industries, and roughly three-quarters of Oregon's human population.

Click the icon for a video clip about Willamette Region completed projects.

Mid Columbia Region

The Mid Columbia Region of the state includes the John Day and Umatilla river basins. Major restoration issues in this region of the state include loss of shrub steppe habitat, incised stream channels, flow augmentation, lowering of groundwater aquifers, degraded floodplain conditions, loss of cold water habitats, unscreened irrigation diversions and significant temperature increases in the Lower John Day River.

The John Day River is one of the most significant undammed stream systems in the West and the basin contains the Painted Hills, John Day Fossil Beds National Monument, and Strawberry Mountain Wilderness Area of the Blue Mountains. The economy is dependent on natural resource industries, forest products, farming, ranching, recreation, and mining. Summer steelhead and bull trout are listed under the federal Endangered Species Act, however the John Day River system has one of the strongest native stocks of summer steelhead in the

Photo Credits: Bridge Creek Watershed Council pre and post photos of a juniper treatment project.

Northwest. Ponderosa pine and Douglas-fir forests in the Ochoco and Blue mountains dominate the headwaters. The north and middle forks of the John Day River meander through open meadow and prairie ranch land. The mainstem of the river below Clarno flows through an incised canyon that bisects shrub-steppe and wheat ranches in the uplands before flowing into the Columbia River at the eastern edge of the Columbia River Gorge. Local restoration partners have eliminated more than 100 fish passage barriers in the main stem of the John Day River, and a concentrated restoration and monitoring effort in the Middle Fork John Day River is providing information about the effectiveness of different restoration treatments.

The Umatilla River basin includes the Umatilla and Walla Walla rivers, and Rock Creek drainages. Ranching, forest products, wheat, and cattle ranching dominate the economy. The Confederated Tribes of the Umatilla Indian Reservation is in this basin and the tribe is active in fish and wildlife resource management. The Umatilla basin is the site of successful reintroduction of spring Chinook, which were extirpated for more than 75 years. The Umatilla and Walla Walla rivers spring from the forested hillsides of the Blue Mountains. Headwater areas of these rivers support remarkably high numbers of native species. Downstream reaches of these rivers flow through highly productive wheat farms, fruit orchards, vineyards, and other irrigated agriculture.

Click the icon for a video clip about Mid Columbia Region completed projects.

Central Region

The Central Region of the state includes the Hood, Deschutes, Klamath and Lakes river basins. Major restoration issues in this region of the state include altered and overstocked forest stands, increased sediment in natural streams, juniper encroachment, loss of lake fringe wetlands and floodplain connectivity, sage-grouse habitat decline, and habitat restoration for reintroduction of anadromous fish.

Draining directly from Mt. Hood's glaciers, the Hood River and Fifteenmile Creek are the primary Oregon waterways entering the spectacular Columbia River Gorge. The Gorge attracts thousands of visitors annually and is world famous for its windsurfing. The western Hood River Valley is known for its pears and other orchard crops and the river supports a significant salmon and steelhead fishery. The Fifteenmile Basin is the edge of wheat country and is a major cherry producing area. Fifteenmile Creek also sustains the easternmost population of wild winter steelhead. Agriculture, forestry, and tourism support the economy of this basin. Hood River and The Dalles are the major communities along this present day and historic travel and trade route between inland regions and the coast. The removal of Powerdale Dam on the Hood River, and development of a unique flat fish screen by the Hood River based Farmer's Cooperative Alliance, have helped address factors affecting salmon populations in the Hood River. A comprehensive program of addressing upland runoff in the Fifteenmile Creek watershed is paying off in improved water quality and returning fish runs.

Photo Credit: Oregon Watershed Enhancement Board tour of a Deschutes SIP project site.

Bordered by the Cascade Range to the west, the Deschutes River basin includes the high Cascade lakes, wild and scenic waterways, and a rapidly growing human population. Tourism, agriculture, forestry, ranching, and a high technology industry dominate the economy of the basin. Fed by snowfields of the Cascade and Ochoco ranges, the basin's headwaters flow from springs through high elevation wet meadows and lava plains before dropping through scenic canyons and shrub steppe. The Deschutes River hosts world famous trout and steelhead fisheries. Bull trout and steelhead are listed under the federal Endangered Species Act. The Confederated Tribes of Warm Springs operate Kah-Nee-Ta Lodge, a lumber mill, and other tribal enterprises. Several dams generate electricity and block fish runs to the upper basin. With the relicensing of the Pelton-Round Butte dam complex, fish passage has been provided recently to the upper basin. With the reintroduction of anadromous fish, a strong partnership has developed focused on land and water conservation and habitat enhancement to maximize the likelihood of success of the reintroduction.

The Klamath River basin has been the focus of national attention following the drought of 2001. Flowing south

from Crater Lake National Park and the Gearhart Wilderness Area, the streams and springs that form Upper and Lower Klamath lakes exit Oregon into California as the Klamath River. Extensive lakes and wetlands along the Sycan, Sprague, Williamson, and Wood rivers dominate the basin. Numerous bald eagles and large numbers of waterfowl overwinter in the basin. Irrigated agriculture, ranching, forestry, and recreational tourism are key elements of the economy in the basin. Significant restoration activity has taken place to recover rearing habitat for the listed Lost River and shortnose sucker fish.

Waters that flow in the desert country of Lake, southern Harney, and southwestern Malheur counties drain toward lakes such as Malheur, Abert, Silver, Summer, Goose, and Warner. These waterbodies and associated wetlands are remnants of ancient Pleistocene lakes that filled the basin. Scenic mountains rise abruptly from the valley floors. Streams that drain the uplifted ranges support Lahontan cutthroat trout, redband trout, Tui chub, Alvord chub, Warner Lake suckers, Modoc suckers, and Borax Lake chub. Hart Mountain and Malheur National Wildlife Refuges and the Steens Mountain Wilderness Area provide wildlife viewing and scenic vistas. Fort Rock and the Alvord Desert are home to antelope and sage grouse. Diamond Craters, the historic Round Barn of the P Ranch, and the Burns Paiute Reservation are located in this basin. Ranching and forest products support the basin's communities.

Click the icon for a video clip about Central Region completed projects.

Coordinated Agency Actions

The 2011-2013 biennium was a time of challenge with state agencies attempting to retain core Oregon Plan elements such as salmon recovery, and water quality monitoring while revenues continued to decline. Through the use of federal funding provided by the National Marine Fisheries Service and state funding, a renewed emphasis on coordinated program implementation was a major area of focus. Agency accomplishments include the development and adoption of the State's Integrated Water Resources Strategy and the implementation of high priority actions called for in salmon Recovery Plans, Total Maximum Daily Load plans, and Agricultural Water Quality Plans. Looking ahead, the agencies intend to capitalize on the momentum of the last two years to further an integrated approach to natural resource monitoring, known as Enterprise Monitoring, and to expand the strategic approaches to implementing water quality programs.

The following links provide access to further details about the other State of Oregon Natural Resource Agencies accomplishments and activities during the 2011-2013 biennium.

Oregon Department of Fish and Wildlife

ODFW Salmon and Steelhead Recovery Tracker – provides monitoring data and results for those salmon and steelhead management units which have a conservation or recovery plan in place and funding for a comprehensive monitoring program.

ODFW Native Fish Conservation and Recovery Program – provides links to conservation and recovery plans, plan annual reports, and plan implementation information, as well as other documents associated with native fish conservation and management.

Oregon Department of Forestry

Private Forest Landowners and the Oregon Plan (PDF) - A guide to voluntary actions to assist threatened and endangered fish.

Forests for Oregon - A magazine of the Oregon Department of Forestry. View online and/or sign up for email subscription.

Oregon Department of Agriculture

Oregon Agricultural Water Quality Report (PDF) - Along with Oregon's Forest Practices Act and other nonpoint source water quality programs, as well as the Oregon Department of Environmental Quality's permitting programs for point sources, the AgWQMP is a key part of the state's strategy for improving the condition of our waters. The program also addresses agriculture's commitments in the Oregon Plan for Salmon and Watersheds. By law, the program is charged to prevent and control water pollution from agricultural lands. It is also a key part of the state's overall water quality program, ensuring that farmers and ranchers do their part in meeting water quality standards.

Board Opportunities and Recommendations

Build on accomplishments. The commitment and work of all Oregon Plan partners has resulted in a nationally recognized approach with unmatched environmental accomplishments.

Invest in local groups. The Oregon Plan has resulted in a strong and vibrant network of restoration practitioners throughout the state. Ongoing support for this restoration infrastructure, including watershed councils and Soil and Water Conservation Districts, is critical to the future effectiveness of on-the-ground implementation.

Improve effectiveness monitoring and reporting. Investments in conservation and restoration must result in demonstrable benefits to Oregon's watersheds. Monitoring of the ecological outcomes of Oregon Plan activities is foundational to guarantee a positive return on these restoration investments and to inform adaptive management that increases the effectiveness of conservation and restoration into the future.

Support the economies of Oregon's local communities. Investments in watershed restoration have the additional benefit of contributing to local economies. Every $1 million invested in restoration generates 15-24 jobs. Additionally, OWEB's grants leverage matching funds to increase investments in watersheds throughout the state.

Continue to support high-quality conservation and restoration. Funding from OWEB supports ecological priorities based on local, state and regional conservation strategies and plans. In addition, the funding increasingly enables focused investments over multiple years to achieve specific priority ecological outcomes in conjunction with other funding partners, thereby leveraging OWEB funding and bringing greater certainty about progress toward ecological outcomes.

Striving to meet demand. In recent years, revenues that support restoration and conservation have declined. This shift from the plentiful resources that marked earlier years of implementation under the Oregon Plan elevates the need for a Strategy that ensures OWEB maximizes the return on its restoration investments and the effectiveness of its grant making.

Online Data and Tools

More Watershed Restoration information. Oregon Watershed Restoration Tool (web map)

All OWEB Grant Investments. OWEB Investment Tracking Tool (web map)

Distribution of funding throughout Oregon. 2011-2013 Awarded Funding by Basin (web map)

Find which legislator represents your local watershed. Oregon Watershed Councils and Legislative Districts (web map)

Real-time Information about OWEB grants. OWEB Grant Management System (web page)

Restoration data downloads. Oregon Watershed Restoration Inventory (web page)

Online natural resource library. Oregon Explorer (web page)

Oregon Watershed Restoration Inventory (OWRI). To report a project to OWRI click here.

Biennial Report Production Acknowledgements

Wahoo Films - Video production

John Ame - Executive Summary graphic layout

Questions?

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