2007 - 2009 Biennial Report

The OREGON PLAN FOR SALMON AND WATERSHEDS

The Oregon Plan for Salmon and Watersheds

Biennial Report 2007-2009

The Oregon Watershed Enhancement Board is proud to produce the seventh report on the Oregon Plan for Salmon and Watersheds.

The Oregon Plan is a remarkable effort by people from all parts of the state to form unique partnerships and coordinate actions to improve the ecological conditions of the places we live. These efforts are helping to protect and improve water quality in our rivers and lakes and to restore habitat to support healthy populations of native fish and wildlife.

This edition of the report assembles information on implemented projects, local community efforts, and agency program accomplishments under the Oregon Plan. Consistent with the past three reports, this document provides specific data on each of the state's 15 major basins. We also continue a theme of the last report to highlight stories about the people, partnerships, and on-the-ground projects that are benefiting watersheds and communities across the state.

One of the unique aspects of the Oregon Plan that makes it work so well is the strong spirit of partnership and cooperation to get things done. That spirit lives fully in the efforts of our many Oregon Plan partners who contributed to this report. We are grateful for their involvement to make this report as comprehensive and informative as possible.

Thomas M. Byler
Executive Director
Oregon Watershed Enhancement Board

This report is dedicated to Roger Wood. The staff, board members, and partners of the Oregon Watershed Enhancement Board lost a great friend and colleague with the sudden death of Roger Wood in September 2008. Roger was Grant Program Manager at OWEB from 2001 through 2006 and then was the principal architect of the Special Investment Partnerships effort adopted by the Board in 2007. His leadership, thoughtfulness, and commitment to Oregon and the Oregon Plan are greatly missed by all. Roger's memory and legacy will continue to guide our efforts to make Oregon a better place for future generations.

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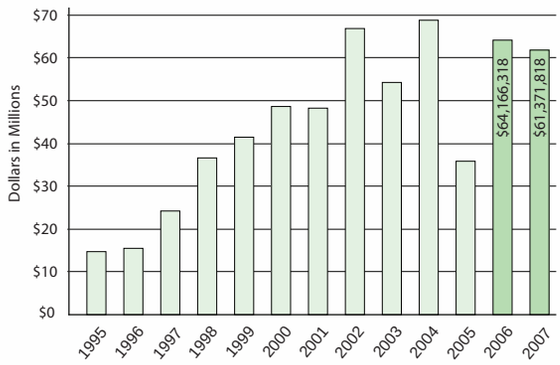
(publication available for download)

Executive Summary

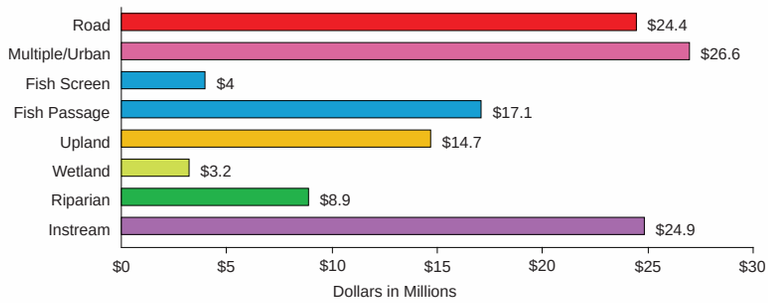
The 2007-2009 biennium has been a challenging and exciting period for watershed enhancement and fish and wildlife habitat restoration efforts. This report describes results from and observations about the ongoing implementation of the Oregon Plan and lays out recommendations from the OWEB Board for improving implementation of the Oregon Plan.

One of the main reasons we are able to bring this report to you is that Oregon has been tracking completed restoration work for 13 years through the Oregon Watershed Restoration Inventory. Between 1995 and 2007, the total funding for completed and reported restoration projects from state, federal, private, and other sources exceeded $514 million. In 2006 and 2007 alone, the total funding for reported restoration projects was $123.8 million. The majority of those funds (67 percent) were provided by federal and state government sources. Additional results for 2006 and 2007 are highlighted throughout this report.

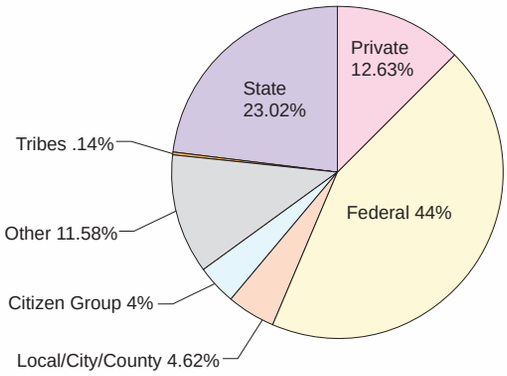
Funding for Completed and Reported Restoration by Year 1995-2007
Adjusted to 2007 Dollars



Funding for Completed and Reported Restoration by Activity Type, 2006 and 2007
Based on $123.8 Million Reported



Sources of Funding for Completed and Reported Restoration, 2006 and 2007
Based on $123.8 Million Reported



OWEB Board Observations

Oregon Plan success depends on strong leadership and sustained investment in voluntary restoration, agency actions, monitoring, and science oversight.

- Volunteer participation by landowners and citizens in watershed restoration actions is a key value of the Oregon Plan approach to water quality and habitat improvement.
- Strong and persistent leadership from the Governor, the Legislature and local citizens is required for long-term success of the Oregon Plan.
- Sustained and sufficient investments in state natural resource agencies is needed for successful Oregon Plan implementation.
- Public awareness of and participation in the Oregon Plan is critical to its long-term success.
- Diverse funding from federal and private foundation sources is critical to maintain investment in Oregon Plan capacity and watershed restoration efforts.

OWEB Board Observations (continued)

Oregon Plan investments in watershed restoration and related projects directly benefit local communities.

- Watershed council and soil and water conservation district implementation of Oregon Plan watershed enhancement projects supports local jobs and services and increases the long-term sustainability of local economies.
- Adequate funding for councils and districts is critical to sustain voluntary restoration efforts.
- Councils and districts are the conduit between interested landowners and agencies to address local watershed conditions.
- On-the-ground restoration cannot happen without adequate non-capital funding to support technical assistance, monitoring, and education needs.

Oregon Plan projects prepare watersheds for climate change by increasing their resilience and ability to adapt.

OWEB Board Recommendations

Promote citizen involvement in the Oregon Plan. Successful implementation of the Oregon Plan over the long term will depend on the informed backing of and participation by Oregon's citizens. Enhanced and coordinated outreach efforts are needed to develop a common understanding of the Oregon Plan among all Oregonians and to continue making progress towards reaching Oregon Plan goals.

Build creative partnerships to focus on significant ecological outcomes. Local, state, tribal, and federal partners have gained valuable experience in working together on restoration actions over the years. Oregon Plan partners should continue and expand efforts to build strategic partnerships and leverage resources to achieve shared ecological objectives as efficiently and effectively as possible.

Streamline and expedite permitting for restoration projects. Landowners who engage in restoration efforts need more certainty that projects will be implemented in a timely manner. Oregon Plan partners should continue to revise and refine permitting and other project implementation steps to ensure that the public approval processes move forward as quickly and efficiently as possible.

Support strong leadership, interagency communication, and coordination. Oregon Plan outcomes can be more effectively addressed if agencies work together to address joint agency goals and objectives. The Oregon Plan teams (Core, Outreach, Monitoring, and Regional Implementation) should be revitalized to integrate efforts and enhance agency communication.

Develop and implement shared priorities for restoration. Local, state, and federal participants have made significant progress in completing conservation and recovery plans, subbasin plans, water quality plans, and restoration priorities. Oregon Plan partners should coordinate implementation of these plans and priorities so that implementation more strategically targets the most critical resource and community needs in each basin.

Track restoration and recovery trends and improve information accessibility. Oregon Plan partners should continue efforts to improve the accessibility of data and information for the public and watershed practitioners. Significant, long-term investments in monitoring are needed to demonstrate and ensure the success of watershed and salmon recovery efforts. Understanding the effectiveness of the Oregon Plan depends on our commitment to collect and assess monitoring data and report findings to the public.

Develop a coordinated strategy that demonstrates ways habitat restoration actions reduce the growing risk of climate change. Climate change is the primary long-term challenge facing Oregon's communities, ecosystems, and economies. Oregon Plan partners should move from discussion about these impacts to coordinated planning across agency and watershed boundaries to demonstrate how watershed actions can reduce the risk of adverse affects of climate change on the environment. Investment in the applied sciences is also needed to deepen the knowledge and experience base of stakeholders (e.g. academicians, local communities, and landowners) about the impacts of climate change on Oregon's watersheds.

Oregon Plan for Salmon and Watersheds Overview

The Oregon Plan for Salmon and Watersheds is an initiative where all Oregonians can join to help restore healthy watersheds that support the economy and quality of life of Oregon. The Oregon Plan has four elements with success depending on strong 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 implement regulatory programs, soundly manage public land, and promote public education and awareness about watersheds and salmon.
- Monitoring 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.

The Oregon Plan began as a state-led strategy for conserving salmonid species listed or headed for listing under the federal Endangered Species Act (ESA). The strategy was intended to solve three vexing problems. First, listing a species as threatened or endangered under federal requirements rarely leads to recovery and conservation because federal agencies lack the means to effect positive action on private land. Second, the absence of state leadership on species conservation means that federal agencies responsible for ESA enforcement have no choice but to exert their regulatory authority. Third, Oregon was facing lawsuits over its failure to develop improvement plans for water quality-limited streams. The Oregon Plan originated and 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 land. The Governor renamed OCSRI the Oregon Plan for Salmon and Watersheds, or the Oregon Plan. In 1999, the Oregon Plan was broadened to address water quality, watershed health, and native salmon populations statewide.

Oregon Plan Reporting Basins

The Role of the Oregon Watershed Enhancement Board

In 1998, Oregonians approved Ballot Measure 66, which called for dedicating 15 percent of net state lottery proceeds for 15 years to restore and protect Oregon's parks, beaches, watersheds, and critical fish and wildlife habitats. One-half of the 15 percent is administered by the Oregon Parks and Recreation Department. The remaining half was dedicated to the protection and restoration of native salmonid populations, watersheds, fish and wildlife habitats, and water quality. The measure also required these funds to be administered by one state agency.

The 1999 Legislature created the Oregon Watershed Enhancement Board (OWEB), which became the designated management agency for distribution of Measure 66 funds, including for purposes of the Oregon Plan. OWEB operates a grant program that invests in local communities to improve water quality and habitat for fish and wildlife and monitors and manages watershed information. (More information on OWEB is available on pages 14 and 15.)

OWEB is also charged with the responsibility to prepare and submit, by January 15 of each odd numbered year, a report assessing the implementation and effectiveness of the Oregon Plan. This report is the Oregon Plan Biennial Report and the 2007-2009 Biennial Report is the fourth prepared by OWEB to meet this requirement.

Tracking Oregon Plan Success

The Oregon Watershed Restoration Inventory (OWRI) was established in 1995 to track completed restoration work. Except for projects funded by OWEB or implemented under certain permits, all reporting to this database is voluntary. The Basin Reports section includes data from the OWRI, the Federal Interagency Restoration Database, Grande Ronde Model Watershed Program, and ODFW Fish Screening and Passage Program Database.

Partnerships

The Oregon Plan combines the regulatory and land management programs of state and federal agencies and local governments with voluntary watershed restoration by private landowners and others. Over the years, solutions to address water quality, watershed health, and native salmon populations have been achieved by the building of partnerships between government agencies, tribes, watershed councils, soil and water conservation districts, non-profit organizations, landowners, and citizens.

Developing Strategic Priorities

The Oregon Plan is informed by numerous assessments and plans that guide efforts at the local, regional, and state level. These range from local watershed assessment and action plans to statewide conservation strategies. Notable planning programs and documents include the Oregon Conservation Strategy, Coast Coho Conservation Plan and other species recovery plans, Total Maximum Daily Load analysis, Water Quality Management Plans, and Agricultural Water Quality Management Program plans (Senate Bill 1010 plans).

Oregon Plan Teams

A network of interagency teams supports local and statewide conservation and restoration efforts:

- **Core Team** – provides senior management-level interagency policy coordination and direction to other Oregon Plan teams.
- **Monitoring Team** – coordinates monitoring, data management and analysis among state, federal and local agencies and partners.
- **Outreach Team** – coordinates public communication and develops outreach and educational tools to support the Oregon Plan.
- **Regional Implementation Teams** – provides forums for agency managers and staff to coordinate efforts on regional Oregon Plan-related matters.

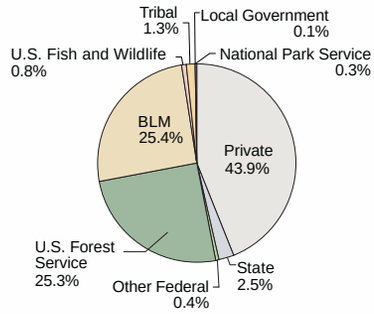
OREGON WATERSHED ENHANCEMENT BOARD

OWEB

Agency Actions

A key premise of the Oregon Plan is that effective actions by government agencies are essential to improve Oregon's watersheds. This premise recognizes the role of state and federal agencies to implement existing regulatory and conservation programs to protect natural resources. Agency actions, in partnership with local groups and landowners, are important to improve water quality, recover salmon populations, and restore watershed health.

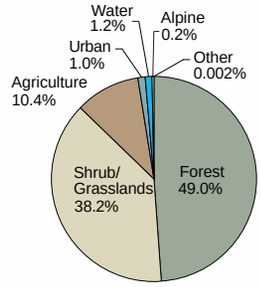
Statewide Land Ownership



State Agency Roles and Actions

A number of Oregon state agencies are responsible for conservation investments, water quality and quantity protection, fish and wildlife habitat protection, and restoration activities, as well as fishery harvest management and production of hatchery fish. Each agency is given authority by legislative action and their capacity is limited by budget appropriations. The following offers examples of agency Oregon Plan activities during the first half of the 2007-2009 biennium.

Statewide Land Cover



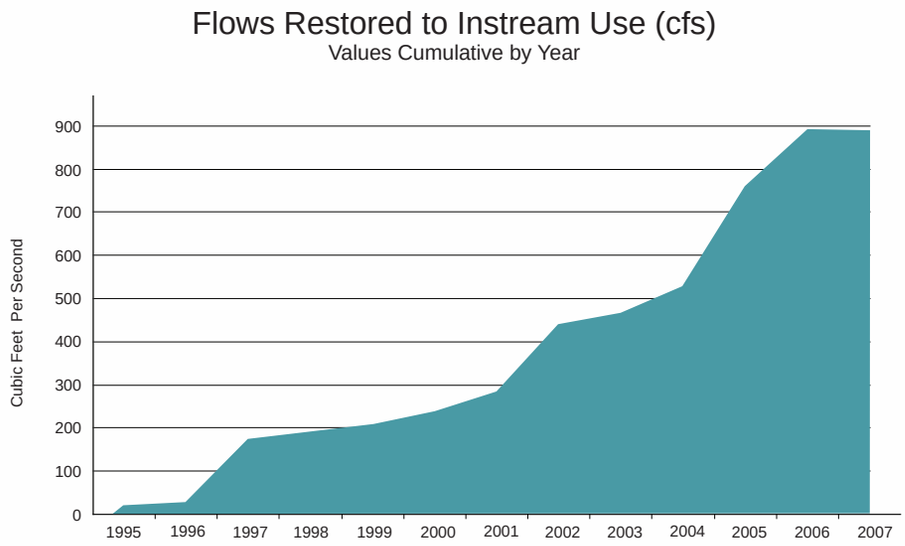
Conservation Investments

- OWEB awarded nearly $46.4 million to 661 grants for watershed restoration and protection, technical assistance, assessment, research, education and outreach, monitoring, and watershed council support.
- DEQ awarded nearly $1.4 million for restoration, monitoring, and pollution prevention in 22 projects throughout the state. DEQ is prioritizing Nonpoint Source Pollution 319 Grants towards improving water quality in waterbodies with TMDLs or 303(d) listings and in Groundwater Management and Drinking Water Source Areas.
- OECDD awarded $34.3 million in loans and grants to 33 local communities, including $71,240 in grants for Brownfield projects; $9.6 million in loans for clean water infrastructure projects; $3.9 million in loans and $2.3 million in grants for sewer system planning and improvement projects; and $14.5 in loans and $3.5 million in grants for water system planning and improvement projects.
- OPRD used approximately $419,000 of Salmon License Plate funds to implement watershed restoration projects, including erosion control, channel stabilization, fish passage, invasive species treatment, and dike repair in the Deschutes, Grande Ronde, South Coast, and Willamette basins.

Clean Water and Streamflow

- The Water Quality Pesticide Management Team, an interagency group composed of representatives from DEQ, ODA, ODF, and Oregon Department of Human Services, formed to make surface and groundwater quality programs related to pesticide use more consistent and resource efficient.
- DEQ completed and received EPA approval on TMDLs for the Willamette and Umpqua basins, Willow Creek Subbasin (Umatilla), Tenmile watershed (South Coast), and Bear Creek watershed (Rogue). TMDLs for the "Miles" Creeks watersheds (Middle Columbia), Molalla-Pudding Subbasin (Willamette), and Rogue River Basin will be submitted to EPA by the end of 2008.
- DEQ began a Toxics Monitoring Project for surface waters in the Willamette Valley and for drinking water throughout the state. This project will give information about current and emerging contaminants that threaten aquatic life and human health.
- WRD works closely with landowners, water users, and other partners to voluntarily move existing water rights to instream uses. To date, about 900 cubic feet per second of water has been placed instream through conserved water projects, instream leases, and instream transfers.

- WRD has been working to increase water use measurement statewide. Surveys of the 2,200 largest surface water diversions (called "significant diversions") in high priority flow restoration watersheds have found 160 diversions that are out of compliance with existing requirements to measure water use. By August of 2008, 51 percent had been brought into compliance or are on a path to compliance.



Fish and Wildlife Habitat

- From July 2007, through June 2008, ODFW's Fish Screening and Passage Program installed 25 fish passage and 73 screening projects. Another 34 fish passage and 121 fish screening projects are in various stages of planning, construction, or post-construction work.
- OWEB invested $1.7 million to protect 540 acres in the Deschutes, North Coast, and Willamette basins through conservation acquisitions.
- DSL reported a gain of 183 new acres of non-tidal wetlands and six acres of tidal wetlands through permitted activities.
- DSL authorized permits for over 2,800 acres of wetland enhancement.

Regulation/Enforcement

- ODA staff conducted 724 inspections of permitted Confined Animal Feeding Operations in calendar year 2007. Of the 541 routine inspections, 461 or 85.2 percent were in compliance with their permit.
- OSP Troopers completed 21,598 hours of resource protection, made 25,025 contacts, and documented 2,978 violations.
- ODA received and resolved 93 complaints related to Agricultural Water Quality Management Plans between January 2007 and June 2008. Almost all of the complaints have been resolved without resorting to enforcement. ODA took regulatory action, including a civil penalty, in only five cases.
- New ODF rules now make it easier to place large wood in streams to improve fish habitat, retain trees where debris torrents may one day deliver large wood to streams, and provide riparian protection above fish passage barriers.

Technical Assistance

- DEQ Pesticide Stewardship Projects (PSPs), which encourage low-impact pesticide use and collect pesticides at no cost to the users, are active in the Clackamas, Yamhill, Pudding, Walla Walla, and Hood River basins.
- The ODA Agricultural Water Quality Management Program has progressed to implementation of basin-wide management plans. Since January of 2008, ODA staff conducted more than 30 outreach activities reaching approximately 20,000 Oregonians.
- DSL created an expedited, notification based permit process for large wood and boulder placement projects.
- From July 2007, through June 2008, ODFW Habitat Conservation Biologists reviewed 633 permits that affect fish, wildlife, and their habitat, and responded to 2,184 requests for assistance from city and county governments with land use and development issues.

Other

- ODA continued gypsy moth pre- and post-treatment population assessments and eradication treatments in the Deschutes, Rogue, and Willamette basins in 2007 and 2008.
- ODFW conducted field studies to determine life history, status, and/or distribution of various non-anadromous native fish, including Oregon chub, bull trout, redband trout, Warner sucker, Borax Lake chub, and nine species in the Goose Lake basin.
- ODFW continued native fish aquatic habitat inventory work, including coho habitat and population monitoring, assessment of habitat restoration projects conducted under the Western Oregon Stream Restoration Program, and Salmon and Columbia rivers estuary studies.
- The Watersheds Research Cooperative is engaged in the Trask Paired Watershed Study and the Alsea Watershed Study Revisited, which are multidisciplinary studies examining the effects of contemporary forest practices on hydrology, water quality, fish, and other aquatic biota.

A large culvert on Middle Creek Trail at the Tryon Creek State Natural Area was replaced in a partnership between the City of Portland and OPRD to restore access for steelhead and cutthroat trout (photo by OPRD).

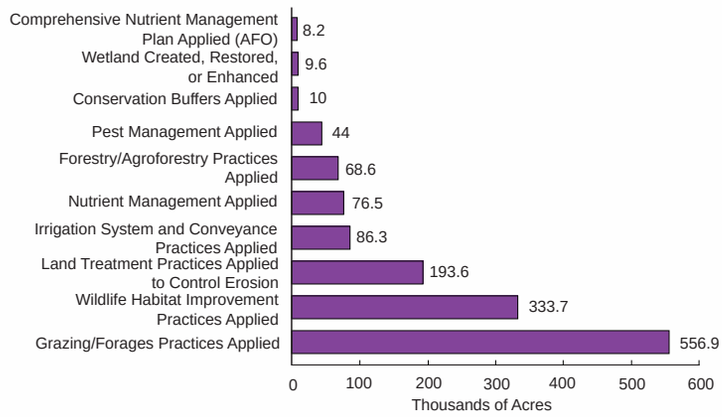
Recovery and Conservation Plans

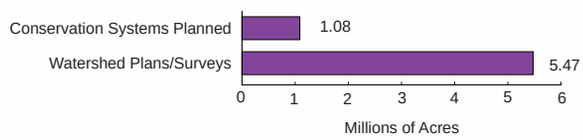
Oregon state agencies and local stakeholders are participating with NMFS to develop salmon and steelhead recovery plans consistent with the ESA and Oregon's Native Fish Conservation Policy. ODFW is also taking the lead in the development of conservation plans for other species. The following lists some of the recovery and conservation plan efforts completed or underway.

- Oregon Coast Coho Conservation Plan. Plan completed and being implemented.
- Rogue River Spring Chinook Conservation Plan. Plan completed and adopted by Oregon Fish and Wildlife Commission.
- Mid-Columbia River Recovery Plan (steelhead). Draft plan completed and submitted to NOAA.
- Lower Columbia River Recovery Plan (coho, steelhead, Chinook, and chum); Upper Willamette River Recovery Plan (Chinook, steelhead); and Southern Oregon-Northern California Coast Recovery Plan (coho). Plans under development.
- Oregon Coast Spring Chinook Conservation Plan, Lower Columbia White Sturgeon Conservation Plan, and Pacific Lamprey Conservation Planning. Plans in beginning stages of development.

Natural Resources Conservation Service and Partner Land Treatment Accomplishments

July 2006 - June 2008





Federal Agency Roles and Actions

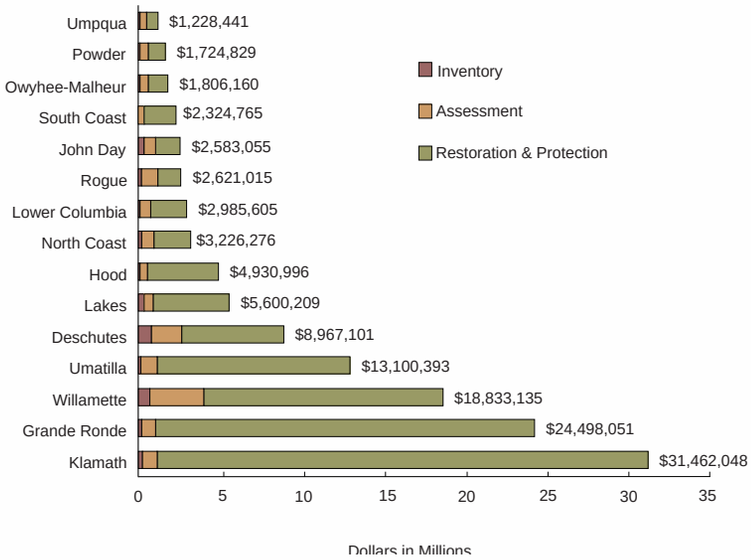
Restoration activities conducted on federally managed land, primarily USFS and BLM, are shown for each basin with the other completed and reported restoration activities. Other federal agency actions in concert with the Oregon Plan include:

- The Endangered Species Act (ESA) directs NOAA's National Marine Fisheries Service (NMFS) to develop and implement recovery plans for threatened and endangered species.
- The USFWS Partners for Fish and Wildlife Program was established in 1987 and provides technical and financial assistance to private landowners and tribes who are willing to work on a voluntary basis to help meet the habitat needs of Federal Trust Species.
- The EPA partners with, and oversees, DEQ implementation of federally delegated environmental programs, including clean air and clean water programs.
- The USDA Natural Resources Conservation Service funds conservation actions on private agricultural land across the state.
- The Bonneville Power Administration provides funding for fish and wildlife mitigation in the Columbia Basin.

For more information about the Oregon state agencies involved in the Oregon Plan, or for additional examples of agency actions, please visit www.oregon.gov/OWEB/biennialreport_0709.shtml.

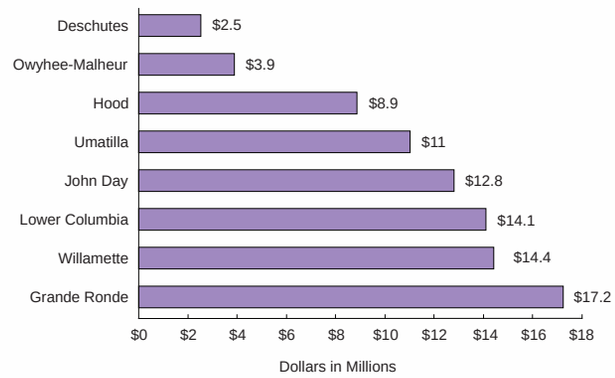
Natural Resources Conservation Service Funding

By Basin, July 2006 - June 2008

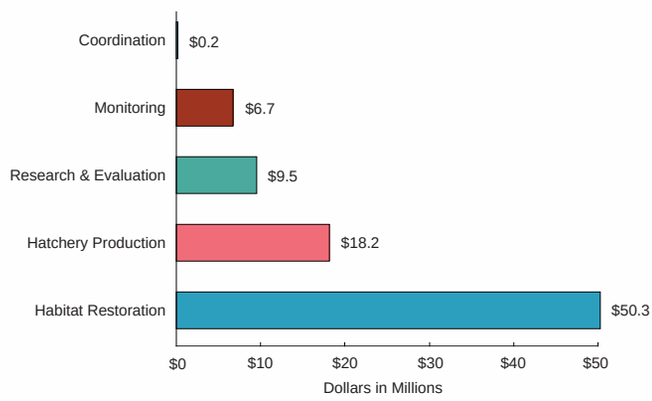


Bonneville Power Administration Investment by Basin 2006-2008

*An Additional $140.7 million was spent basin-wide, some of which is applicable to Oregon.
BPA investments occur in the Columbia River and tributaries only



Bonneville Power Administration Investment by Category 2006-2008



Voluntary Restoration

Voluntary programs initiated at the local level to protect and enhance the quality and stability of watersheds are an important part of the Oregon Plan and bring added value to Oregon's watershed restoration and habitat protection approach. The voluntary restoration work completed by private landowners – ranging from individuals to industries in rural and urban communities – allows Oregon to accomplish significant watershed, fish and wildlife habitat, and water quality results that cannot be achieved by governmental regulatory programs alone. Examples of voluntary restoration projects in each basin are highlighted in the Basin Reports section of this report.

Voluntary Restoration Accomplishments

The Watershed Restoration Outcomes table below shows the results of voluntary restoration work reported to the OWRI, IRDA, ODFW, FSA, and GRMWP databases between 1995 and 2007. For 2006 and 2007:

- Private land restoration was reported in every Oregon Plan reporting basin and a total of nearly 1,300 projects were completed on private land.
- Work was completed to improve approximately 1,500 miles and decommission about 400 miles of roads. Many of these projects reduced sediment in streams.
- Fish passage work improved 213 road crossings and retired 12 push-up dams.
- Road crossing work improved fish access to 472 stream miles.
- Other completed projects included work to improve the riparian condition of nearly 1,100 stream miles, plus instream and upland habitat improvement work.
- Over 11,000 acres were enrolled in the Conservation Reserve Enhancement Program, a federal and state partnership to assist landowners in improving riparian conditions for fish habitat and water quality.

Watershed Restoration Outcomes

Restoration Treatments	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	Total
Riparian miles treated	167	162	344	357	336	392	389	410	572	464	375	585	521	5072
Road: miles of road closures and decommissionings	245	45	137	281	372	326	321	205	191	133	97	128	276	2757
miles of road improvements	349	311	564	768	803	763	632	1396	884	722	835	437	1074	9538
Fish Screens: irrigation diversions with fish screens installed	0	0	0	5	2	5	155	110	113	70	63	92	80	695
Acres enrolled in CREP program	0	0	0	0	909	747	1953	3045	2351	4370	3604	7134	4371	28484
Fish Passage: stream crossing improved	53	87	179	326	292	250	308	259	203	195	143	136	77	2508
miles made accessible to fish due to stream crossing improvements	25	55	167	507	440	290	335	400	407	305	298	302	170	3700
Fish Passage: push-up dams retired	10	6	5	14	8	8	15	24	6	22	1	3	9	131

Note: Totals may differ from the 2005-2007 report summary due to data revisions and additional data reported from previous years.
Most values should stay the same or increase from values in previous years.

Local Partnerships

Landowners, under the Oregon Plan, are often assisted by a local organization, either a watershed council or soil and water conservation district. Other local government and nonprofit organizations also work with landowners. However, between July 1, 2007, and September 30, 2008, councils and districts were the recipient of 87 percent of OWEB's competitive grant awards for assessment, monitoring, education and outreach, technical assistance, habitat protection, and on-the-ground restoration projects.

Watershed councils (WCs) are locally organized, voluntary, non-regulatory groups established to improve the condition of watersheds in their local area. They are comprised of people from the local community who work across jurisdictional boundaries and across agency mandates to look at the watershed more holistically. Councils monitor and assess watershed conditions, provide learning opportunities, build community, leverage funding, and implement restoration projects. Funding is provided from OWEB to support

council capacity to effectively engage the participation of private landowners and local communities. Highlights of their activities include:

- Over 80,000 volunteer hours, including a total of 3,231 tree planting volunteers, 1,870 river clean-up volunteers, 829 water quality monitoring volunteers, and 2,178 invasive species removal volunteers.
- On average, 957 people attend watershed council meetings every month.
- Councils sponsored landowner workshops involving 2,068 people, public information meetings attended by 3,641 people, and watershed tours attended by 3,574 people.

Soil and water conservation districts (SWCDs) are local government entities that provide the local link between state and federal programs and landowners. The SWCDs complement the work of watershed councils. Funding from OWEB is distributed through ODA to 45 SWCDs for conducting outreach and providing technical assistance to landowners interested in doing projects. Highlights of their activities include:

- SWCDs contacted 53,000 landowners and provided assistance to 8,800 landowners.
- SWCDs presented 101 workshops that attracted over 2,300 attendees.
- SWCDs sponsored 90 tours attended by nearly 2,000 people.
- SWCDs monitored 513 sites for water quality.
- SWCDs helped to implement 535 projects to improve water quality, including CREP implementation, stream habitat improvements, grazing management, and nutrient management.

Ongoing Voluntary Restoration Work

Some watershed restoration projects can take considerable time to complete, and the reporting of projects to OWRI can occur several years after OWEB awards a grant to initiate the work. Currently there are nearly 1,000 open OWEB grants, totaling over $85 million in funds committed. Of these, 621 grants, or $57 million in funds committed, are for restoration projects that are still in progress, but not yet reported. On average, 80 percent of OWEB awards are spent on goods and services in the county in which the grant is awarded, supporting local jobs and communities.

Citizens and community groups can now track OWEB grant information online through the OWEB Grant Management System (OGMS). For more information, please visit www.oregon.gov/OWEB.

The table shows the status of all active (yet to be completed) OWEB grants, showing that there is a significant amount of watershed investment work in progress. OWEB tracks active grants, and works with grantees to help them complete grants in a timely manner.

Active Grants

As of September 22, 2008

Basin Name	Number of Grants	Total Awarded	Unspent Balance
Statewide	49	$15,490,698.58	$9,955,457.67
Deschutes	68	$7,589,212.00	$3,913,835.70
Grande Ronde	43	$2,675,682.00	$2,125,837.41
Hood	32	$2,189,332.00	$677,186.11
John Day	73	$3,915,781.00	$2,645,344.20
Klamath	21	$3,496,138.00	$1,074,801.74
Lakes	33	$1,820,602.00	$1,288,285.07
Lower Columbia	21	$825,548.45	$608,901.92
North Coast	117	$8,165,298.68	$4,547,931.66
Owyhee-Malheur	50	$6,487,972.00	$2,646,099.42
Powder	20	$737,086.00	$512,089.91
Rogue	63	$6,499,848.44	$5,161,963.08
South Coast	72	$6,376,435.16	$3,691,720.78
Umatilla	54	$2,151,743.24	$1,465,222.10
Umpqua	48	$4,056,294.00	$3,061,374.61
Willamette	192	$13,105,605.00	$7,842,272.15
Total	**956**	**$85,583,276.55**	**$51,218,323.43**

Monitoring

Oregon continued a significant focus on monitoring associated with the Oregon Plan in the 2007-2009 biennium. Monitoring programs and projects allow for the documentation of watershed conditions, track various key environmental attributes over time, evaluate the effectiveness of conservation and restoration efforts, and provide information for setting priorities and making informed decisions for the future.

General Observations

- With decreases in state resources projected over the next couple of years, monitoring programs are likely to be reduced. This may limit data collection and analysis needed for decision-making related to Oregon's natural environment.
- The role of citizen science and collaboration will need to grow to continue grass roots efforts under the Oregon Plan, including monitoring.
- Monitoring efforts should utilize the latest technological advancements, particularly in data collection and distribution programs. This leads to more useful data for technical analysis and more easily-accessible information for the general public.

Monitoring at Marmot Dam on the Sandy River (photo from OWEB)

Monitoring Accomplishments

- Watershed councils and soil and water conservation districts continue to implement 41 environmental monitoring programs funded by OWEB, focusing particularly on water quality and fish monitoring. These efforts occur at the local level involving citizens to inform key watershed management and restoration decisions.
- OWEB entered its second year of an Effectiveness Monitoring Program focusing on the evaluation of riparian livestock exclusion and Western juniper removal projects. The Program added monitoring of small dam removal at Marmot Dam on the Sandy River, Brownsville Dam on the Calapooia River, and Savage Rapids Dam on the Rogue River. Monitoring the effectiveness of irrigation efficiency, the Conservation Reserve Enhancement Program, and wetlands project investments were also added this biennium. More information is available at www.oregon.gov/OWEB/MONITOR/monitoringreports_linked.shtml.
- Oregon continued to participate in Pacific Northwest Aquatic Monitoring Partnership regional monitoring efforts, which yielded initiatives and progress toward Northwest-wide alignment of salmon monitoring programs and High-Level Environmental Indicator reporting.
- OWEB, with help from Oregon State University, made the OWRI database and maps of more than 10,000 restoration projects from around the state available for the first time online at http://oregon-explorer.info/OWRI/OWRI.aspx?Res=17100.
- OWEB invested nearly $2.1 million in grants to monitoring projects throughout Oregon.
- The Legislature allocated over $5.7 million in funds to state agencies for monitoring fish populations, water quality, and habitat.

For more information: http://www.oregon.gov/OWEB/MONITOR/

Oregon Plan Monitoring Team Members 2007 - 2009

BLM
DEQ
DSL
NOAA Fisheries
ODA
ODF
ODFW
OWEB
USFS
WRD

Science Oversight

The Independent Multidisciplinary Science Team (IMST) is a panel charged with advising the State of Oregon on science related to the Oregon Plan. The IMST's scientific guidance enhances Oregon's efforts in recovering native fish populations, improving water quality, and enhancing watershed health. IMST scientists represent a spectrum of scientific disciplines relevant to the management of Oregon's natural resources and are jointly appointed by the Governor, Senate President, and Speaker of the House of Representatives. The goals of IMST activities are to foster:

- Enhanced credibility of the Oregon Plan through recognition that actions taken under the Oregon Plan are based on the best available science.
- Improved design, implementation, and monitoring of actions by Oregon Plan partners to achieve specific outcomes related to Oregon Plan goals.
- Increased exposure to and understanding of relevant science on the part of those engaged in restoring salmonids and watersheds.

Members of IMST

- **Michael J. Harte**, College of Oceanic and Atmospheric Sciences, Oregon State University
- **Robert M. Hughes**, Department of Fisheries and Wildlife, Oregon State University
- **Victor W. Kaczynski**, Consulting Fisheries Scientist
- **Nancy Molina**, Cascadia Ecosystems
- **Carl Schreck**, Biological Resources Division, USGS, U.S. Department of Interior
- **Clinton Shock**, Department of Crop and Soil Science, Oregon State University

General Observations

The IMST continually evaluates information needs related to the implementation of the Oregon Plan, as well as other critical issues surrounding the management of Oregon's natural resources. The IMST regularly communicates with state agencies, the Legislature, and other key Oregon Plan stakeholders and engages these entities in the formulation and prioritization of IMST work, ensuring that IMST's products are timely, relevant, and useful. Impartiality is a cornerstone of IMST's work, and they routinely engage with other scientists to obtain a spectrum of interpretations and perspectives on the meaning and implications of scientific research.

Science Oversight Accomplishments

Accomplishments of the IMST in 2007-2009 focused on meeting state agency needs for scientific and technical information, and reviews of key programs, initiatives, and assessments. Products included:

- Scientific peer review of ODFW's draft Mid-Columbia River Steelhead Recovery Plan.
- Use of Ecological Indicators in Restoration Effectiveness Evaluations.
- Issues in Aggregating Environmental Data for Status and Trends Analysis.

During 2007-2009 IMST held monthly public meetings on a variety of topics, engaged state agency employees in formal and informal discussions of scientific questions, held briefings with other researchers on emerging scientific issues, participated in Oregon Plan Core Team meetings, and maintained a publicly available web-based searchable database of relevant scientific literature.

Current and Future IMST Projects

- Impact of Urban and Rural-Residential Land Uses on Watershed Function and Salmonids.
- Eastern and Central Oregon Resources: Their Effects on Recovery of Native Fishes and Watershed Functions.
- Scientific review of ODFW's draft recovery plan for Lower Columbia River Domain.
- Future projects will likely address the effects of climate change on native fish species, watershed conditions, and water needs/supply; the ecological roles and health of estuaries; invasive species; and, enhanced integrated monitoring for climate change and ecosystem health.

Additional information about the IMST is at www.fsl.orst.edu/imst/index.html

Oregon Watershed Enhancement Board

Overview and Investments

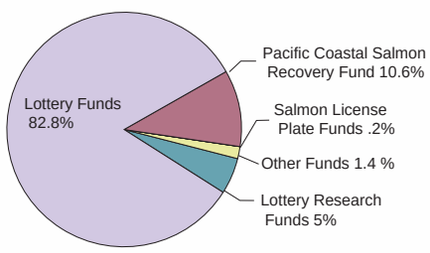
The Oregon Watershed Enhancement Board (OWEB) is a state agency that operates a grant program that invests in local communities to improve water quality and habitat for fish and wildlife. OWEB's mission is "to help create and maintain healthy watersheds and natural habitats that support thriving communities and strong economies." OWEB:

- Provides grants in local communities to preserve water quality and improve fish and wildlife populations.
- Funds voluntary and incentive-based projects.
- Enhances Oregon's quality of life by improving water quality, fish and wildlife populations, and watershed functions.
- Empowers landowners and local communities to develop solutions and implement projects.
- Builds local partnerships and trust around natural resource issues.
- Monitors and manages information, and reports on implementation of the Oregon Plan for Salmon and Watersheds.

OWEB is led by a 17-member policy oversight and decision-making board. Members represent the public-at-large, tribes, state natural resource agency boards and commissions, OSU Extension, and federal natural resource agencies. Members of the OWEB Board are listed on the back inside cover of this report.

OWEB administers constitutionally dedicated Ballot Measure 66 State Lottery revenues. In 1998, Ballot Measure 66 dedicated 15 percent of Lottery Fund revenues to parks and watershed restoration purposes; OWEB administers half of those funds. OWEB also administers congressionally appropriated Pacific Coastal Salmon Recovery Funds (PCSRF) and state Salmon License Plate proceeds.

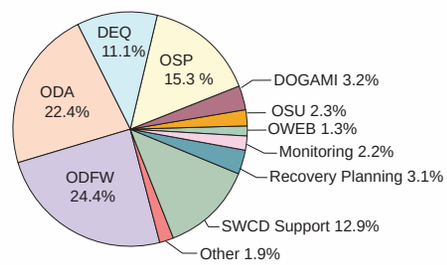
OWEB Funding Sources
July 2007- September 2008



$110 Million Total

In the 2007-2009 biennium, the majority of OWEB's funds were from Measure 66 State Lottery dollars (83%) and federal PCSRF funds (11%).

Allocation of Non-Competetive Funds
July 2007- September 2008



$46.5 Million Total

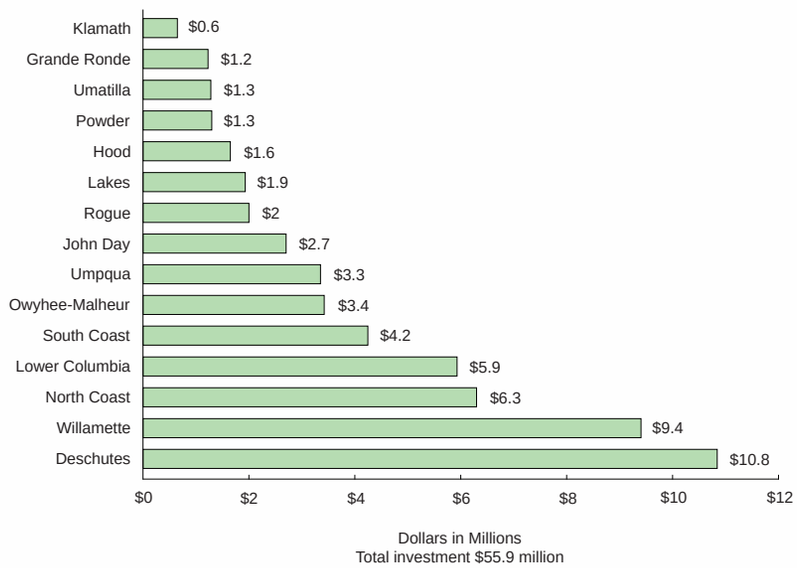
Non-competitive awards were made either through legislative appropriation or OWEB Board decisions outside of the regular grant processes. More than 89% of these funds were appropriated by the Legislature to state agencies to serve Oregon Plan needs. The remainder was allocated by OWEB primarily for recovery planning and monitoring.

Grant Program

The Grant Program at OWEB manages how project applications are processed, reviewed, and recommended for funding to the OWEB Board, and how grants are tracked during their implementation. There are five general categories of projects eligible for OWEB funding, including on-the-ground watershed management, assessment or monitoring of conditions, education and outreach, watershed council support, and technical assistance. In the 2007-2009 biennium, OWEB solicited and awarded funding for its first round of research projects.

Eighty percent of OWEB grant funds are spent in the county in which a grant is awarded, supporting local businesses through contracting and the purchase of supplies and equipment, and supporting family incomes. Watershed enhancement projects support jobs locally and increase the long-term sustainability of the local economy. Each dollar OWEB grants for watershed council support generates an additional five dollars for watershed projects in the local community.

Distribution By Basin OWEB Grant Funds
July 2007- September 2008

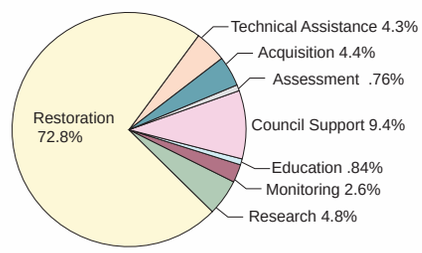


The $63.7 million awarded by OWEB between July 2007 and September 2008 is invested around the state in each Oregon Plan basin, including an investment of $7.5 million in statewide grants not shown in this graph. The Willamette and Deschutes basins have the largest investment from OWEB for watershed projects.

OWEB Partners

- private agricultural and forest landowners
- urban, rural, and industrial landowners
- tribes
- watershed councils
- soil and water conservation districts
- cities and counties
- business and industry
- conservation groups
- public interest groups
- state and federal natural resource agencies

Distribution By Type
July 2007- September 2008



$63.7 Million Total

Between July 2007 and September 2008, OWEB invested $63.7 million in local voluntary watershed projects. The majority of funding was awarded for on-the-ground watershed restoration projects (72.8%).

Partnership Investments

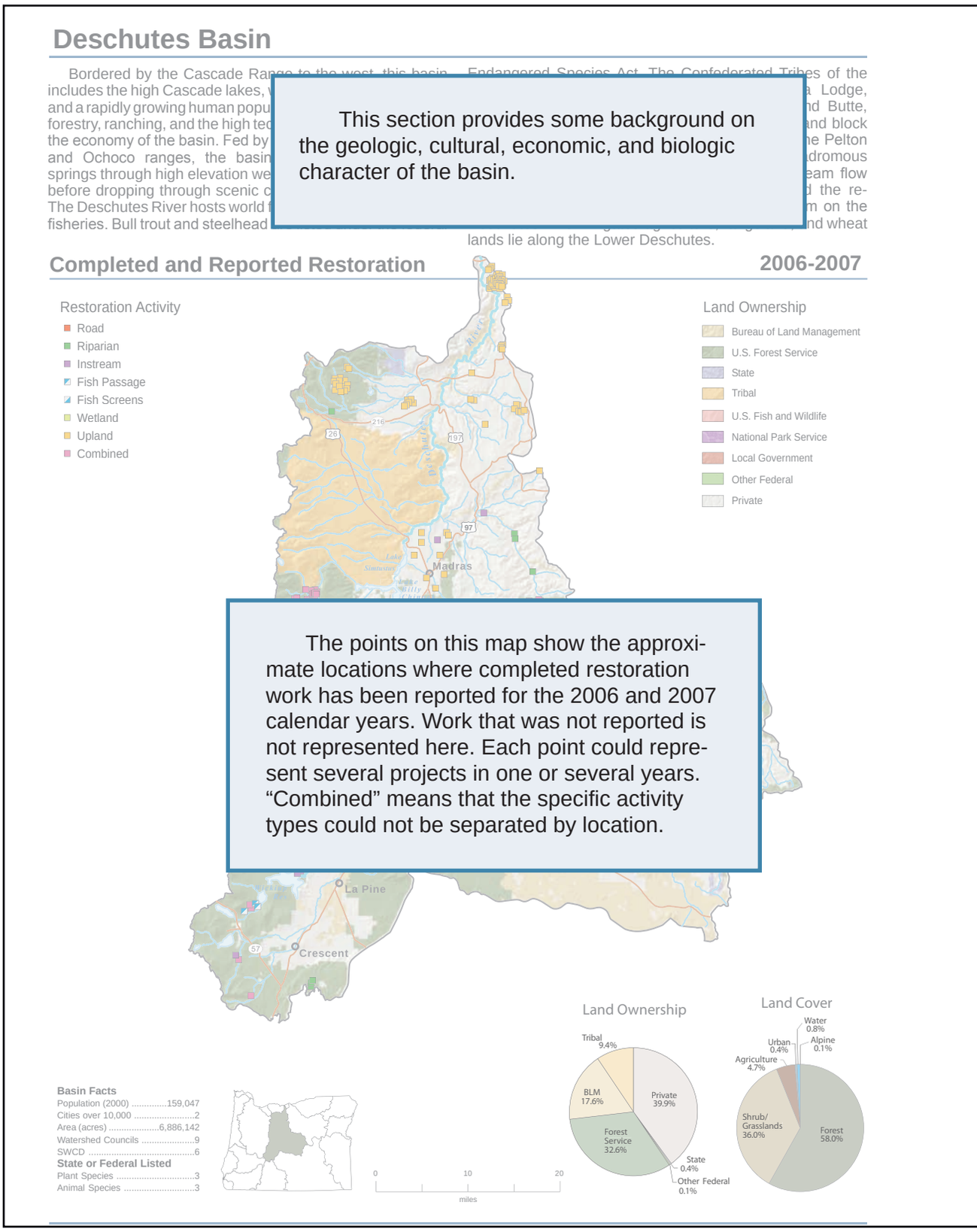
The OWEB Board continually looks for ways to focus restoration activities and leverage funding. This biennium, OWEB pursued the development of specific partnerships and desired ecological outcomes. OWEB approved two Special Investment Partnerships this biennium; one in the upper Deschutes Basin to improve habitat for reintroduced salmon and steelhead, and a second in the Willamette Basin to increase channel complexity and floodplain connections to the river.

In addition, the Board continues to support the partnerships with the U.S. Department of Agriculture to implement the Oregon Conservation Reserve Enhancement Program (CREP). This partnership matches state funds 20 percent to 80 percent with federal funds to restore riparian forested buffers in agricultural lands. The Board continued an effort with the USFWS, NOAA Fisheries, and Ecotrust to implement whole watershed restoration. This biennium, the Board also allocated funds to partner with ODFW to address the habitat needs of Oregon symbol species for the state's sesquicentennial celebration in February of 2009.

Key to Basin Layouts

These two pages explain the material reported for each of the 15 Oregon Plan reporting basins represented on the following pages. The Basin Reports section includes data from the Oregon Watershed Restoration Inventory (OWRI), the Federal Interagency Restoration Database, the Grande Ronde Model Watershed Program, and the ODFW Fish Screening and Passage Program.

In this report, the Basin Reports are presented in alphabetical order, beginning with the Deschutes on pages 18 and 19 and ending with the Willamette on pages 46 and 47.



Restoration Issues

Riparian/Wetland

- Drainage of high elevation wet meadows (streamflow)
- Loss of riparian cover

This section describes the riparian and wetland, upland, instream and passage, and other restoration issues common to the basin.

Investments and Activities 2006-2007

Funding for Completed and Reported Restoration by Year, 1995-2007
Adjusted to 2007 Dollars

This graphic shows the total reported funds for restoration in this basin between 1995 and 2007, adjusted to 2007 dollars. The totals here may differ from the 2005-2007 report due to data revisions, additional reported data, and the dollar year adjustments.

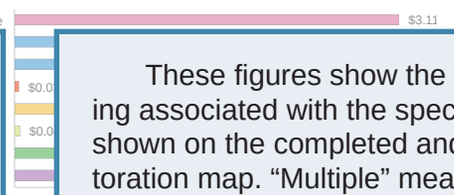
OWEB Investment in Restoration and Capacity, 2006 and 2007
Total Investment $6,547,644

This graphic shows the OWEB grant investment for the same time period (2006 and 2007). Watershed projects may take years to complete, although some projects funded by OWEB in this time period may have been completed and reported to the OWRI and may be captured on the map and in the other investment graphics.

Source of Funding for Completed and Reported Restoration, 2006 and 2007
Based on $8.7 Million Reported

This graphic shows the source of funds for restoration projects that were completed and reported in 2006 and 2007. The percentages of significant state funding sources are highlighted. The specific source of federal funding may not have been available and cannot be broken out.

Funding by Activity Type, 2006 and 2007
Dollars in Millions



These figures show the level of funding associated with the specific activity types shown on the completed and reported restoration map. “Multiple” means that funding amounts could not be separated by activity type in the data.

Project Story

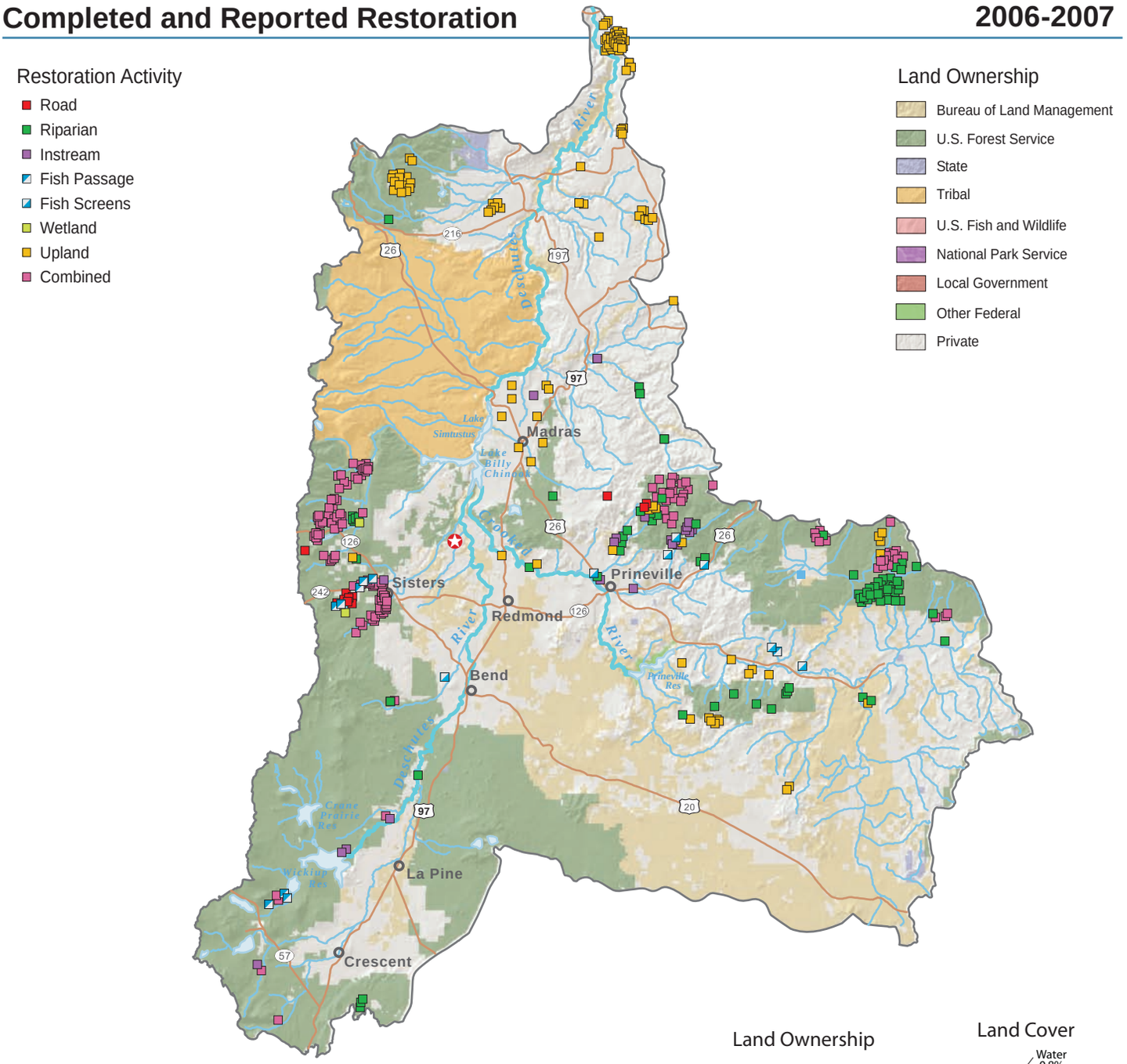
This area of the basin reports showcases a single project that was completed and reported to the OWRI in 2006 or 2007. Projects were selected to highlight the range of restoration activities and partners at work across the state. In every basin, there are many other worthy projects that deserve recognition.

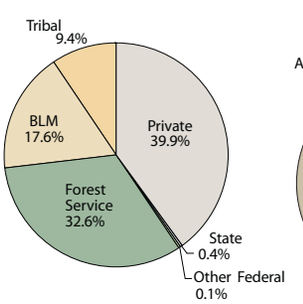
The location of the project story is marked on the basin map with a special star symbol. ✪

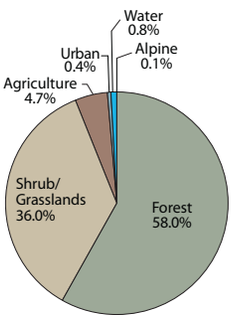
Deschutes Basin

Bordered by the Cascade Range to the west, this basin includes the high Cascade lakes, wild and scenic waterways, and a rapidly growing human population. Tourism, agriculture, forestry, ranching, and the 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 the Warm Springs Reservation operate Kah-Nee-Ta Lodge, a lumber mill, and other tribal enterprises. Round Butte, Ochoco, and Prineville dams generate electricity and block fish runs to the upper basin. The construction of the Pelton Round Butte complex starting in 1957 blocked anadromous fish access to the upper basin. Habitat and instream flow restoration activities are being undertaken to aid the re-introduction of anadromous fish above Pelton Dam on the Deschutes River. Irrigated agriculture, rangeland, and wheat lands lie along the Lower Deschutes.

Completed and Reported Restoration 2006-2007





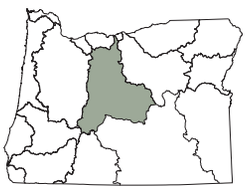


Basin Facts

Population (2000) 159,047
Cities over 10,000 2
Area (acres) 6,886,142
Watershed Councils 9
SWCD 6

State or Federal Listed

Plant Species 3
Animal Species 3



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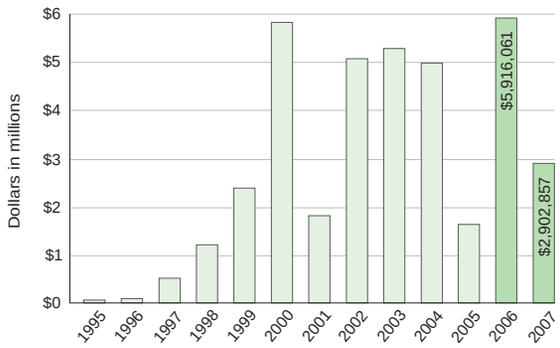
miles

Restoration Issues

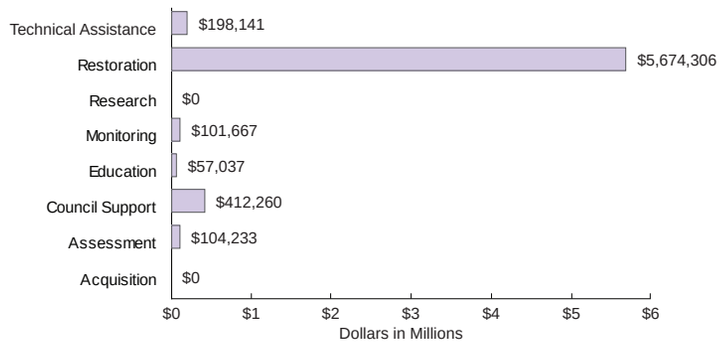
Riparian/Wetland	Upland	Instream and Passage	Other
• Drainage of high elevation wet meadows (streamflow) • Loss of riparian cover	• Altered fire regime and overstocked stands in forested areas • Increased sediment inputs from agriculture in lower basin • Juniper encroachment	• Loss of stream complexity • Irrigation diversions • Major blockage of anadromous fish at Pelton-Round Butte dams	• Rapid residential development • Habitat restoration for reintroduction of anadromous fish above Lake Billy Chinook

Investments and Activities 2006-2007

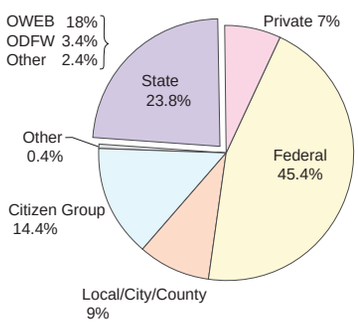
Funding for Completed and Reported Restoration by Year, 1995-2007
Adjusted to 2007 Dollars



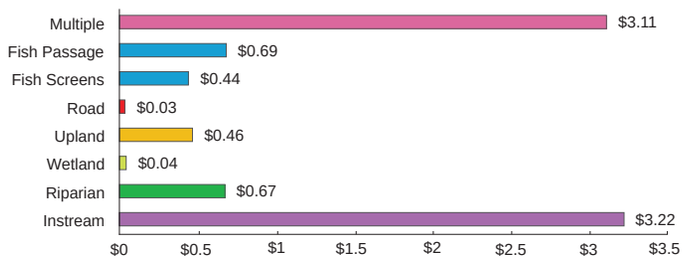
OWEB Investment in Restoration and Capacity, 2006 and 2007
Total Investment $6,547,644



Source of Funding for Completed and Reported Restoration, 2006 and 2007
Based on $8.7 Million Reported



Funding for Completed and Reported Restoration by Activity Type, 2006 and 2007
Dollars in Millions



Project Story

McKenzie Canyon Project

The summer flow in Whychus Creek has been significantly reduced by irrigation diversions since the late 1800s. Upstream of Sisters, major irrigation diversions emptied the creek of virtually all of the water and by the time the creek reached Sisters it was largely dry. This project replaced an open irrigation canal with two miles of pipeline resulting in the transfer of 1.2 cubic feet per second of water rights to instream use on Whychus Creek. Partners included the Deschutes River Conservancy, Upper Deschutes WC, BOR, Three Sisters Irrigation District, landowners, and OWEB.

Installing irrigation pipeline (photo by Deschutes River Conservancy)

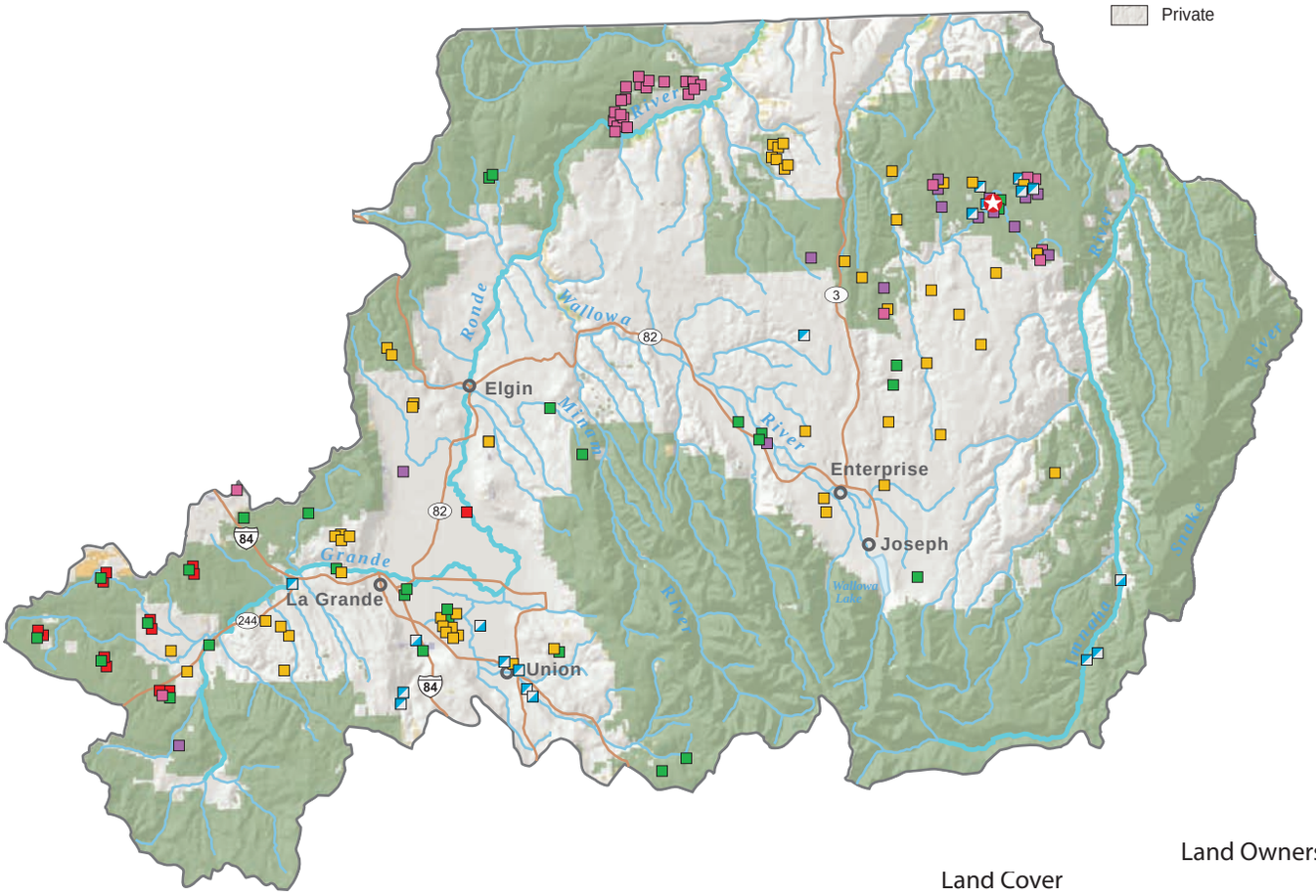
Grande Ronde Basin

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 to join the Snake River. 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.

Completed and Reported Restoration 2006-2007

Restoration Activity
- Road
- Riparian
- Instream
- Fish Passage
- Fish Screens
- Wetland
- Upland
- Combined

Land Ownership
- Bureau of Land Management
- U.S. Forest Service
- State
- Tribal
- U.S. Fish and Wildlife
- National Park Service
- Local Government
- Other Federal
- Private

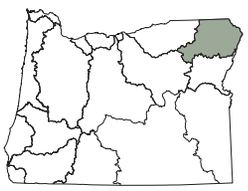


Basin Facts

Population (2000) 30,971
Cities over 10,000 1
Area (acres) 3,125,912
Watershed Councils 1
SWCDs 2

State or Federal Listed

Plant Species 4
Animal Species 4



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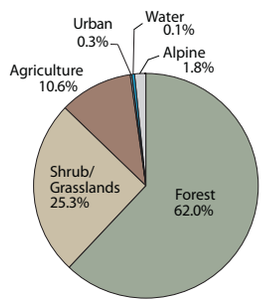
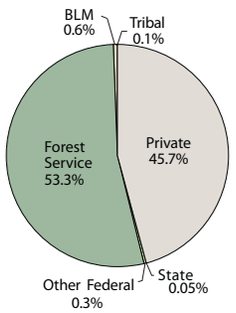
miles

Land Cover



Land Ownership

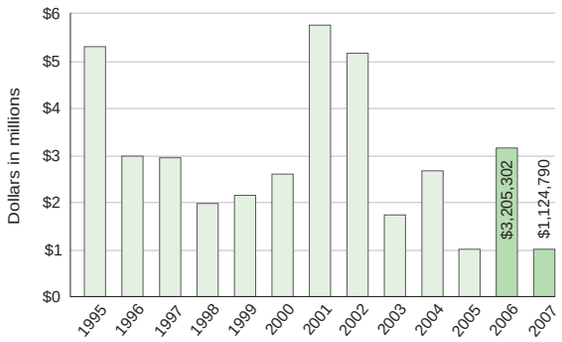


Restoration Issues

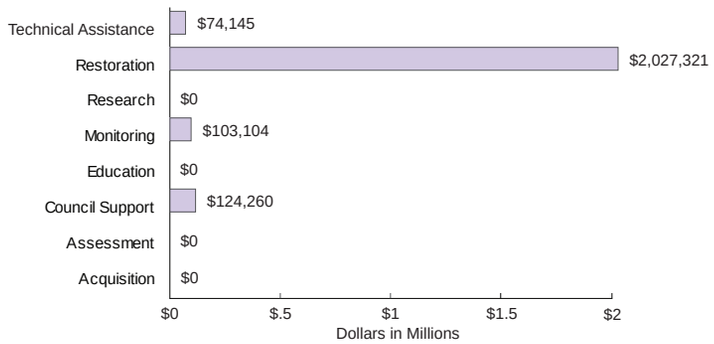
Riparian/Wetland	Upland	Instream and Passage	Other
• Drainage of high elevation wet meadows (streamflow) • Loss of riparian cover	• Altered fire regime and overstocked stands in forested areas	• Irrigation diversions • Loss of late summer flows • Loss of stream connectivity and complexity	• Loss of Sockeye salmon from Wallowa Lake

Investments and Activities 2006-2007

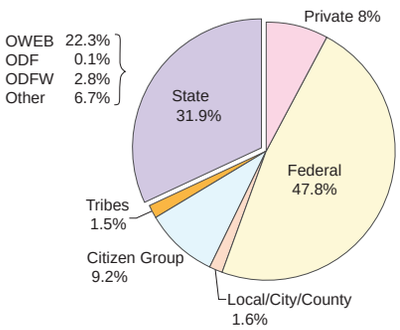
Funding for Completed and Reported Restoration by Year, 1995-2007
Adjusted to 2007 Dollars



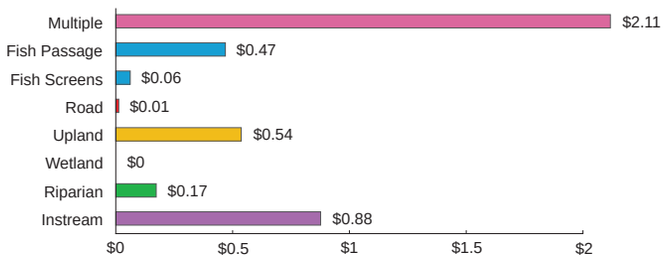
OWEB Investment in Restoration and Capacity, 2006 and 2007
Total Investment $2,328,830



Source of Funding for Completed and Reported Restoration, 2006 and 2007
Based on $4.2 Million Reported



Funding for Completed and Reported Restoration by Activity Type, 2006 and 2007
Dollars in Millions



Project Story

Billy Creek Culvert Replacement

Fish passage is a critical limiting factor to steelhead in the Grande Ronde watershed. At this site on Billy Creek, the culvert and associated instream structures were replaced with a wooden bridge and a new channel was constructed under the bridge and downstream for a length of 160 feet. The new bridge and channel have restored season-long passage to 9.5 miles of formerly blocked habitat. A steelhead redd was found just downstream of the bridge in 2006. Partners included Wallowa Resources, USFS, BPA, NOAA, OWEB, PacificCorp, and Grande Ronde Model Watershed.

Setting the bridge footings (photo by Wallowa Resources)

Hood Basin

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. 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.

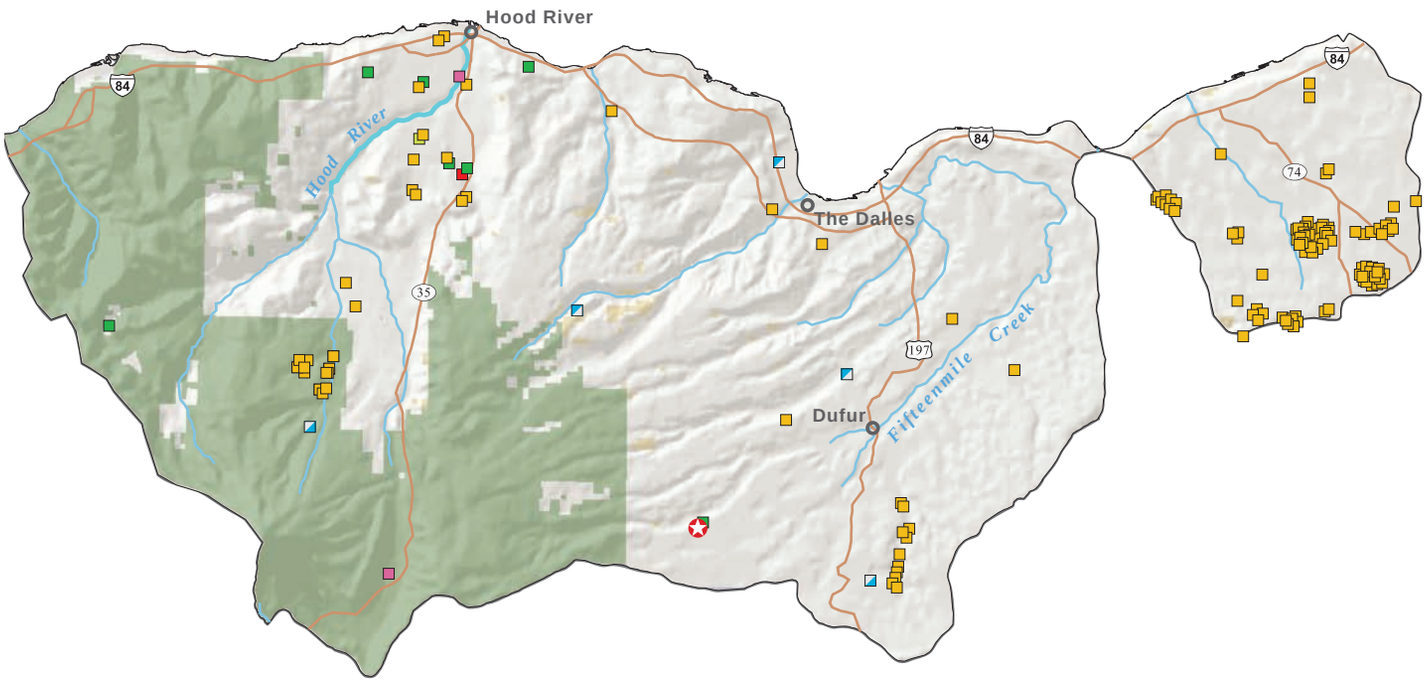
Completed and Reported Restoration 2006-2007

Restoration Activity

- Road
- Riparian
- Instream
- Fish Passage
- Fish Screens
- Wetland
- Upland
- Combined/Urban

Land Ownership

- Bureau of Land Management
- U.S. Forest Service
- State
- Tribal
- U.S. Fish and Wildlife
- National Park Service
- Local Government
- Other Federal
- Private

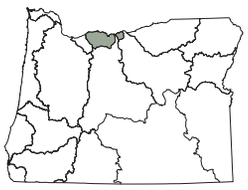


Basin Facts

Population (2000) 42,240
Cities over 10,000 1
Area (acres) 745,844
Watershed Councils.....5
SWCDs.....3

State or Federal Listed

Plant Species.....2
Animal Species.....6



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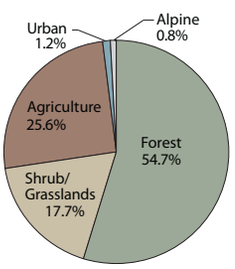
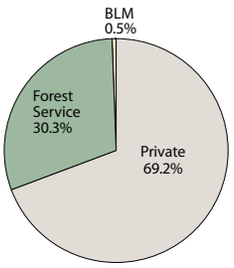
Land Cover



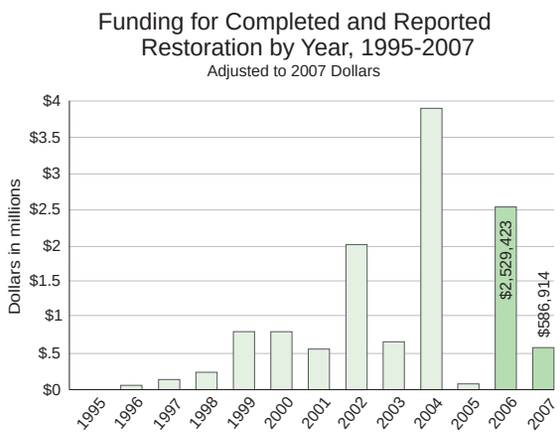
Land Ownership

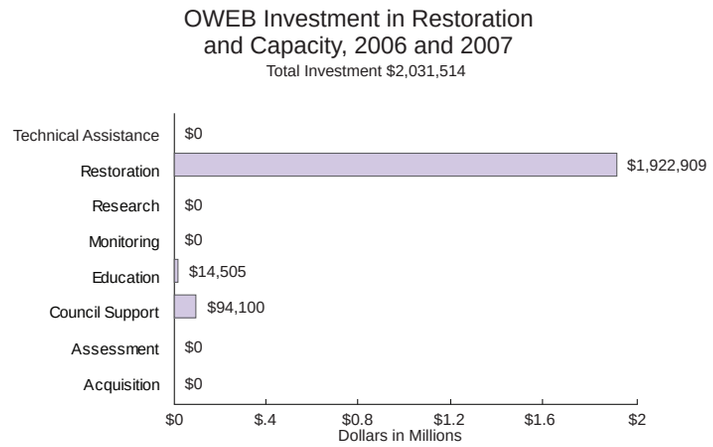


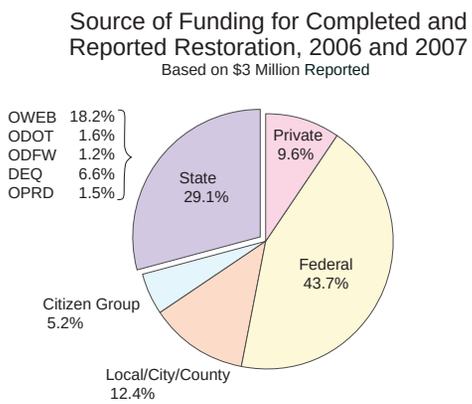
Restoration Issues

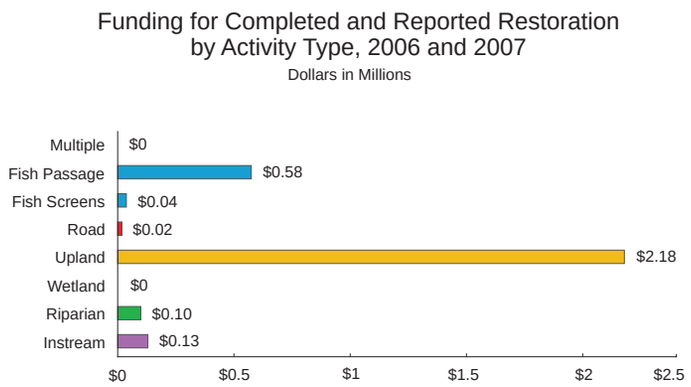
Riparian/Wetland	Upland	Instream and Passage	Other
• Loss of riparian cover • Glacial silt and high glacial melt flows	• Sediment inputs from agriculture • Orchard pesticides inputs to aquatic habitats	• Out of stream water use • Loss of stream complexity • Agricultural chemicals in stream and sediment • Glacial silt	• Powerdale Dam removal

Investments and Activities 2006-2007









Project Story

Fifteenmile Riverkeeper Project

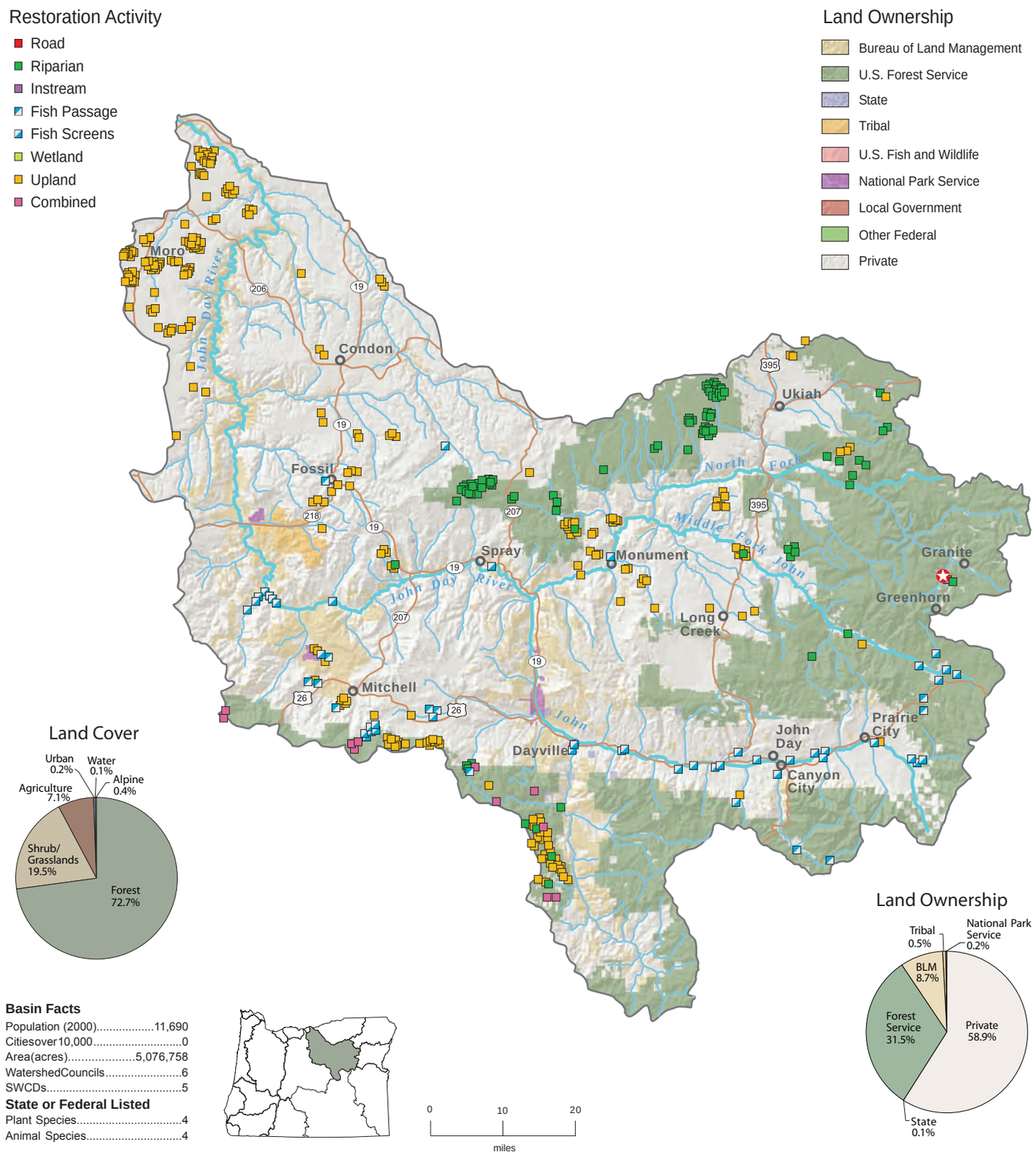
Fifteenmile Creek originates in the Mt. Hood National Forest and is home to the easternmost run of wild winter steelhead in the Columbia Basin. Habitat conditions were poor in the project area downstream of the national forest with few pools, large wood, or other habitat elements. Heavy equipment placed 650 logs over 0.8 mile of the creek, including log jams to prevent road washouts and improve fish habitat. Seven pools were also excavated to increase pool density and to provide for spawning gravel recruitment. Partners included the Wasco SWCD, City of Dufur, ODFW, OWEB, and USFS.

Constructing a logjam structure (photo by Wasco SWCD)

John Day Basin

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 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 Northwest. Nearly 40 percent of the basin is public land. Ponderosa pine and Douglas-fir forests in the Ochoco and Blue mountains dominate the headwaters. The north and middle forks of the John Day 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.

Completed and Reported Restoration 2006-2007



Basin Facts

Population (2000).....11,690
Cities over 10,000.....0
Area (acres).....5,076,758
Watershed Councils.....6
SWCDs.....5

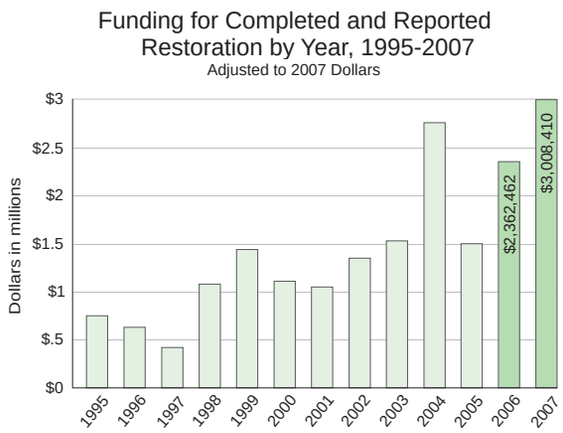
State or Federal Listed

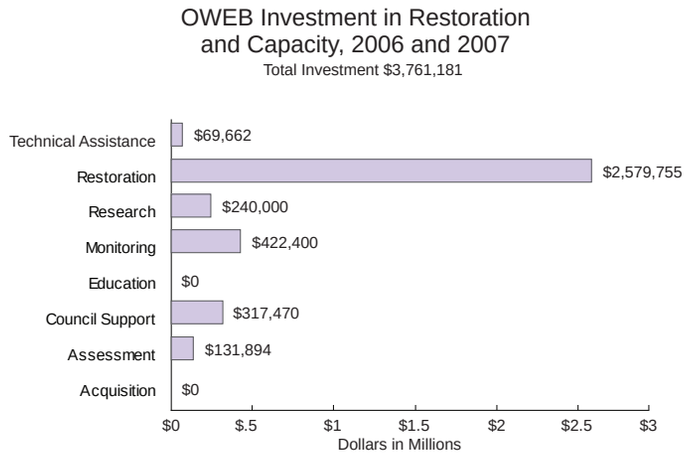
Plant Species.....4
Animal Species.....4

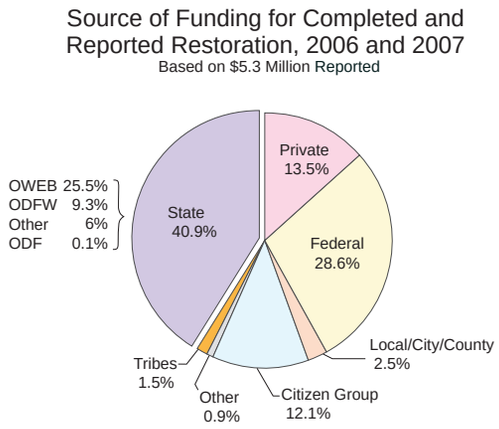
Restoration Issues

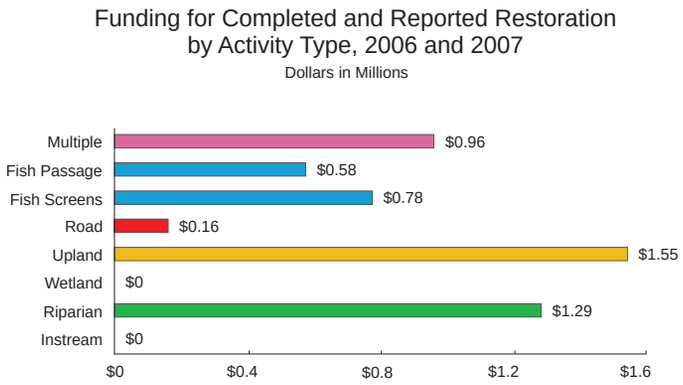
Riparian/Wetland	Upland	Instream and Passage	Other
• Drainage of high elevation wet meadows (streamflow) • Loss of riparian cover	• Noxious weeds • Juniper encroachment • Altered fire regime and overstocked and diseased stands in forested areas	• Loss of stream complexity • Fish passage barriers • Loss of cold water refuge habitats • Reduced streamflows • Irrigation diversions	• Significant cumulative temperature increases in the lower river

Investments and Activities 2006-2007









Project Story

Clear Creek Floodplain Restoration

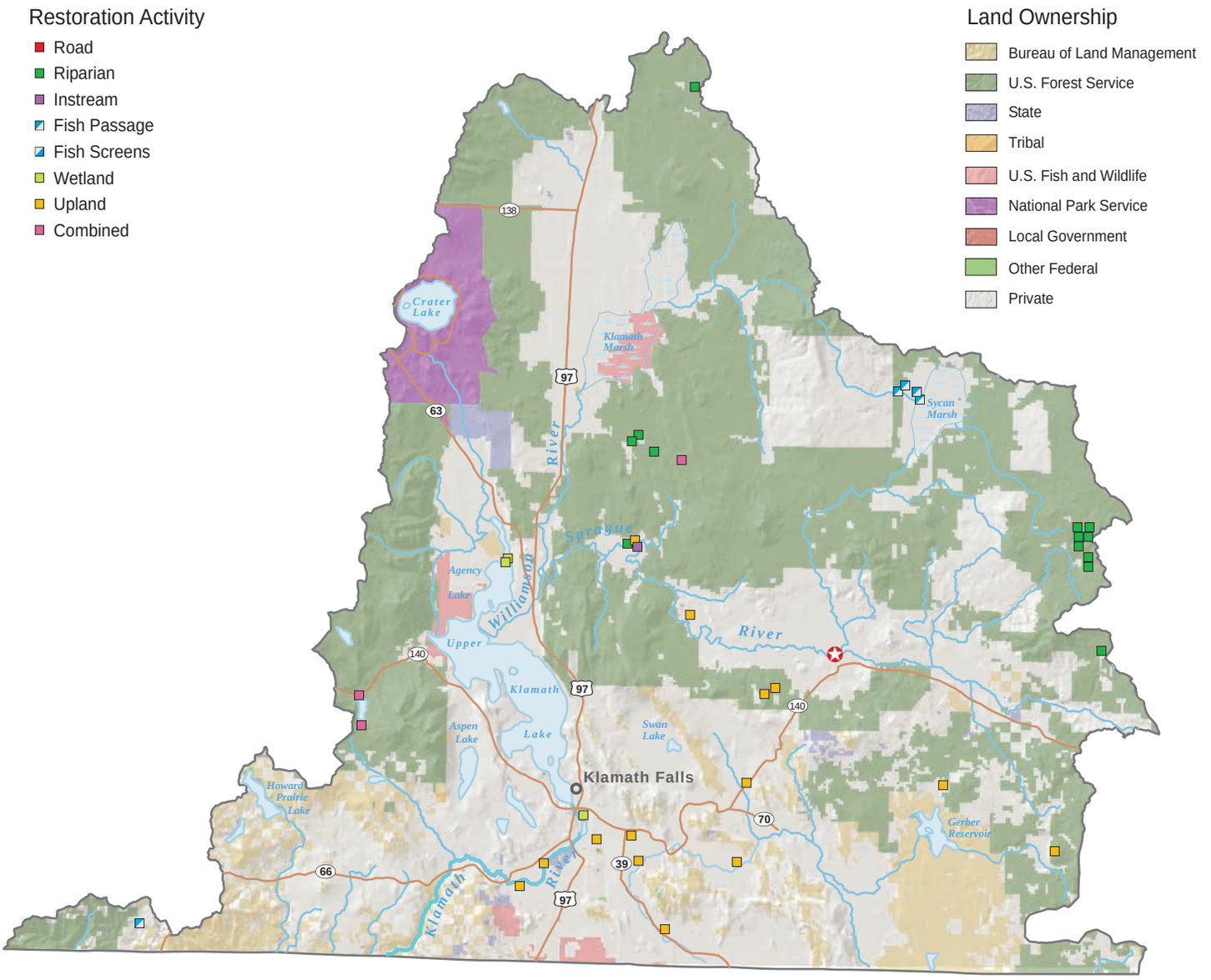
The Grant SWCD has been working since 1999 to restore natural stream function in the Lower North Fork John Day Basin where dredging from mining had turned stream channels upside down, significantly affecting fish habitat. This project completed 1.6 miles of floodplain restoration in Clear Creek by redistributing and shaping dredge tailings. The results are unrestricted stream channels that will create meanders, backwaters, and other fish habitat elements, and a functioning riparian zone that will support grasses and other vegetation. Additional partners included the Umatilla National Forest, Confederated Tribes of the Umatilla Indian Reservation, OWEB, and USFWS.

Clear Creek floodplain after 2006 work (photo by Grant SWCD)

Klamath Basin

The Klamath Basin has been the focus of national attention following the drought of 2001. Flowing south from Crater Lake National Park and the Gearhart Wilderness, 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 immense 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.

Completed and Reported Restoration 2006-2007

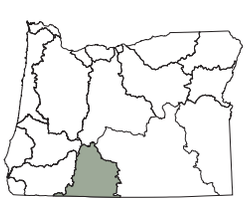


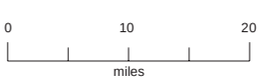
Basin Facts

Population (2000).....61,712
Cities over 10,000 1
Area(acres).....3,627,446
Watershed Councils.....6
SWCDs.....1

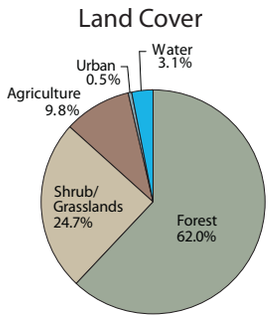
State or Federal Listed

Plant Species.....5
Animal Species.....9

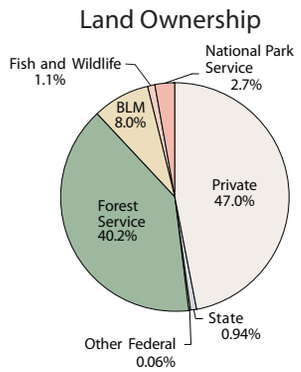




Land Cover



Land Ownership

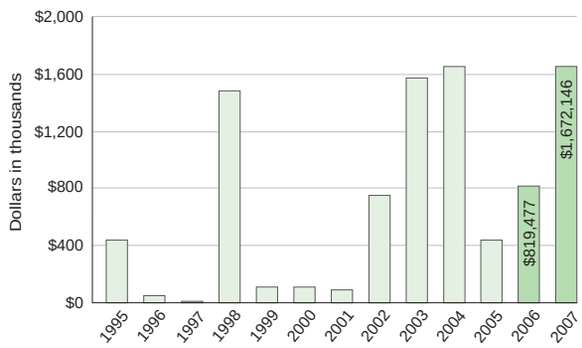


Restoration Issues

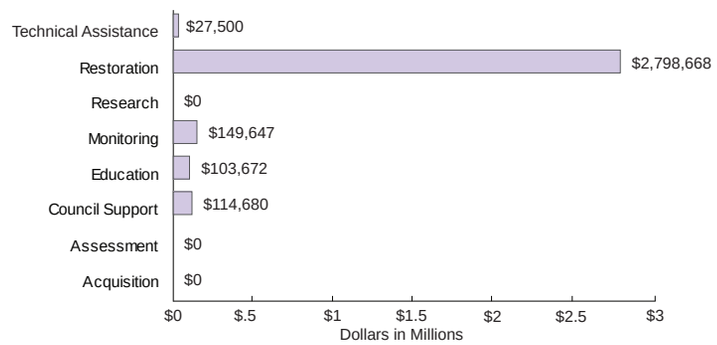
Riparian/Wetland	Upland	Instream and Passage	Other
• Loss of lake fringe wetlands, riparian cover, and floodplain connectivity • Unstable streambanks	• Altered fire regime • Juniper encroachment • Forest insect infestations	• Unscreened diversions • High stream temperatures	• Surface and ground water withdrawals • Nutrient loading into Upper Klamath Lake • Four mainstem dams block anadromous fish

Investments and Activities 2006-2007

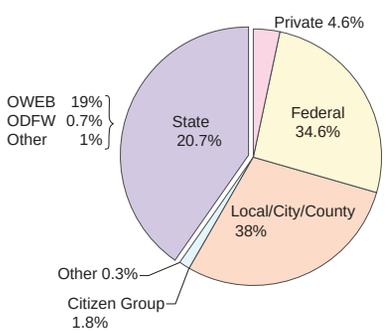
Funding for Completed and Reported Restoration by Year, 1995-2007
Adjusted to 2007 Dollars



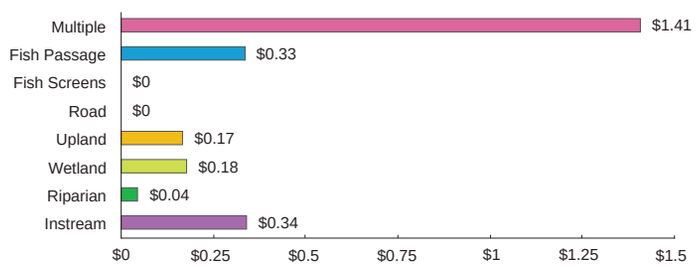
OWEB Investment in Restoration and Capacity, 2006 and 2007
Total Investment $3,194,167



Source of Funding for Completed and Reported Restoration, 2006 and 2007
Based on $2.5 Million Reported



Funding for Completed and Reported Restoration by Activity Type, 2006 and 2007
Dollars in Millions



Project Story

Winding Sprague Ranch Project

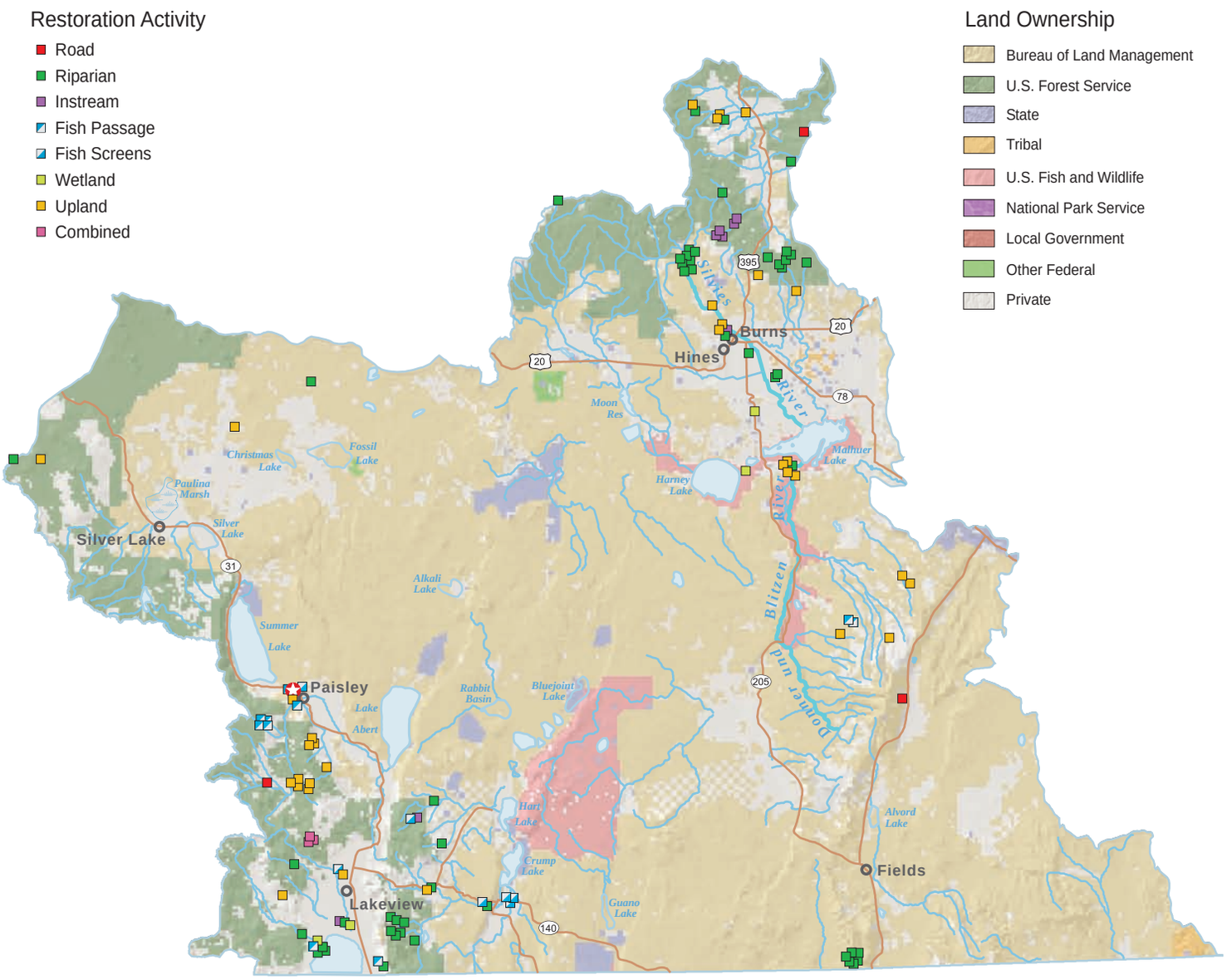
The project, started in 2005 and completed in 2007, was a demonstration project for reactivating historical meanders and implementing both passive and active restoration treatments on the Sprague River near Beatty. The project site is an important migration corridor for federally listed shortnose and Lost River suckers, redband trout, and Klamath large scale suckers. The project converted side channels to backwater wetlands, reactivated 4,000 feet of historical channel meanders, installed 13 large wood structures for fish habitat, excluded livestock from the river corridor, and installed over 20,000 plants to restore riparian vegetation. Partners included the Winding Sprague Ranch, USFWS, River Design Group, Inc., John Richmond Contracting, Inc., and OWEB.

An aerial view of the channel and wetland restoration on the Sprague River (photo by USFWS)

Lakes Basin

Waters that flow in the desert country of Lake, southern Harney, and southwestern Malheur counties drain toward lakes like 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 principally support the basin's communities.

Completed and Reported Restoration 2006-2007

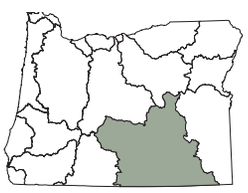


Basin Facts

Population (2000) 10,098
Cities over 10,000 0
Area (acres).....11,638,073
Watershed Councils.....5
SWCDs.....3

State or Federal Listed

Plant Species.....7
Animal Species 10



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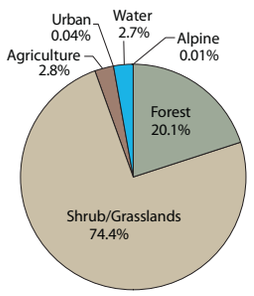
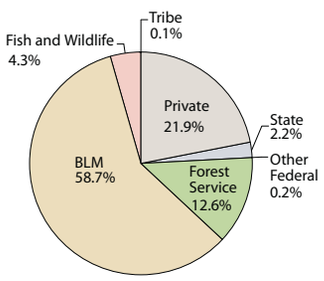
miles

Land Cover



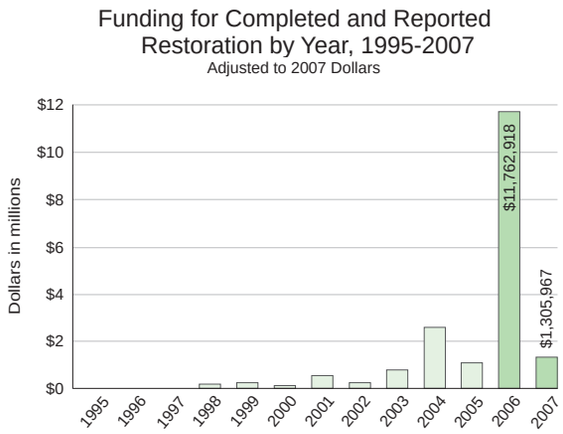
Land Ownership

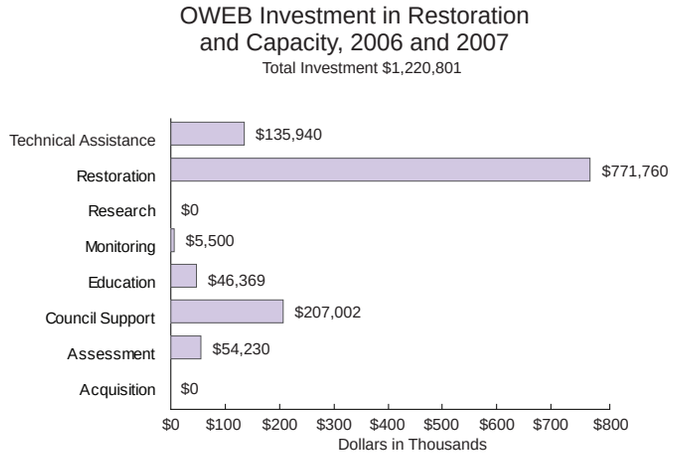


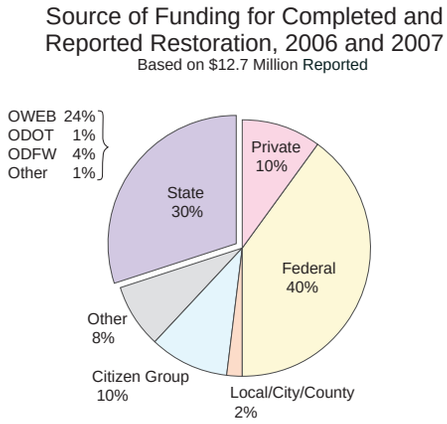
Restoration Issues

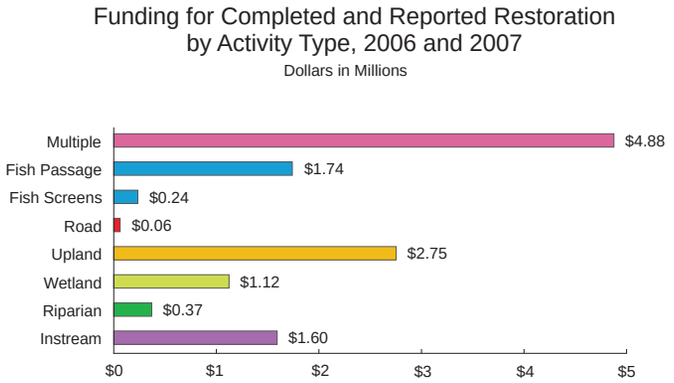
Riparian/Wetland	Upland	Instream and Passage	Other
• Channelization of riparian systems • Loss of riparian cover	• Noxious weed encroachment • Juniper encroachment • Loss of shrub steppe habitats • Altered fire regime • Forest insect infestations	• Lack of connectivity for adfluvial redband trout • Channelized streams	• Sage grouse habitat decline

Investments and Activities 2006-2007









Project Story

Paisley Town Weir Project

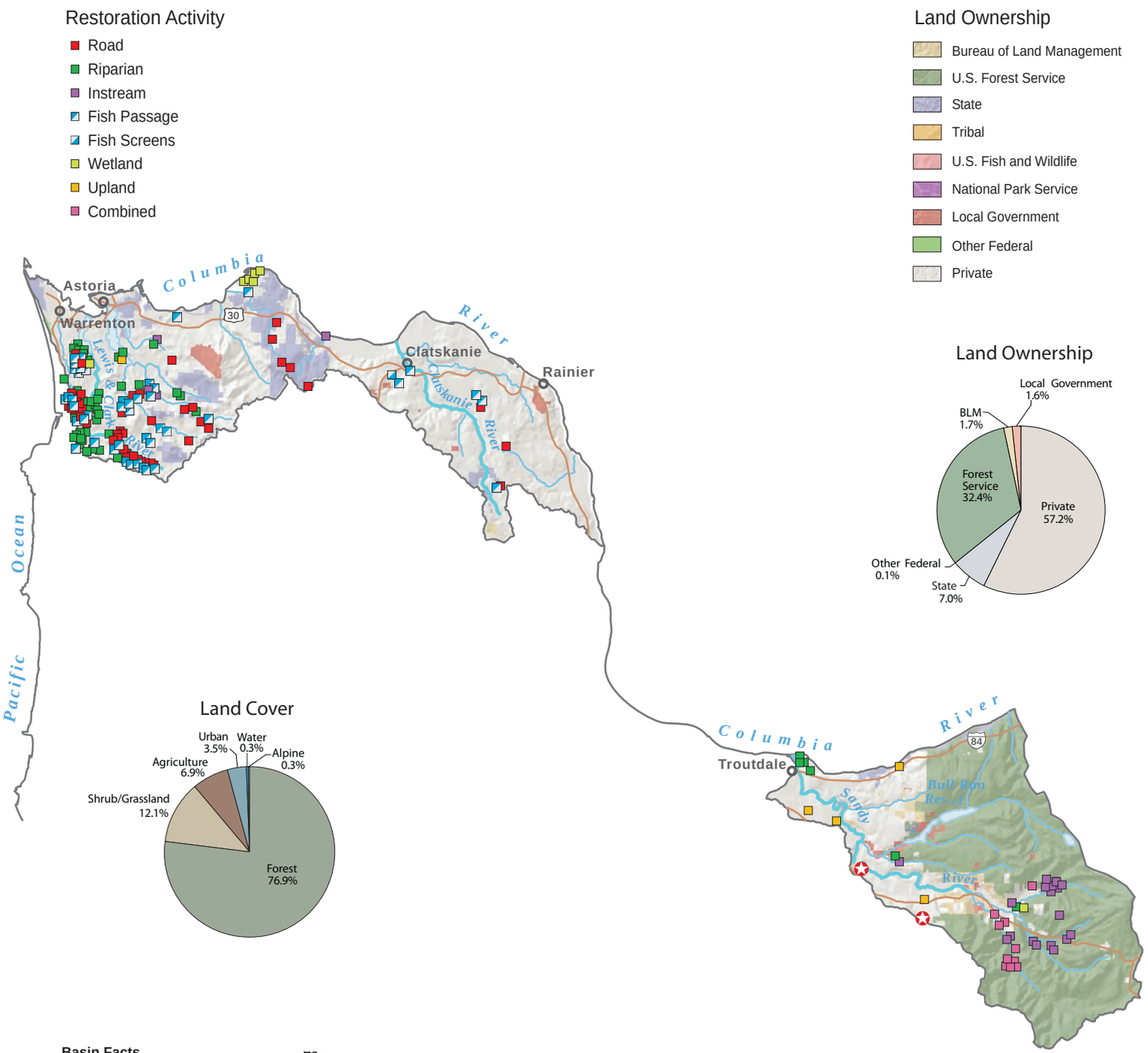
The Paisley Town Weir was an irrigation diversion structure that delivered water from the Chewaucan River to private irrigators and the citizens of Paisley, but was a barrier to redband trout. This project removed the weir and constructed a fish friendly diversion that allows both adult and juvenile fish passage. Since completion in 2006, redband trout have returned to the Chewaucan River past the town of Paisley, which now holds a summer fishing derby celebrating return of the trout fishery. This project also served as a catalyst for owners of two private irrigation diversions to build fish passage structures for two other barriers on the Chewaucan. Partners included the Bagley Ditch Company, J Spear Ranch Co., Lake County Resource Advisory Council, landowners, USFWS, NFWF, ODFW, ODOT, NFF, and OWEB.

The river after removal of the weir (photo by John Merwin)

Lower Columbia Basin

In the Lower Columbia Basin, a number of relatively small streams drain onto floodplains and into the tidal reaches of the Columbia River. Water flows either from the Coast Range (e.g. Skipanon, Young's, and Clatskanie rivers, Big and Gnat creeks), or from the west slope of the Cascades (Sandy 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. Undiked areas of the floodplain support high species diversity. Anadromous fish species listings under the federal Endangered Species Act include coho, chum and Chinook salmon, and steelhead. Maritime shipping, commercial fishing, forestry, and wood processing are key elements of the economy in this basin. Extensive hybrid cottonwood plantations occupy much of the diked floodplain. Dam removal in the Sandy River watershed was a significant event for salmon recovery.

Completed and Reported Restoration 2006-2007



Basin Facts

Population (2000) 97,783
Cities over 10,000 1
Area (acres) 771,803
Watershed Councils 5
SWCDs.....4

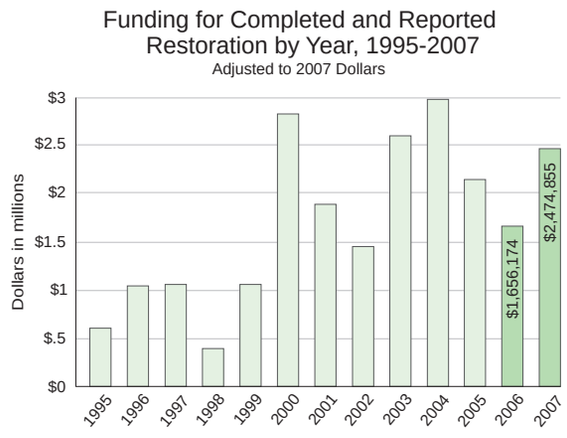
State or Federal Listed

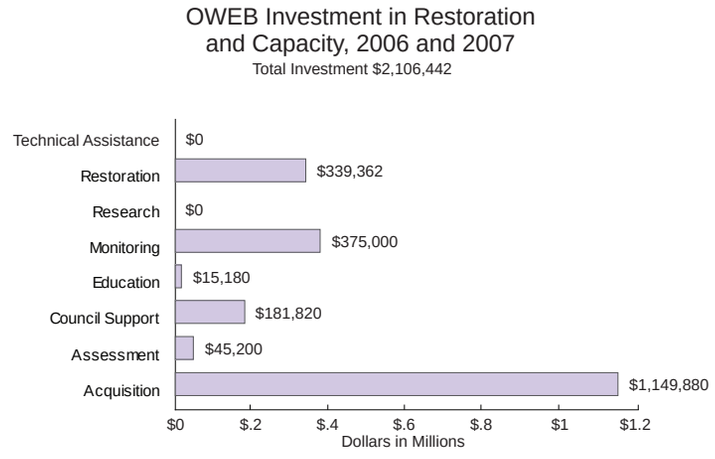
Plant Species.....4
Animal Species.....9

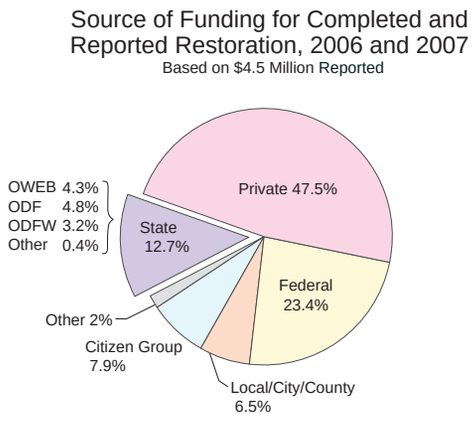
Restoration Issues

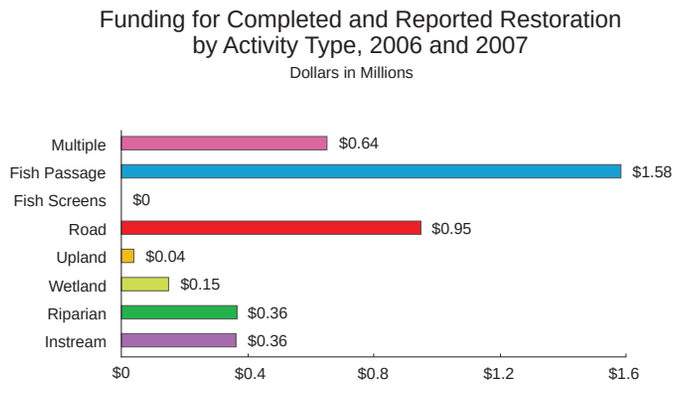
Riparian/Wetland	Upland	Instream and Passage	Other
• Loss of Columbia floodplain habitats • Loss of estuarine wetlands • Change of tidal inundation in tide gated areas • Flow changes due to management of hydroelectric projects.	• Fine sediments from farm and forest roads	• High stream temperatures • Inventory, prioritize and remove barriers • Low gradient stream complexity	• Urban encroachment • Water availability

Investments and Activities 2006-2007









Project Story

Cedar Creek Riparian Improvement Project

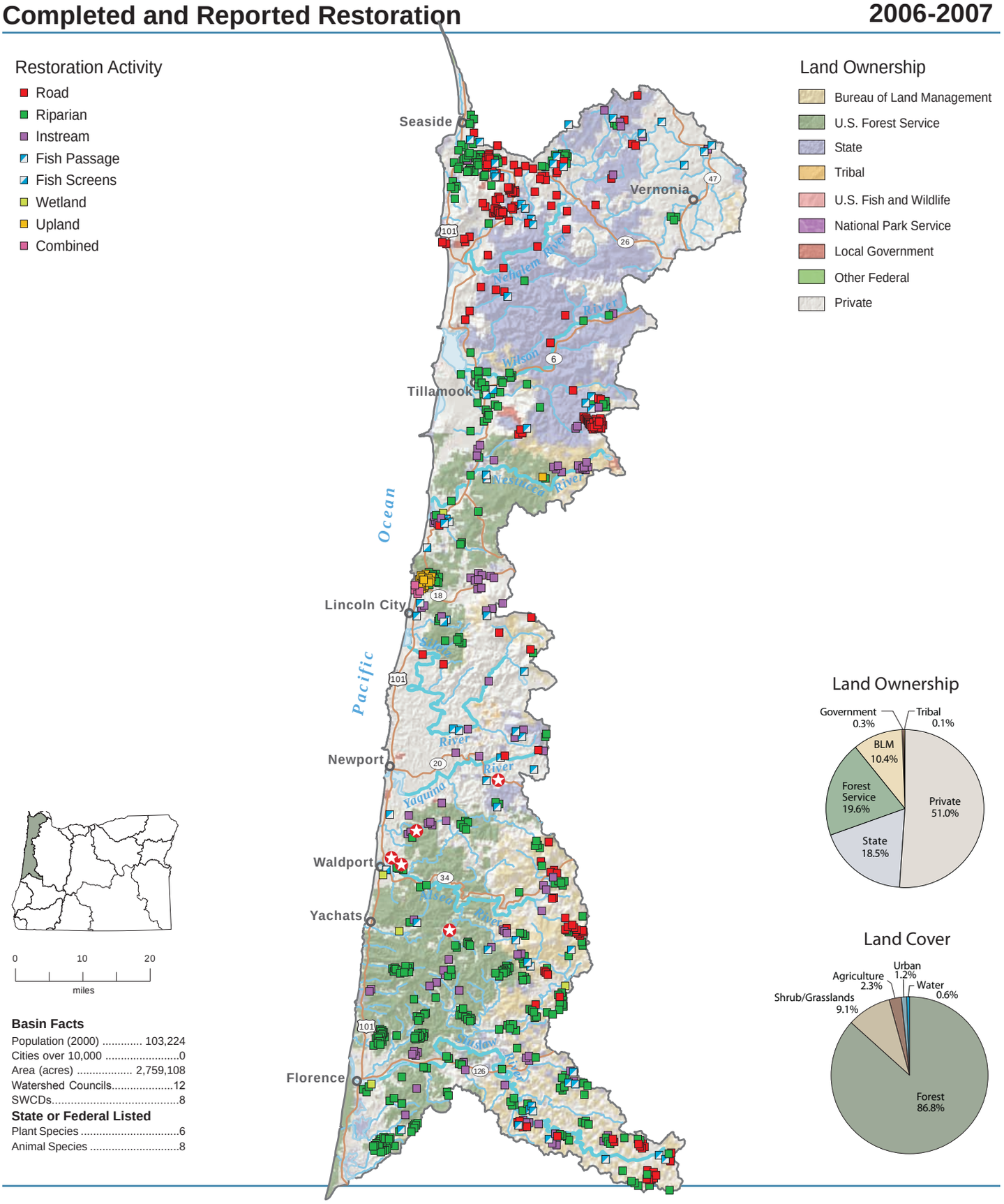
This project resulted in native trees and shrubs being planted on 16.7 acres along Cedar Creek and two of its tributaries in the Sandy River watershed. Partners developed relationships with each landowner and controlled invasive species and planted trees along the streams. A key goal of the project was to work with adjacent landowners so that the stream restoration efforts would have a greater impact. As a result, a core group of landowners is now engaged in maintaining and improving water quality, and 44 volunteers were involved in site preparation, tree planting, and maintenance. Partners included the Sandy River Basin WC, landowners, volunteers, Clackamas County SWCD, Project YESS – Mt. Hood Community College, Clackamas County Environmental Youth Corps, River Network, and OWEB.

Pacific willows shade the creek (photo by Sandy River Basin WC)

North Coast Basin

Composed of eight modestly sized, unobstructed tributaries to the Pacific Ocean, the North Coast basin supports coho, chum, and Chinook salmon, cutthroat trout, and steelhead. Coho salmon have been listed as “threatened” under the federal Endangered Species Act and are the focus of significant conservation efforts. Fall Chinook runs are relatively healthy and support world famous fisheries. Douglas fir and Western Hemlock forests of the coast range support a strong forest industry. The Tillamook State Forest, site of the legendary Tillamook Burn in 1933, is beginning to come into harvestable condition. Rivers in this basin are underlain by basalt or sandstone geology with lush forest cover, and are primarily privately managed. The Tillamook County Creamery supports a strong dairy industry in the Tillamook Bay and Nestucca drainages. Estuaries often host recreational fishing and some are a home base for commercial fishing fleets.

Completed and Reported Restoration 2006-2007



Basin Facts

Population (2000) 103,224
Cities over 10,000 0
Area (acres) 2,759,108
Watershed Councils.....12
SWCDs.....8

State or Federal Listed

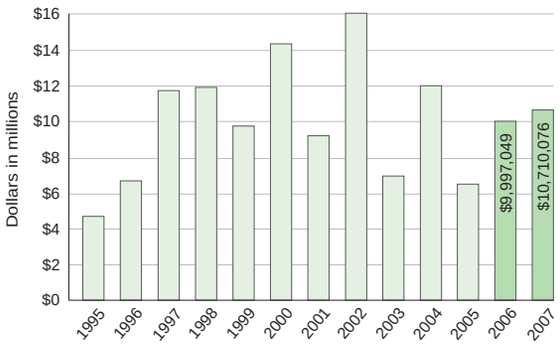
Plant Species 6
Animal Species 8

Restoration Issues

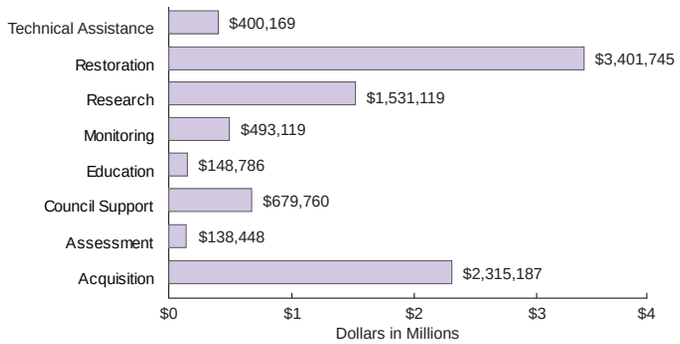
Riparian/Wetland	Upland	Instream and Passage	Other
• Loss of estuarine and low gradient floodplains and wetlands • Loss of riparian cover • Invasive species • Change of tidal inundation in tide gated areas	• Sediment delivery from roads	• Lack of stream complexity • High stream temperature • Tidegate barriers to fish passage • Fish passage barriers	• Urban encroachment • Water availability

Investments and Activities 2006-2007

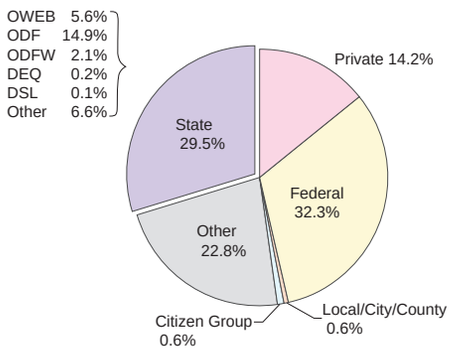
Funding for Completed and Reported Restoration by Year, 1995-2007
Adjusted to 2007 Dollars



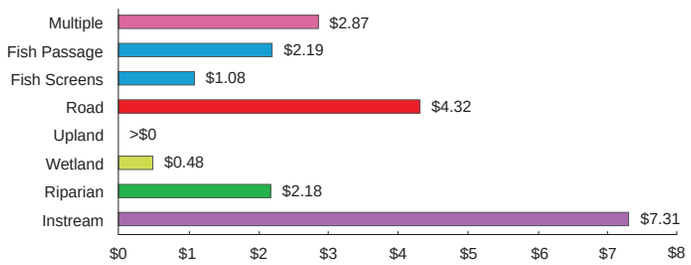
OWEB Investment in Restoration and Capacity, 2006 and 2007
Total Investment $9,108,333



Source of Funding for Completed and Reported Restoration, 2006 and 2007
Based on $20.4 Million Reported



Funding for Completed and Reported Restoration by Activity Type, 2006 and 2007
Dollars in Millions



Project Story

Fishing for Trees

In 2006, Governor Kulongoski declared a state of emergency for Oregon's coastal counties impacted by Klamath River fishing restrictions. In response, OWEB offered a special grant program for projects that employed displaced fishers and implemented salmon recovery restoration work. Fishing for Trees was created to employ five displaced salmon fishermen to work on restoring riparian areas with native trees and shrubs. More than 7,000 native trees and shrubs were planted on 13 private properties and USFS land. Partners included the Lincoln SWCD, NRCS, USFS, Ten Mile National Audubon Society, Partners of Plum Creek, Green Diamond, landowners, DEQ, and OWEB.

Site preparation and planting (photo by USFS)

Owyhee-Malheur Basin

The upper Owyhee and Malheur River drainage is a very lightly populated portion of the state. The lower portions of both basins, the western edge of the Treasure Valley, supports rich irrigated row-crop agriculture and is particularly known for production of Spanish onions. 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 winter-feeding operations and other agricultural activities. Bull trout in this basin are listed as “threatened” under the federal Endangered Species Act.

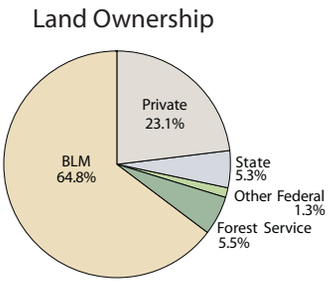
Completed and Reported Restoration 2006-2007

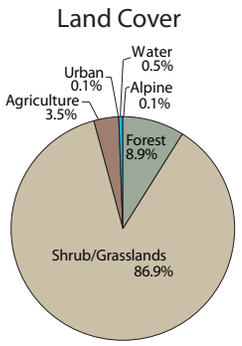
Restoration Activity

- Road
- Riparian
- Instream
- Fish Passage
- Fish Screens
- Wetland
- Upland
- Combined

Land Ownership

- Bureau of Land Management
- U.S. Forest Service
- State
- Tribal
- U.S. Fish and Wildlife
- National Park Service
- Local Government
- Other Federal
- Private



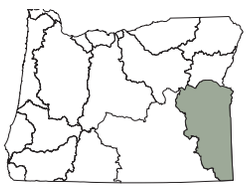


Basin Facts

Population (2000) 31,397
Cities over 10,000 1
Area (acres) 6,746,140
Watershed Councils 4
SWCDs 1

State or Federal Listed

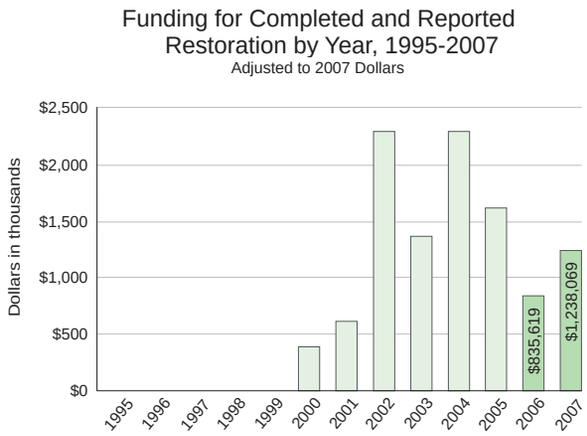
Plant Species 12
Animal Species 4

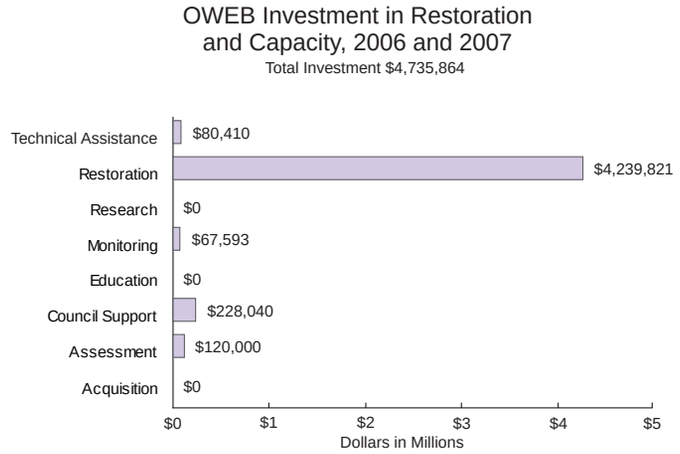


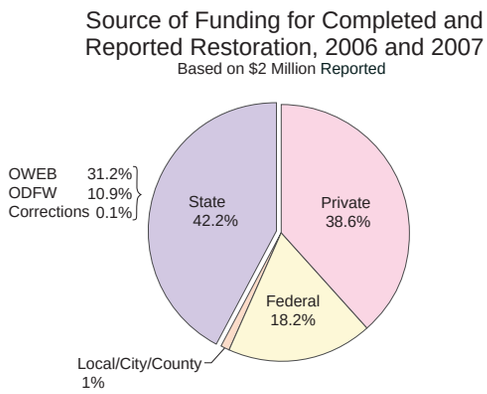
Restoration Issues

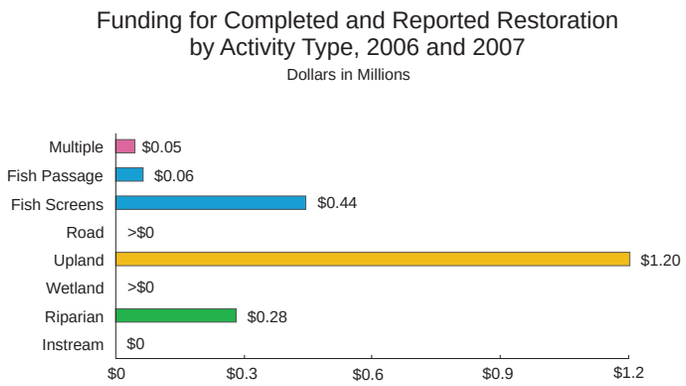
Riparian/Wetland	Upland	Instream and Passage	Other
• Loss of riparian cover • Fecal coliform bacteria from wintering animals	• Loss of sagebrush steppe habitats • Noxious weeds • Juniper encroachment • Agricultural sediment and nutrient delivery	• Increased stream temperatures	• Groundwater quality degradation from agricultural activities • Loss of sage grouse habitat

Investments and Activities 2006-2007









Project Story

North Fork Malheur River Fish Passage Project

The North Fork Malheur River supports an important population of bull trout and redband trout. Prior to this project, trout could become stranded in unscreened irrigation ditches. Also, push-up dams created seasonal fish migration barriers and sedimentation during annual construction. Three irrigation diversions were consolidated into two; push-up dams were eliminated; and fish screens were installed at the two remaining structures. By fixing these diversions, the project eliminated the most significant barriers to fish passage in this system and fish are able to move past these diversions at all river flows. Water quality and bank conditions were also improved by eliminating structures that required annual maintenance and in-channel disturbance. Partners included the Malheur WC, USFWS, ODFW, BOR, landowner, and OWEB.

Looking upstream at the new structure on the North Fork Malheur River (photo by Malheur WC)

Powder Basin

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. Baker Valley has been identified as a conservation opportunity area where riparian thickets and wetlands could be enhanced for native species.

Completed and Reported Restoration 2006-2007

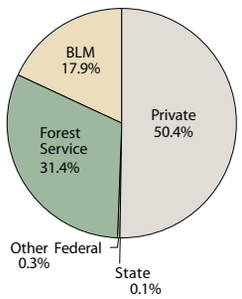
Land Ownership

- Bureau of Land Management
- U.S. Forest Service
- State
- Tribal
- U.S. Fish and Wildlife
- National Park Service
- Local Government
- Other Federal
- Private

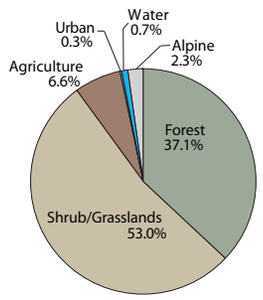
Restoration Activity

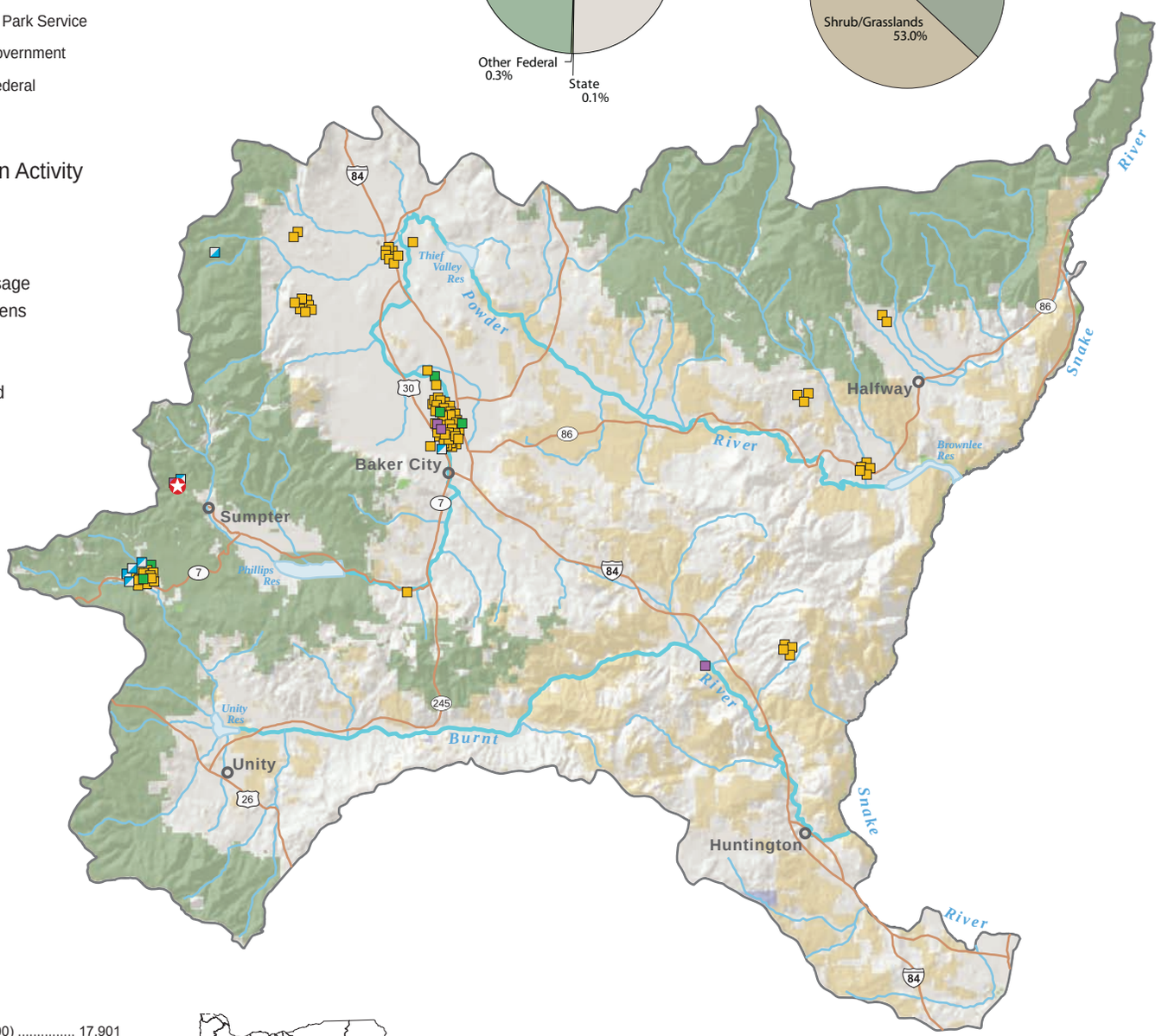
- Road
- Riparian
- Instream
- Fish Passage
- Fish Screens
- Wetland
- Upland
- Combined

Land Ownership



Land Cover



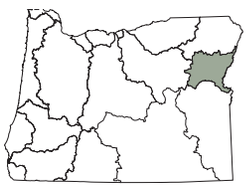


Basin Facts

Population (2000) 17,901
Cities over 10,000 1
Area (acres) 2,207,865
Watershed Councils 1
SWCDs.....5

State or Federal Listed

Plant Species 6
Animal Species 3

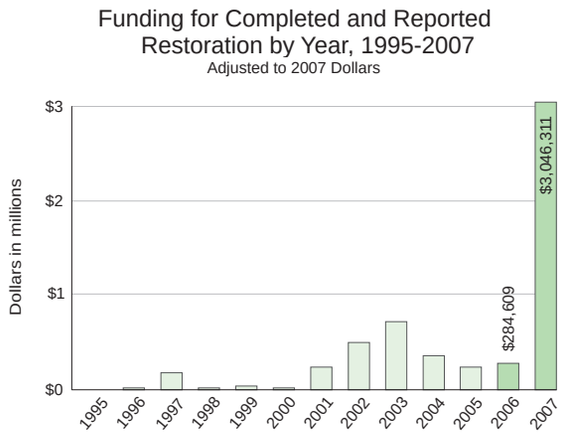


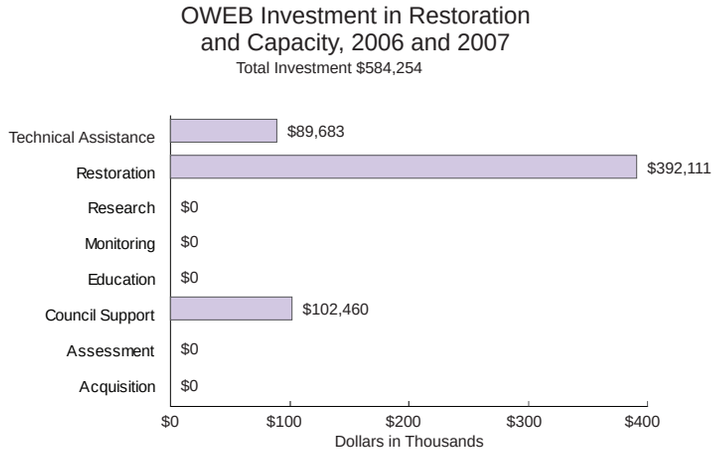
0 10 20
miles

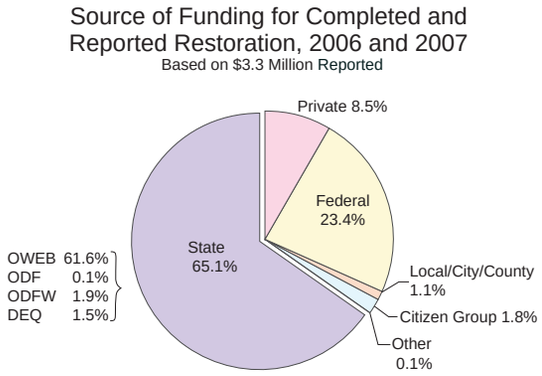
Restoration Issues

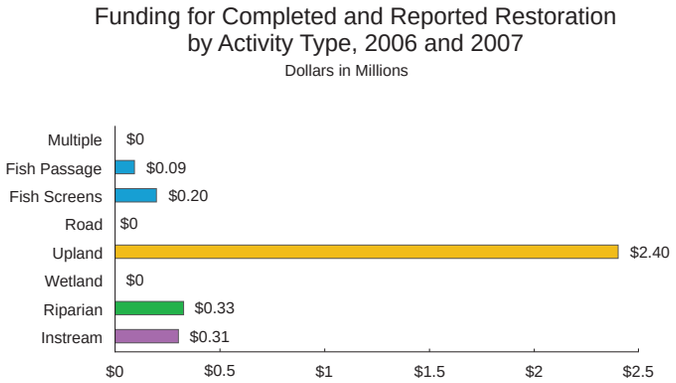
Riparian/Wetland	Upland	Instream and Passage	Other
• Loss of riparian cover	• Juniper encroachment • Overstocked forest stands	• Water quality degradation • Loss of instream habitat • Fish passage barriers and unscreened irrigation diversions	• Effects of historic dredge mining

Investments and Activities 2006-2007









Project Story

Sumpter Municipal Diversion and Fish Habitat Restoration Project

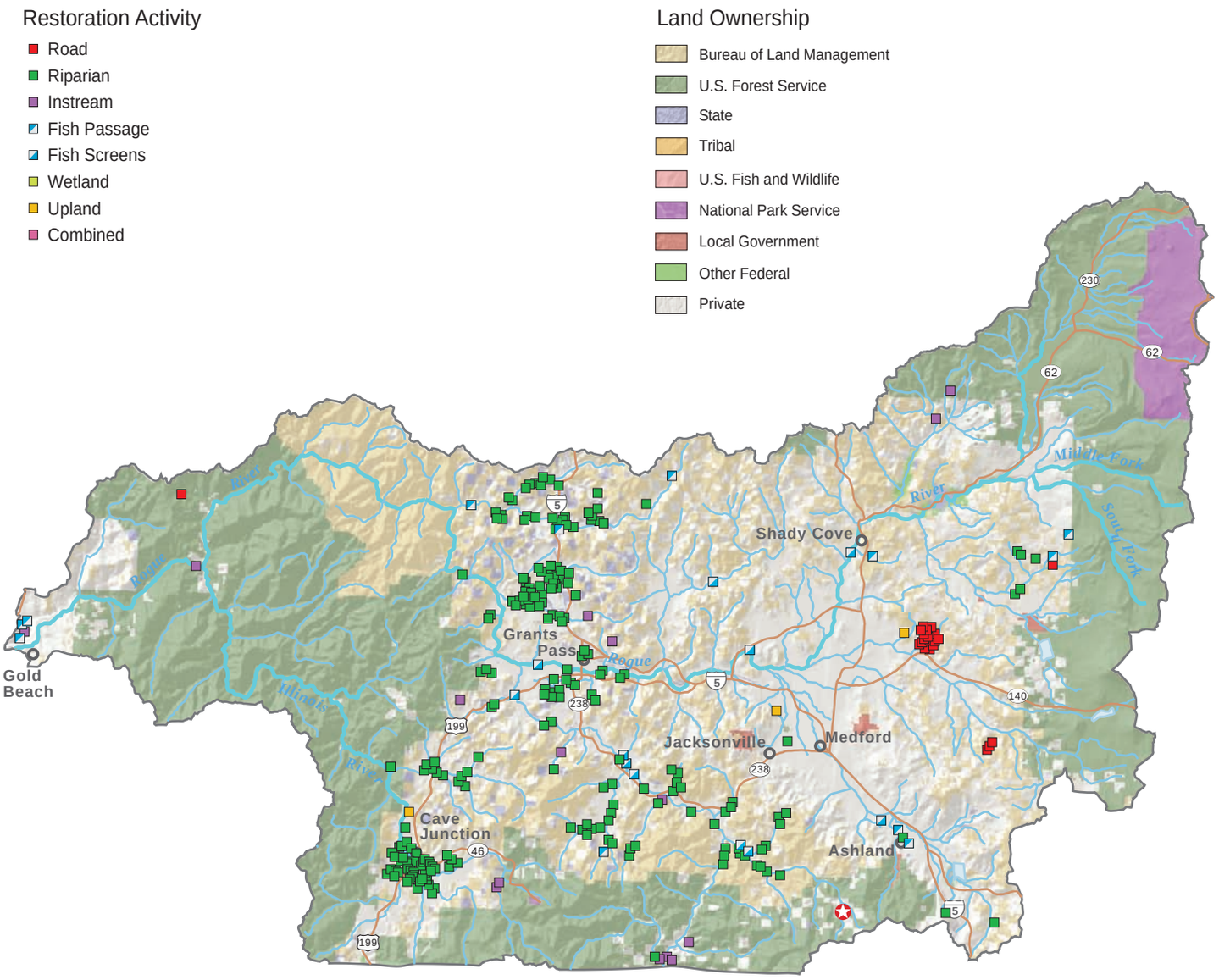
The old municipal diversion structure, built in the 1960s, was a fish passage barrier on McCully Creek, a tributary to the Powder River. Flood flows regularly overtopped the structure causing streambank and channel erosion. The project upgraded the existing diversion, removed the diversion dam, installed a fish screen, reshaped the stream banks, and restored instream fish passage. The project provided access to 13 miles of habitat upstream of the diversion for bull trout and redband trout and resulted in water use savings from improved water control and measurement capabilities. Partners included the City of Sumpter, USFS, ODFW, OWRD, BOR, Powder Basin WC, OSU Extension, DSL, USFWS, NFWF, and OWEB.

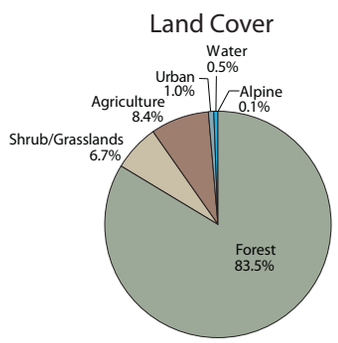
New municipal intake structure (photo by Powder Basin WC)

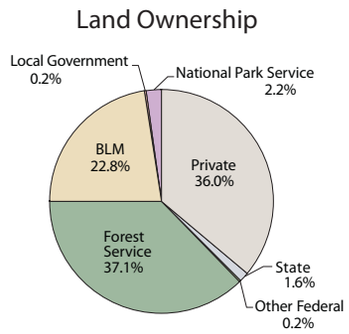
Rogue Basin

Headwaters of the Rogue River originate in Crater Lake National Park in the Southern Cascade Mountains. This basin has an extremely complex geologic structure and corresponding vegetation patterns. From the lava and pumice of the southern Cascade volcanoes, the middle 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 mining being a large historic industry. 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 Evolutionarily 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.

Completed and Reported Restoration 2006-2007





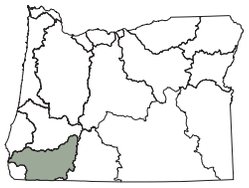


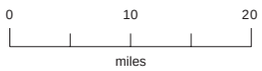
Basin Facts

Population (2000) 257,914
Cities over 10,000 4
Area (acres) 3,210,948
Watershed Councils 9
SWCDs 4

State or Federal Listed

Plant Species.....15
Animal Species.....6



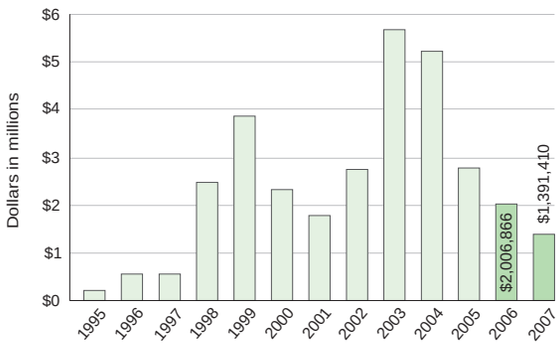


Restoration Issues

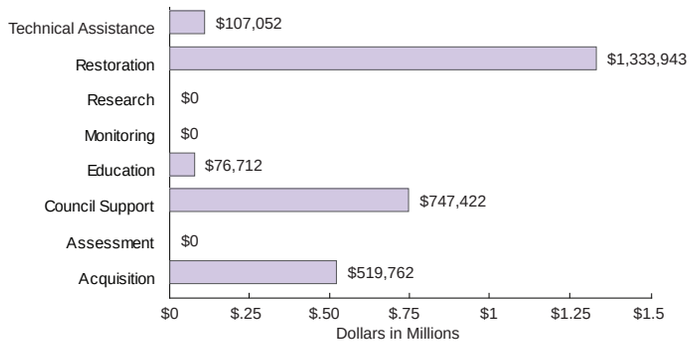
Riparian/Wetland	Upland	Instream and Passage	Other
• Reduced warm season streamflows • Rapidly urbanizing areas • Loss of riparian cover	• High fire risk • Sediment delivery from forest roads	• Mainstem and tributary fish passage barriers • Lack of stream complexity • High stream temperature • Savage Rapids Dam removal • Multiple out-of-stream water diversions	• Significant hatchery influence in the Applegate and Mainstem Rogue • Significant interaction between irrigation and stream systems

Investments and Activities 2006-2007

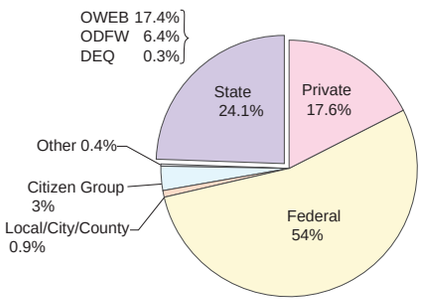
Funding for Completed and Reported Restoration by Year, 1995-2007
Adjusted to 2007 Dollars



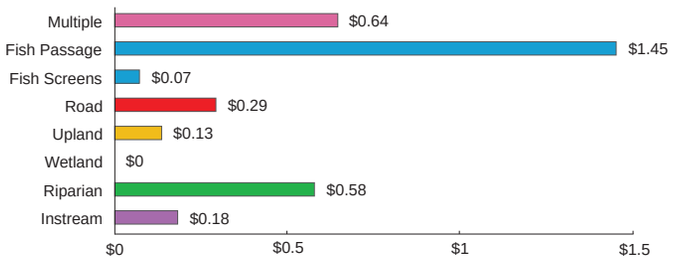
OWEB Investment in Restoration and Capacity, 2006 and 2007
Total Investment $2,784,891



Source of Funding for Completed and Reported Restoration, 2006 and 2007
Based on $3.3 Million Reported



Funding for Completed and Reported Restoration by Activity Type, 2006 and 2007
Dollars in Millions



Project Story

Little Applegate Sediment Reduction Project

The Upper Little Applegate River and Yale Creek, containing high quality steelhead trout habitat, were identified by the Applegate River WC as the two most significant sediment source areas in the Little Applegate River watershed and top priorities for erosion control and sediment reduction efforts. Stream monitoring and road surveys had identified roads and stream crossings as major sediment sources. The project involved grading and rocking key road systems, installing new drainage features, improving stream crossings and culverts, and limiting access to certain areas during wet periods. Surveys at project sites show the treatments to be effective in eliminating sediment delivery from road surfaces and ditches and in preventing larger sediment events. Project partners included area residents, DEQ, BLM, USFS, Fruit Growers Supply Company, and OWEB.

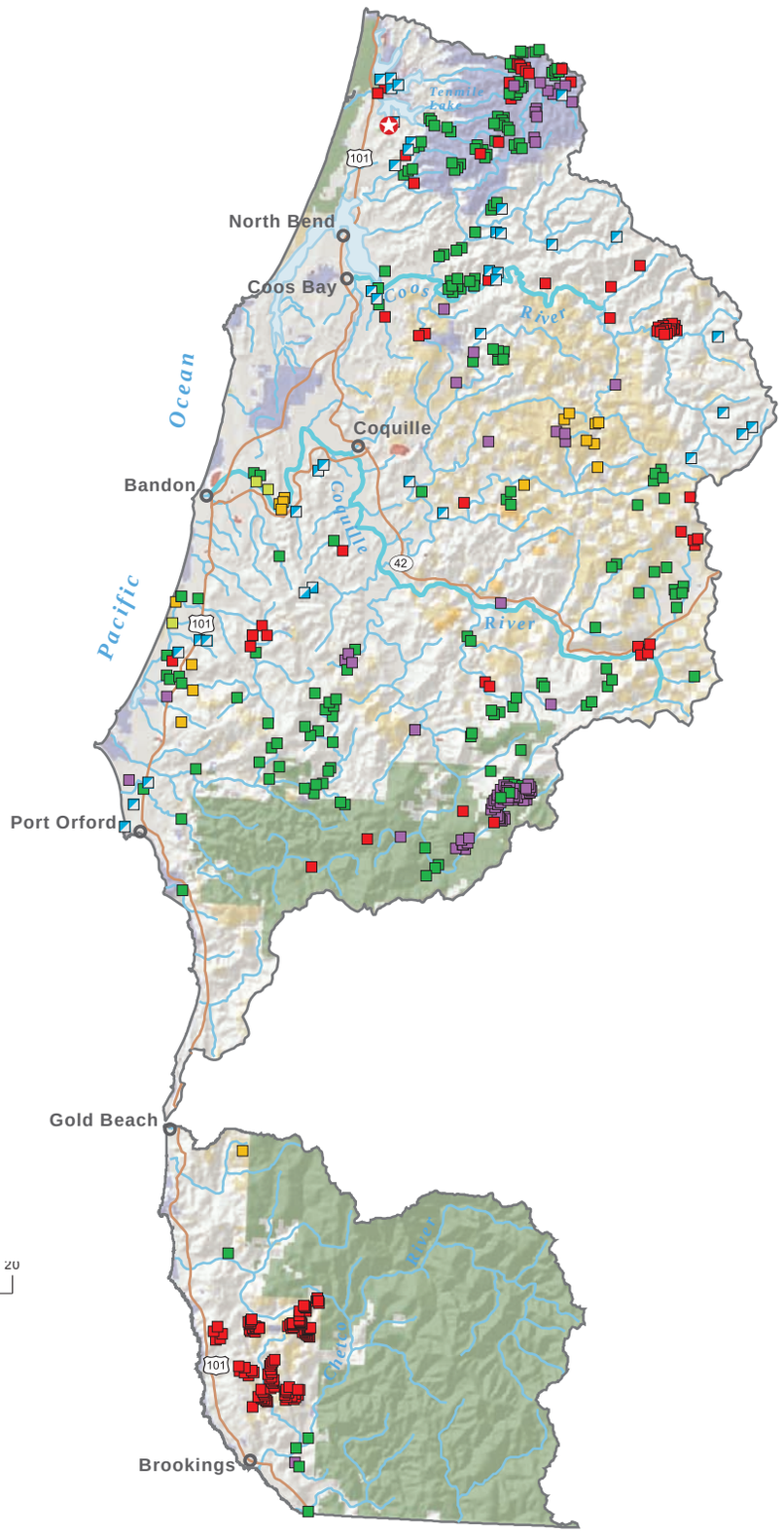
Local contractor rocking Dog Fork Road (photo by Applegate River WC)

South Coast Basin

Two types of drainages lie in the South Coast Basin. At the north end of the basin, the medium-sized Coos and Coquille rivers headwater in the Coast Range and flow to the ocean across the Coos Bay dune sheet. Further south, a number of relatively smaller streams (Floras, Sixes, Elk, Winchuck, and Hunter creeks and Chetco and Pistol rivers) headwater primarily in the Klamath Mountain Province. 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 or 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 were affected by wildfires during the summer of 2002.

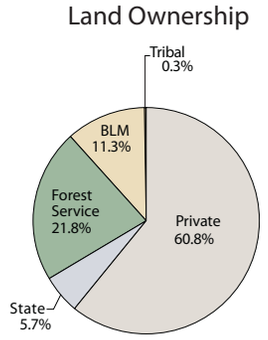
Completed and Reported Restoration 2006-2007

Restoration Activity
- Road
- Riparian
- Instream
- Fish Passage
- Fish Screens
- Wetland
- Upland
- Combined

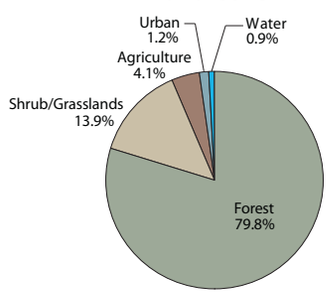


Land Ownership
- Bureau of Land Management
- U.S. Forest Service
- State
- Tribal
- U.S. Fish and Wildlife
- National Park Service
- Local Government
- Other Federal
- Private

Land Ownership



Land Cover



0 10 20
miles

Basin Facts

Population (2000) 83,402
Cities over 10,000 1
Area (acres) 1,901,048
Watershed Councils 10
SWCDs 2

State or Federal Listed

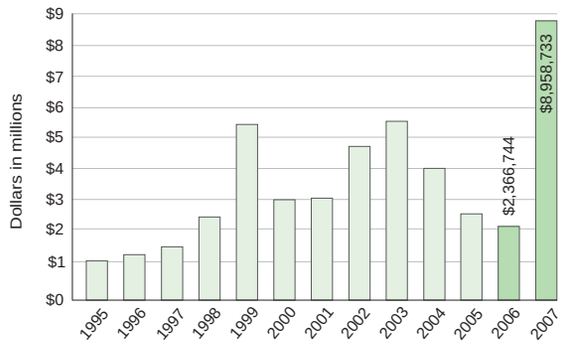
Plant Species 8
Animal Species 6

Restoration Issues

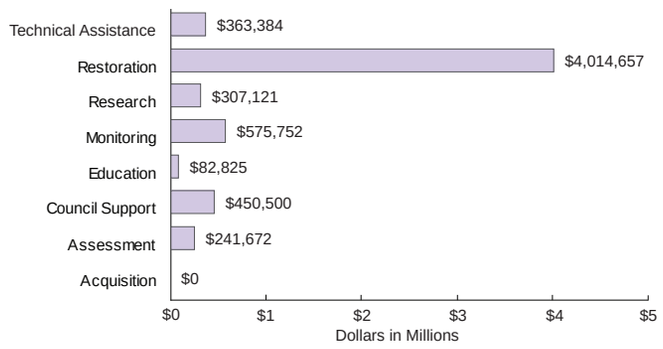
Riparian/Wetland	Upland	Instream and Passage	Other
• Loss of estuarine and low gradient floodplains and wetlands • Loss of riparian cover • Invasive riparian species	• Sediment delivery from forest lands	• Lack of stream complexity • High stream temperature	• Exotic fish in the Siltcoos, Tahkenitch and Tenmile watersheds • Invasive weeds in Tenmile Lake

Investments and Activities 2006-2007

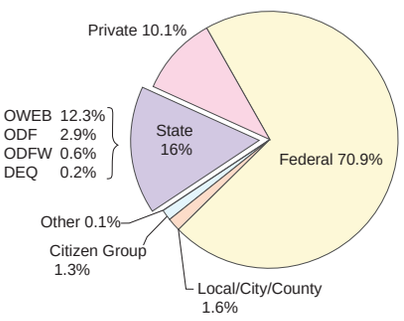
Funding for Completed and Reported Restoration by Year, 1995-2007
Adjusted to 2007 Dollars



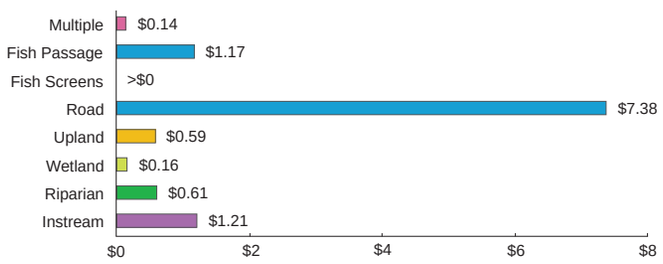
OWEB Investment in Restoration and Capacity, 2006 and 2007
Total Investment $6,035,911



Source of Funding for Completed and Reported Restoration, 2006 and 2007
Based on $11.3 Million Reported



Funding for Completed and Reported Restoration by Activity Type, 2006 and 2007
Dollars in Millions



Project Story

Tenmile Lakes Fish Passage and Sediment Abatement Phase III – Shutter Creek

This phase of the Tenmile Lakes Basin Partnership fish passage and sediment abatement project fixed nine fish passage barriers on private land, addressed three chronic sediment sources from road crossings, and improved access to approximately 13 miles of essential habitat. On Shutter Creek, a perched culvert was replaced by a cement slab bridge. Access to approximately three miles of stream habitat was improved and 58 cubic yards of perched fill was permanently removed as a chronic sediment source. Overall project partners included DEQ, City of Lakeside, ODFW, USFS, DSL, Wilcox Engineering, landowners, Eel~Tenmile S.T.E.P., Coos County Highway Department, Weyerhaeuser, and OWEB.

New bridge on Shutter Creek (photo by Tenmile Lakes Basin Partnership)

Umatilla Basin

This basin includes the Umatilla and Walla Walla rivers, and Willow 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 and diversity of native species. Downstream reaches of these rivers flow through highly productive wheat farms, fruit orchards, vineyards and other irrigated agriculture.

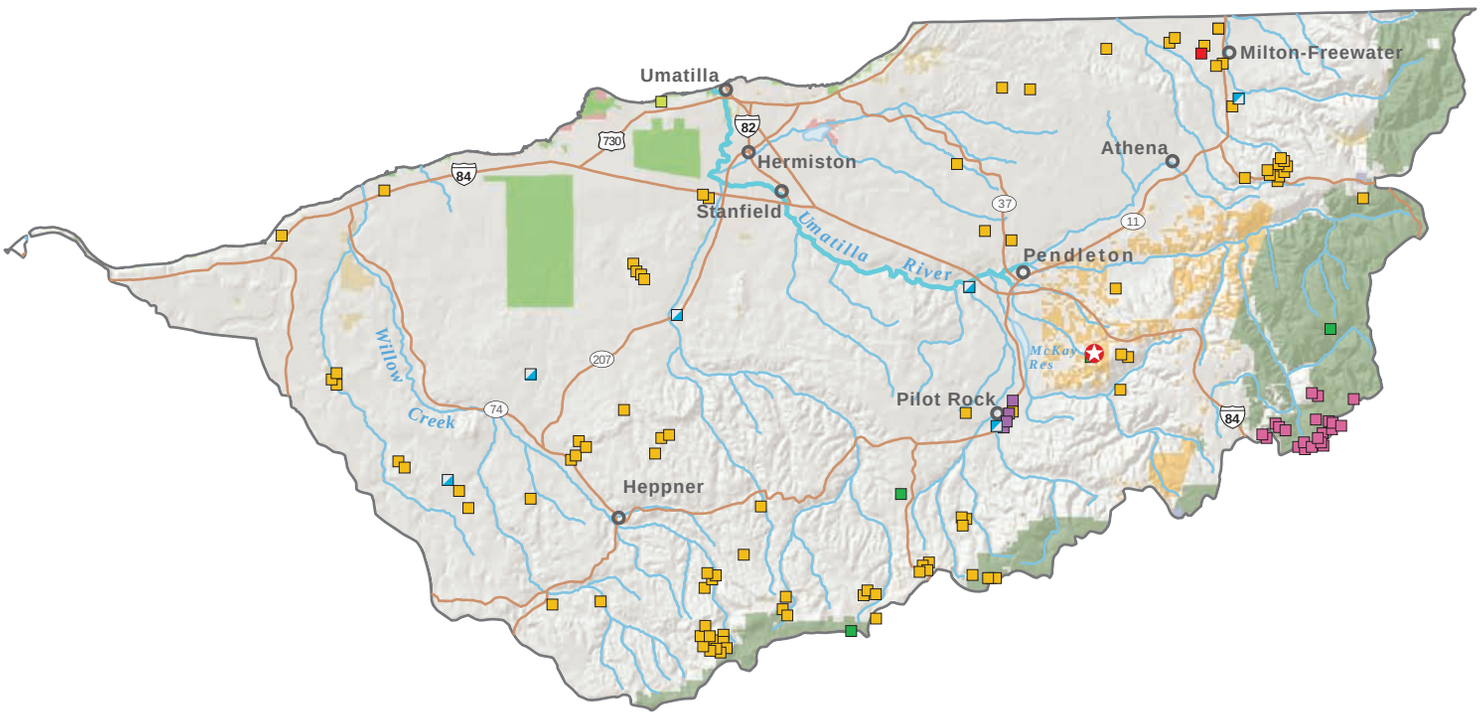
Completed and Reported Restoration 2006-2007

Restoration Activity

- Road
- Riparian
- Instream
- Fish Passage
- Fish Screens
- Wetland
- Upland
- Combined

Land Ownership

- Bureau of Land Management
- U.S. Forest Service
- State
- Tribal
- U.S. Fish and Wildlife
- National Park Service
- Local Government
- Other Federal
- Private

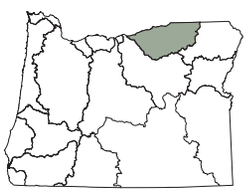


Basin Facts

Population (2000) 81,843
Cities over 10,000 2
Area (acres).....3,004,958
Watershed Councils.....2
SWCDs 4

State or Federal Listed

Plant Species 2
Animal Species.....3



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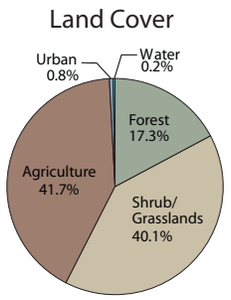
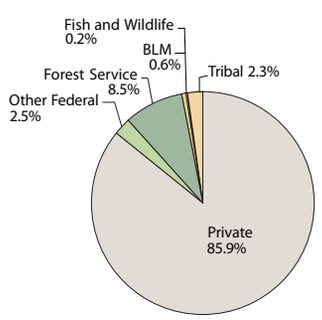
Land Cover



Land Ownership

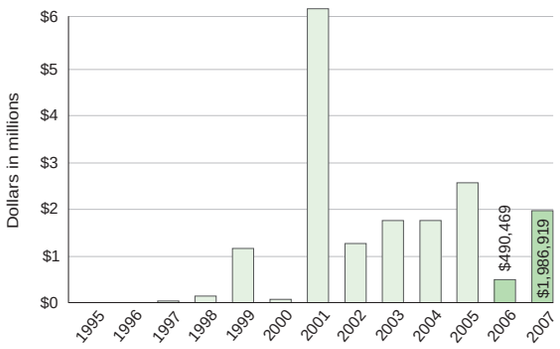


Restoration Issues

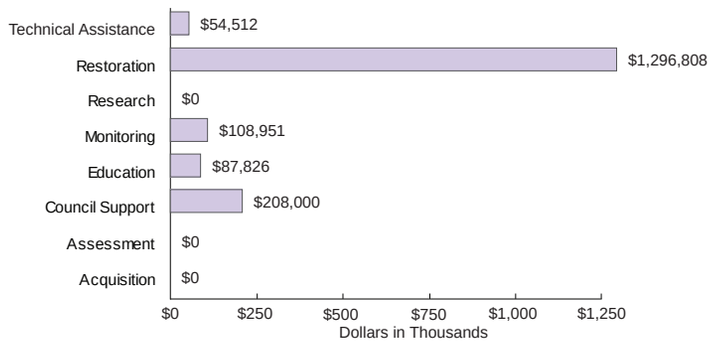
Riparian/Wetland	Upland	Instream and Passage	Other
• Drainage of high elevation wet meadows (streamflow) • Loss of riparian cover • Degraded floodplain conditions	• Noxious weeds • Loss of shrub steppe habitats • Altered fire regime and overstocked and diseased stands in forested areas	• Down-cutting of stream channels • Loss of stream complexity • High stream temperatures • Irrigation diversions	• Flow augmentation in the lower Umatilla and Walla Walla rivers • Lowering of groundwater aquifers

Investments and Activities 2006-2007

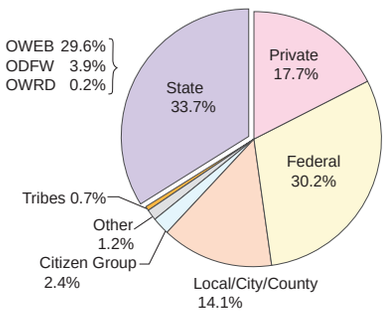
Funding for Completed and Reported Restoration by Year, 1995-2007
Adjusted to 2007 Dollars



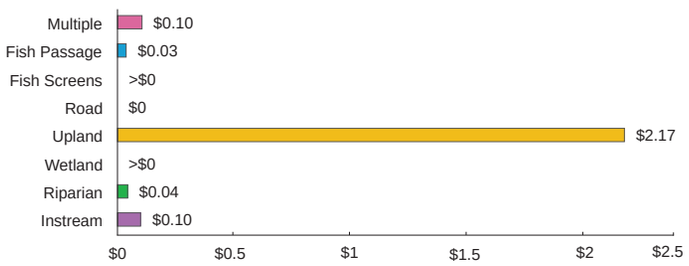
OWEB Investment in Restoration and Capacity, 2006 and 2007
Total Investment $1,756,097



Source of Funding for Completed and Reported Restoration, 2006 and 2007
Based on $2.5 Million Reported



Funding for Completed and Reported Restoration by Activity Type, 2006 and 2007
Dollars in Millions



Project Story

Diggins Animal Feeding Operation

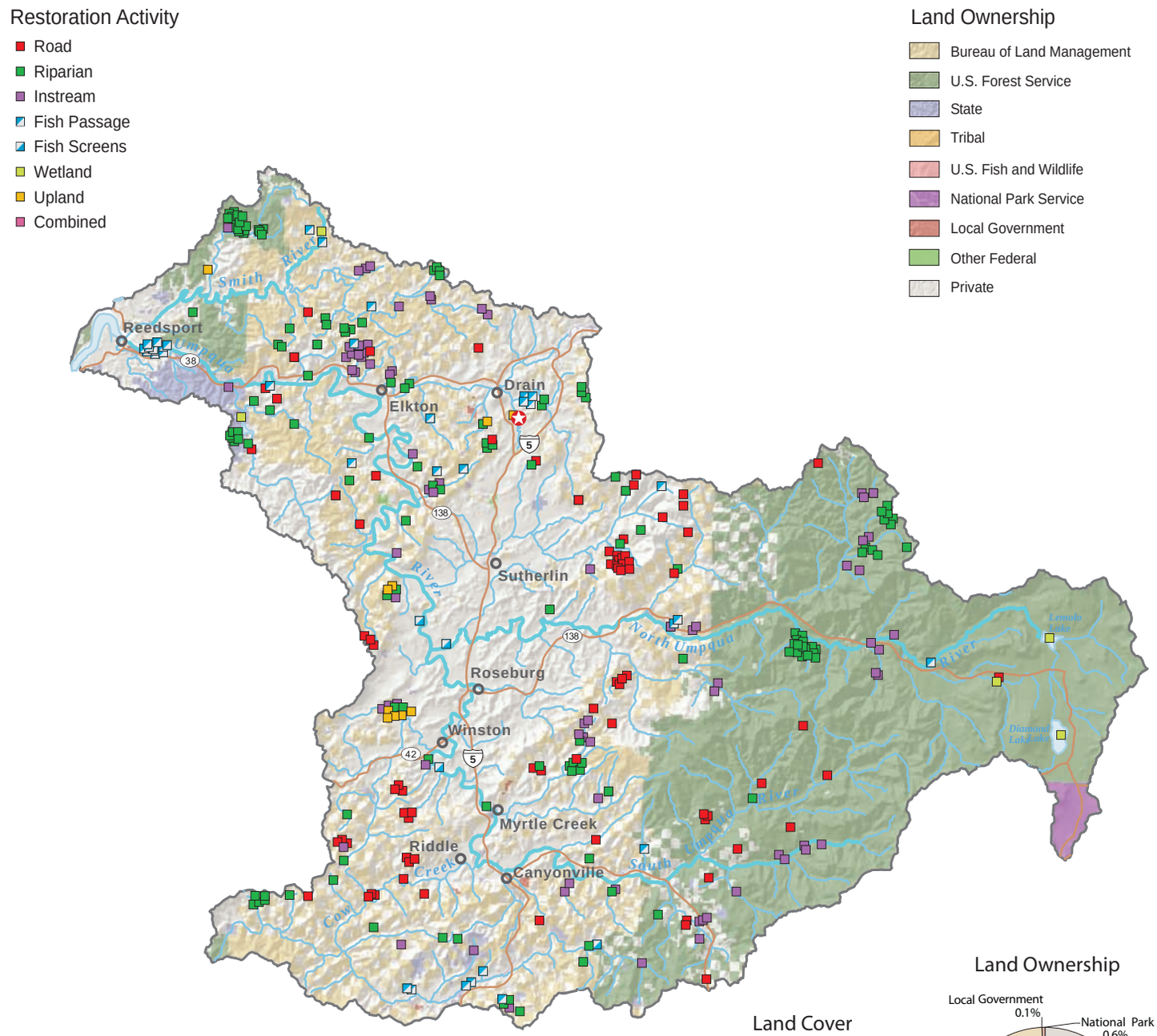
The Diggins Ranch is located southeast of Pendleton on Confederated Tribes of the Umatilla Indian Reservation land. Tribal monitoring identified elevated levels of E.coli bacteria in South Coyote Creek downstream of the ranch, and the landowners contacted the Tiicham Conservation District for assistance in improving winter feeding operations. The project installed a sediment basin to collect manure, riparian fencing to eliminate livestock access to the creek, off-stream watering facilities, three culverts for feed truck access, one culvert for a livestock crossing, cattle guards, concrete feeders to replace steel ones, and gravel on existing roads to reduce sediment. Partners included the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Department of Natural Resources, Tiicham Conservation District, NRCS, and OWEB.

Diggins winter feeding area (photo by CTUIR)

Umpqua Basin

The Umpqua 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 historic foundation for the timber industry, local economies, and strong 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 de-listed from the federal Endangered Species Act protection in this basin. The Umpqua River enters the Pacific Ocean in the center of Oregon's dune country near Reedsport.

Completed and Reported Restoration 2006-2007

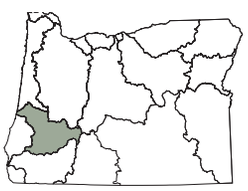


Basin Facts

Population (2000) 99,525
Cities over 10,000 1
Area (acres).....3,000,653
Watershed Councils.....3
SWCDs.....2

State or Federal Listed

Plant Species.....6
Animal Species.....6



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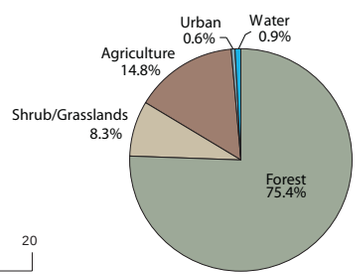
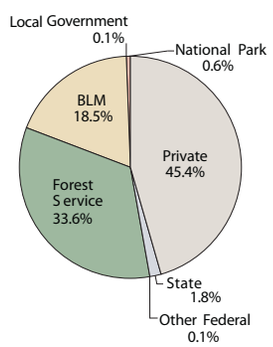
Land Cover



Land Ownership

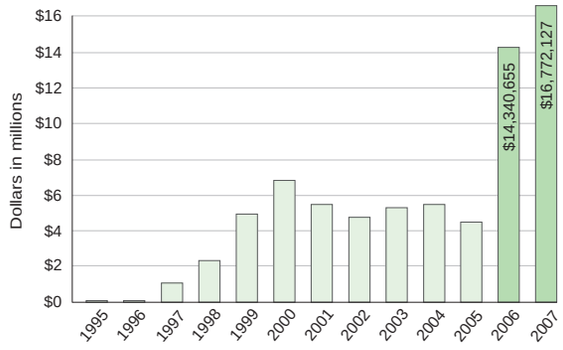


Restoration Issues

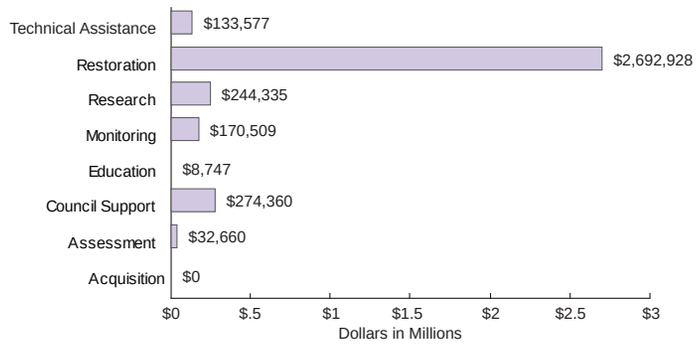
Riparian/Wetland	Upland	Instream and Passage	Other
• Reduced warm season streamflows • Invasive riparian species	• Sediment delivery from forest roads • High fire risk	• Lack of stream complexity • Incomplete information on fish passage issues • High stream temperature	• Significant hatchery influence in the North Umpqua

Investments and Activities 2006-2007

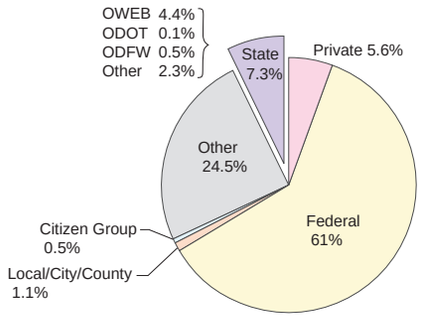
Funding for Completed and Reported Restoration by Year, 1995-2007
Adjusted to 2007 Dollars



OWEB Investment in Restoration and Capacity, 2006 and 2007
Total Investment $3,557,116



Source of Funding for Completed and Reported Restoration, 2006 and 2007
Based on $30.7 Million Reported



Funding for Completed and Reported Restoration by Activity Type, 2006 and 2007
Dollars in Millions

Project Story

Galetti Wetland Restoration

Wetlands adjacent to Yoncalla Creek had been converted to agricultural use and its historic wetland and wildlife habitat functions had been altered. The goal of the project was to restore the property to wetland, wet meadow, and upland habitat similar to historic conditions. A total of 13.5 acres of wetland area was enhanced. An additional 16.5 acres of upland was treated to enhance oak woodlands. Over two years time, nearly 10,000 native sedges, rushes, shrubs, and trees were planted. The restoration of this property also complemented restoration efforts on adjacent properties. Partners included the Douglas SWCD, landowner, USFWS, BLM, ODFW, and OWEB.

Upland and wetland plantings (photo by Douglas SWCD)

Willamette Basin

The Willamette Basin is bounded on the west by the Coast Range and on the east by the Cascade Range, encompassing the Willamette Valley and adjacent forested foothills. Streams that flow from the Coast Range to the Willamette 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 conversion, 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.

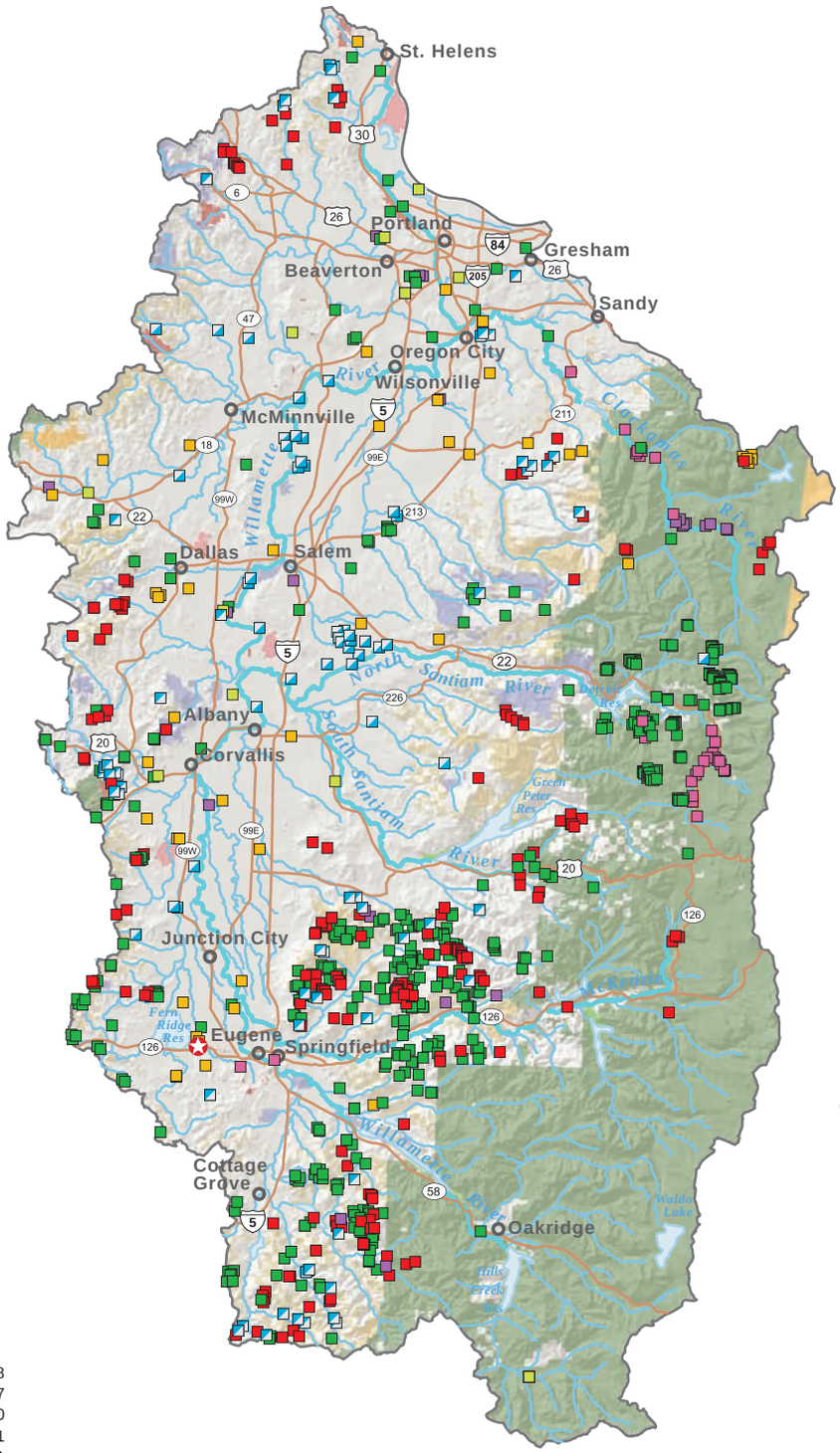
Completed and Reported Restoration 2006-2007

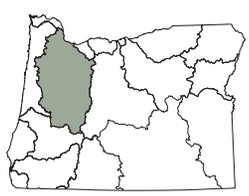
Restoration Activity

- Road
- Riparian
- Instream
- Fish Passage
- Fish Screens
- Wetland
- Upland
- Combined/Urban

Land Ownership

- Bureau of Land Management
- U.S. Forest Service
- State
- Tribal
- U.S. Fish and Wildlife
- National Park Service
- Local Government
- Other Federal
- Private





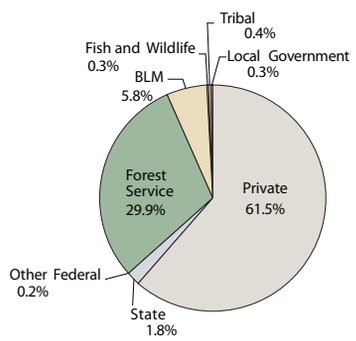
Basin Facts

Population (2000).....2,327,548
Cities over 10,000 27
Area (acres).....7,337,000
Watershed Councils.....21
SWCDs.....11

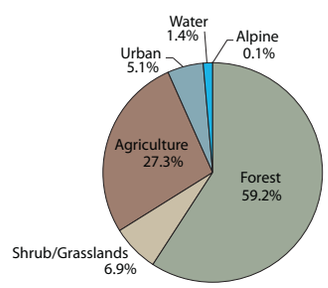
State or Federal Listed

Plant Species.....11
Animal Species.....11

Land Ownership



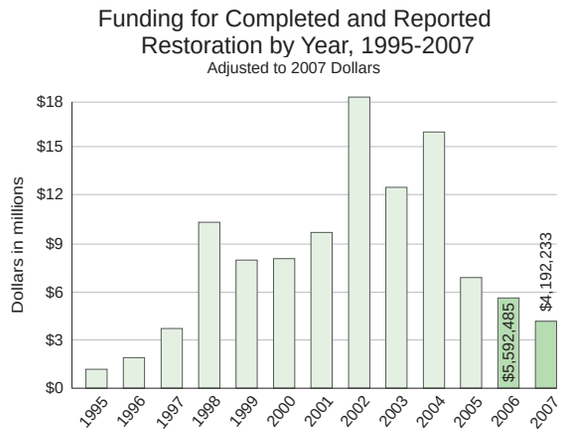
Land Cover

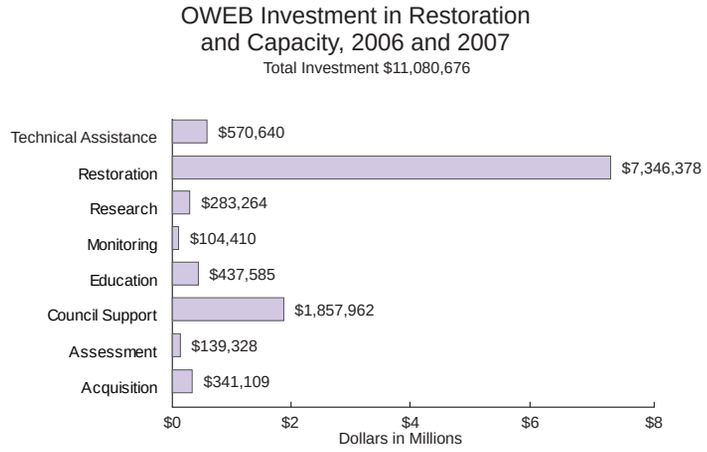


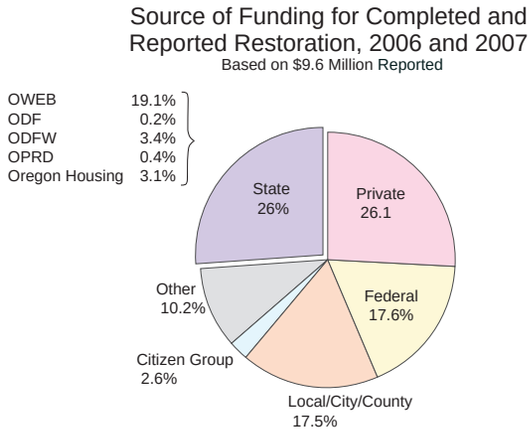
Restoration Issues

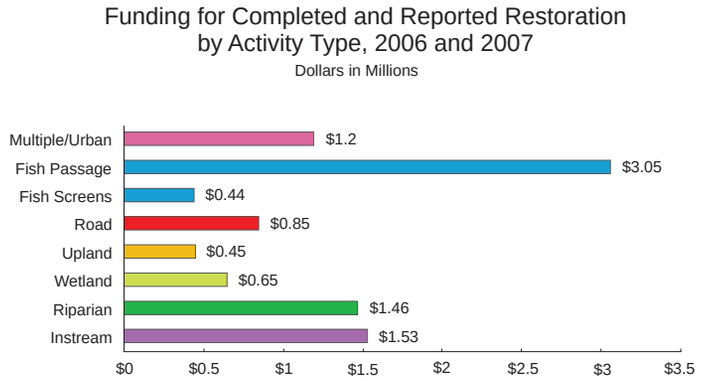
Riparian/Wetland	Upland	Instream and Passage	Other
• Loss of floodplain riparian hardwood forests • Loss of wet prairies and other wetlands • Loss of floodplain connectivity • Invasive species	• Loss of oak savanna, oak woodlands, and prairie habitats • Significant nutrient and chemical inputs • Urban development • Invasive species	• Water quality degradation; sediment, temperature, mercury, nutrients, bacteria, chemicals • Lack of stream complexity • Barriers to fish passage • Impacts from hydropower infrastructure	• Legacy of floodplain and landscape alteration • Legacy of channel simplification • High dams prevent anadromous fish passage

Investments and Activities 2006-2007









Project Story

Dragonfly Bend Habitat Enhancement

This project completed protection and restoration efforts at Dragonfly Bend, a 77-acre site within the West Eugene Wetlands that includes two channels of Amazon Creek. Beginning in 2004, the City of Eugene began a comprehensive project to restore the wetland, stream, riparian, and upland habitats on site. This phase of the project included restoring five acres of upland habitat for rare plants and wildlife species, including Kincaid's lupine, Western pond turtle, and Fender's blue butterfly. The project has been a tremendous success and the property has been the subject of several professional presentations and even a workshop on prairie restoration. Partners included the city, BLM, and OWEB.

Lupine blooms along the banks of Amazon Creek (photo by City of Eugene)

Data Sources

GIS and Cartography by:
University of Oregon InfoGraphics Lab,
Department of Geography:
- Ken Kato, Asst. Director, Project Mgr.
- Alethea Steingisser, Designer
- James E. Meacham, Lab Director
- Researchers:
  - Kate McGuire
  - Lauren Thompson
- Student Cartographers:
  - Jesse Nett
  - Derek Miller

Elevation: USGS (10 meter DEM)
Instream leases and transfers: WRD
Land Cover: Oregon Natural Heritage Program (GAP Analysis)
Land Ownership: BLM
Oregon Plan Basins: OWEB
OWEB Grant Information: OWEB
Populated Places: USGS (GNIS)
Population: PSU Population Research Center
Projected Agency Investments: respective agencies
Roads: ODOT
Streams: EPA, StreamNet, USGS
Federal Investments: NRCS and BPA

Writer/Editor: Melissa Leoni
Layout and Design: John Ame

Acknowledgements: Thank you to the OWEB Grant, Fiscal, Policy and Oregon Plan, and Monitoring section staff for their production assistance. Thanks also to our local, state, and federal partners who contributed to this report.

Cover Image: Atlas of Oregon (2nd. Ed.), copyright 2001 University of Oregon Press, and the University of Oregon InfoGraphics Lab.

Acronyms

BLM	U.S. Bureau of Land Management
BPA	Bonneville Power Administration
CAFO	Confined Animal Feeding Operation
cfs	cubic feet per second
CREP	Conservation Reserve Enhancement Program
DEQ	Oregon Department of Environmental Quality
DSL	Oregon Department of State Lands
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
EQIP	Environmental Quality Incentives Program
GRMWP	Grande Ronde Model Watershed Program
IMST	Independent Multidisciplinary Science Team
NOAA	National Oceanic and Atmospheric Administration
NFCP	Native Fish Conservation Policy
NFF	National Forest Foundation
NFWF	National Fish and Wildlife Foundation
NMFS	National Marine Fisheries Service
NRCS	U.S. Natural Resources Conservation Service
NWPCC	Northwest Power and Conservation Council
ODA	Oregon Department of Agriculture
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
ODOT	Oregon Department of Transportation
OECDD	Oregon Economic and Community Development Department
OPRD	Oregon Parks and Recreation Department
OSP	Oregon State Police
OSU	Oregon State University
OWEB	Oregon Watershed Enhancement Board
OWRI	Oregon Watershed Restoration Inventory
PCSRF	Pacific Coastal Salmon Recovery Fund
PNAMP	Pacific Northwest Aquatic Monitoring Partnership
REO	U.S. Regional Ecosystem Office
RC&D	Resource Conservation and Development
SWCD	Soil and Water Conservation District
TMDL	Total Maximum Daily Load
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
USFWS	U.S. Fish and Wildlife Service
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
WC	Watershed Council
WRD	Oregon Water Resources Department

Oregon Watershed Restoration Inventory
(OWRI): Bobbi Riggers, Data Coordinator, and Ashley Seim, GIS. The OWRI is the primary statewide database for watershed restoration project information voluntarily submitted by restoration practitioners. The database includes completed projects funded by private landowners as well as projects funded with public monies such as OWEB grants. http://www.oregon.gov/OWEB/MONITOR/OWRI.shtml

Federal Interagency Restoration Database
(IRDA): Jim Edmonds, Jeanne Keyes, Debra Kroeger, Jeff Uebel, and Al Doelker. Jointly administered by the BLM and USFS, the database represents completed projects implemented on federal land and/or funded by Title II. http://www.reo.gov/restoration/

Grande Ronde Model Watershed Program
(GRMWP): Cecilia Noyes and Jeff Oveson. The GRMWP is composed of local representatives, landowners, tribes and agency personnel involved with the multiple uses of natural resources within the Grande Ronde River Basin. www.grmw.org

ODFW Fish Screening and Passage Program Database
(FSPD): Lisa Kingsley and Ray Hartlerode. The FSPD is utilized to track the progress and inventory of fish screening and passage projects conducted through the ODFW's Fish Screening and Passage Program, which provides financial and technical assistance to landowners, irrigation districts and other water users to implement screening and passage projects that protect native fish.

OWEB Board Members

OWEB is led by a 17-member policy oversight and decision-making board. Board members represent the public at large, tribes, state natural resource agency boards and commissions, Oregon State University Extension Service, and federal natural resource agencies.

Daniel Heagerty (Board Co-Chair) is Chief Strategic Officer at David Evans Enterprises, Inc. in Portland. He represents the public at large on the board.

Diane Snyder (Board Co-Chair) Vice President-Community Development for the U.S. Endowment for Forestry and Communities and is based in Enterprise. She represents the public at large on the board.

Miles Brown serves as the Branch Chief for Rangeland Resources, Recreation and Wilderness for the Oregon/Washington Bureau of Land Management Office, which he represents on the board. He lives in Hillsboro.

Bobby Brunoe is the Natural Resource Policy Planner for the Confederated Tribes of the Warm Springs Reservation. He fills the public at large (tribal representative) position on the board and lives in Bend.

Dan Carver owns the Imperial Stock Ranch in Maupin. He also serves on the marketing and land use committees of the Oregon Department of Agriculture and serves on its board, which he represents on OWEB.

John Jackson is a small business owner and operator of Orchard View Nursery and part-time consultant on watershed planning issues. He lives in Cornelius and represents the Water Resources Commission on the board.

Jim Johnson is the associate dean for Extended Education and International Programs in the College of Forestry at Oregon State University. He is also the Program Leader for the Forestry and Natural Resources Extension Program within the OSU Extension Service, which he represents on the board.

Skip Klarquist serves as representative of the Oregon Fish and Wildlife Commission. He also serves on the board of the Oregon Wildlife Heritage Foundation. He is an attorney in Portland.

Kim Kratz is the Director of the Oregon State Habitat Office, Habitat Conservation Division, of the National Marine Fisheries Service, which he represents on the board. He lives in Lake Oswego.

Jose Linares is the Director of Natural Resources for the U.S. Department of Agriculture Forest Service in Region 6. He represents the U.S. Forest Service on the board and lives in Salem.

Meta Loftsgaarden is the Partnership Liaison for the Oregon Natural Resources Conservation Service, which she represents on the board. She lives in Portland.

Jim Nakano is a Malheur County Commissioner. He lives in Ontario and represents the public at large on the board.

Jennifer Phillippi is Business Manager of Rough & Ready Lumber Company and is also President of Perpetua Forests Company. She serves as the representative from the Oregon Board of Forestry.

Dave Powers is the Regional Manager for Forests and Rangelands at the U.S. Environmental Protection Agency, which he represents on the board. He lives in Scappoose.

Patricia Smith is a co-owner of William Smith Properties. She represents the public at large on the board and lives in Bend.

Helen Westbrook served two terms as Clatsop County Commissioner. She represents the public at large on the board and lives in Astoria.

Ken Williamson heads the School of Chemical, Biological, and Environmental Engineering at Oregon State University in Corvallis. He serves as representative of the Environmental Quality Commission.

OWEB's Mission

"To help create and maintain healthy watersheds and natural habitats that support thriving communities and strong economies."

Put A Salmon On Your OREGON SALMON PLATE

www.salmonplate.org