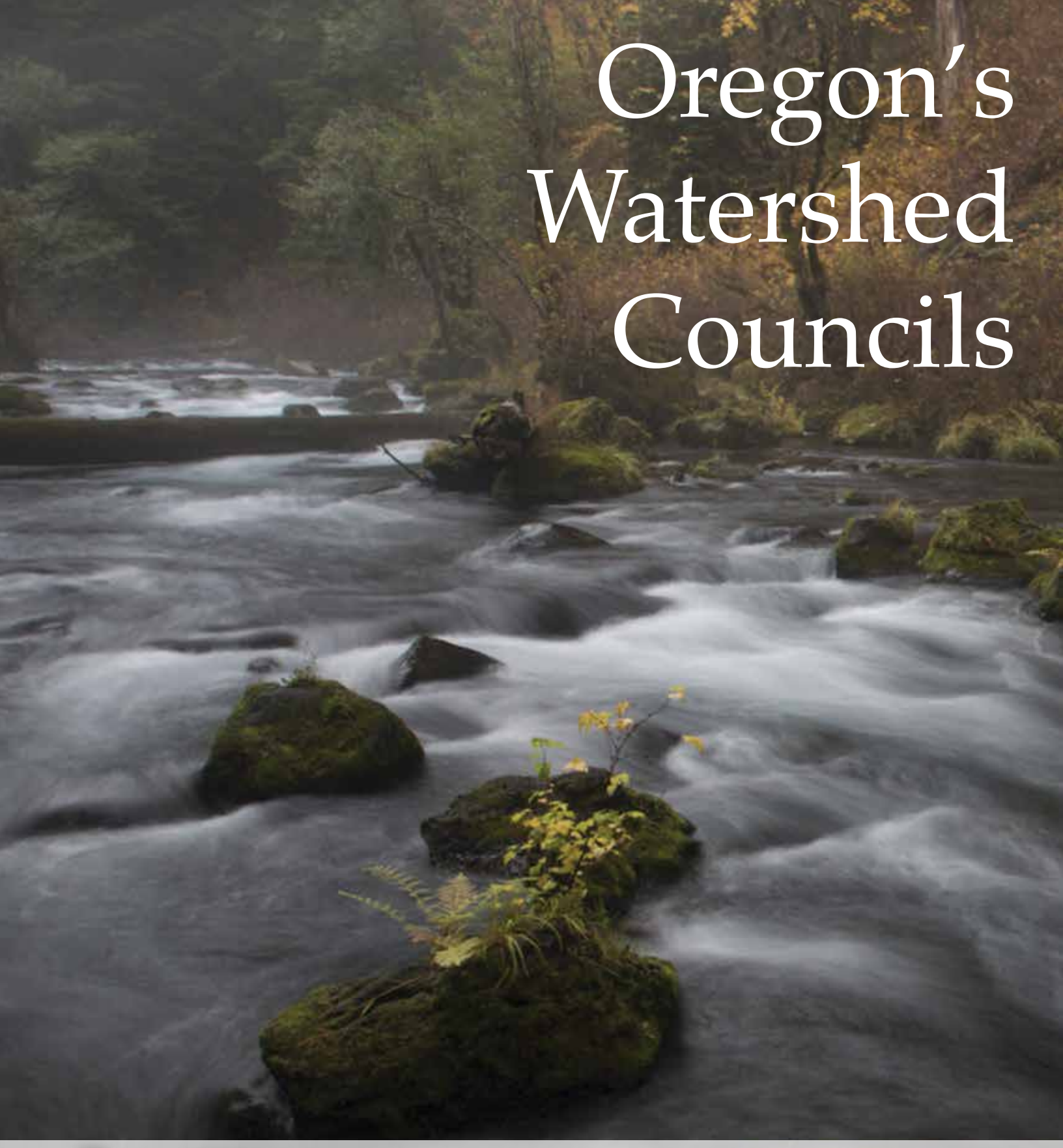


Oregon's Watershed Councils

NETWORK of OREGON
WATERSHED COUNCILS

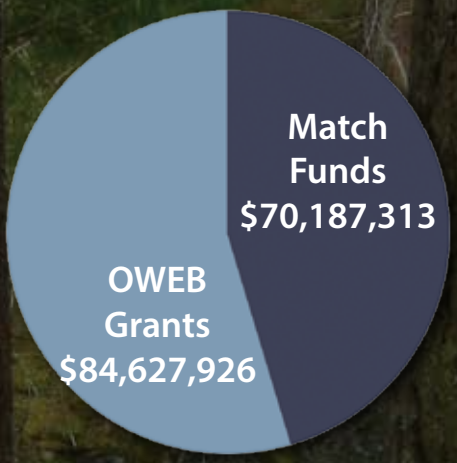
Local Partners

Statewide Impact

Cover Photo by Dave Herasimtschuk / Freshwaters Illustrated

Leveraging State Dollars*

Watershed councils use OWEB dollars to leverage other funding sources by partnering with a wide variety of organizations. During 2011 and 2012, OWEB awarded over $84 million in grants. Those funds were matched by over $70 million in resources from other city, state, and federal agencies, as well as tribes, municipalities, and nonprofit organizations.



Statewide Accomplishments 2010-2011*

Volunteer Hours

70,577

Stream Miles Monitored

7,161

Riparian Stream Miles Treated

810

Miles of Stream Made Accessible to Fish Migration

356

Miles of Instream Habitat Treated

201

Wetland Acres Treated or Created

4,374

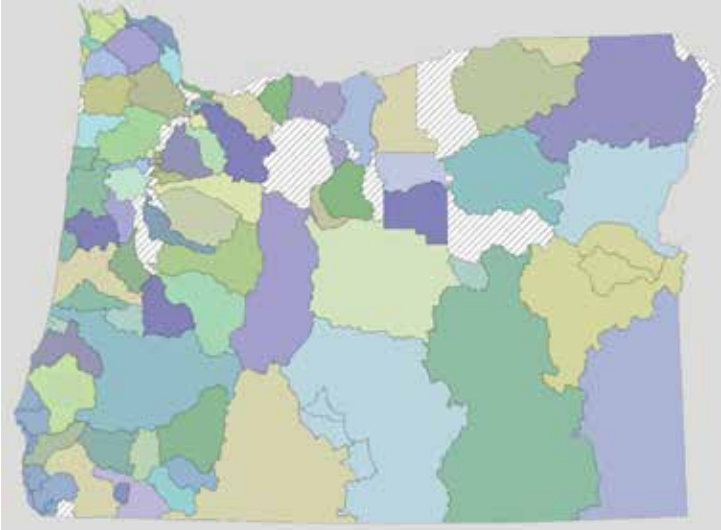
Partners for Restoration

Watershed councils do not work alone. They partner with many different community organizations, including soil and water conservation districts and land trusts, to enhance watersheds around the state. State, federal, and local agencies also provide funding and staff time to support restoration and enhancement objectives. These collaborative partnerships, which also include community volunteers, have tremendous statewide impact. OWEB's investment in councils and their partners also creates jobs and supports local economies.

* Data taken from OWEB's 2011-2013 Biennial Report, available at http://www.oregon.gov/OWEB/.

Photo by Ken Morrish

Community-Based Restoration



Oregon boasts around 90 watershed councils across the state. Each includes local stakeholders chosen to represent broad community interests (graphic provided by OWEB).

Local Partners, Statewide Impact

Watershed councils are locally organized, voluntary, non-regulatory, non-governmental groups established to improve the condition of natural resources in the state's watersheds. In Oregon, around 90 recognized councils are engaged in a wide range of watershed enhancement activities that address local priorities for water quality, as well as fish and wildlife habitat.

Councils receive much of their funding from the Oregon Watershed Enhancement Board (OWEB). Ballot Measure 76, which passed in 2010, directs 7.5% of all state lottery dollars to OWEB. The agency then awards grants to watershed councils and other conservation organizations, such as soil and water conservation districts, to complete restoration projects. Councils also rely on private donations and foundation grants to conduct outreach and community events.

Watershed councils represent broad interests within their basins and often bring together diverse groups of individuals to find solutions for issues of local importance. Councils offer residents the opportunity to independently evaluate watershed conditions and identify restoration or enhancement opportunities. Councils are known for forging partnerships between residents, local, state, and federal agencies, and other groups to help protect, enhance, and restore the state's watersheds.

What is a Watershed?

A watershed is typically defined as the area of land where all precipitation drains to a common water body, such as a river or lake. Watershed boundaries are determined by the shape of the land that surrounds them. Water runs downstream, so buttes and ranges often form the boundaries.

Often called a drainage basin or hydrologic unit, a watershed can cover a large multi-state area like the Columbia River Watershed, or a relatively small area like a stream, pond, or wetland. Larger watersheds are made of smaller watersheds, often called sub-basins. No matter where you stand, a watershed surrounds you.

Photo by Dave Herasimtschuk / Freshwaters Illustrated

A Better Place to Live, Work, and Recreate

Watershed councils make Oregon a better place to live, work, and recreate by improving the function of our watersheds, providing educational opportunities, and supporting local economies. Fish passage projects remove dams and culverts to allow fish access to spawning grounds, trees and shrubs planted along streambanks provide stabilization, shade for fish, and habitat for birds and insects, and placed-based outdoor watershed education programs help local youth unlock the wonder in their own backyards. The OWEB-supported investments that councils and their partners make also have positive impacts on the economy.

In the following pages, you'll see highlights from the many restoration, conservation, and education projects watershed councils help manage across Oregon. To find out more about how you can become involved with your local watershed council, visit the Network of Oregon Watershed Councils online at www.oregonwatersheds.org.

"Oregon is an inspiration. Whether you come to it, or are born to it, you become entranced by our state's beauty, the opportunity she affords, and the independent spirit of her citizens." -Tom McCall

Watershed Process and Function

Healthy watersheds have rivers and streams with cool, clean water, pools, riffles, meanders, and the room to spread during high water events. They are home to a mix of native plants and provide good habitat for wildlife. In many parts of Oregon, natural watershed functions and processes have been altered. Watershed councils work with local landowners and federal, state, and local government agencies to implement actions to restore these natural processes and functions.

A Calapooia Watershed Council staff person talks with a local stakeholder about restoration work on his farm.
Photo by Kyle Smith

SMITH SILL FISH PASSAGE PROJECT, *Walla Walla Watershed Council*

Leveraging Partnerships for Restoration

Located on the Walla Walla River near the town of Milton-Freewater is the Smith Grade Control Sill. The structure was originally built by the US Army Corps of Engineers in the 1940s as part of the Milton-Freewater Levee Flood Protection Project. Over the last few years a three-foot head cut in the river bed migrated up to this structure, creating a fish passage barrier for rainbow trout, bull trout, and juvenile steelhead and Chinook salmon during low flows. There was also concern that if the concrete sill collapsed or was undermined, the flood protection levee could be compromised.

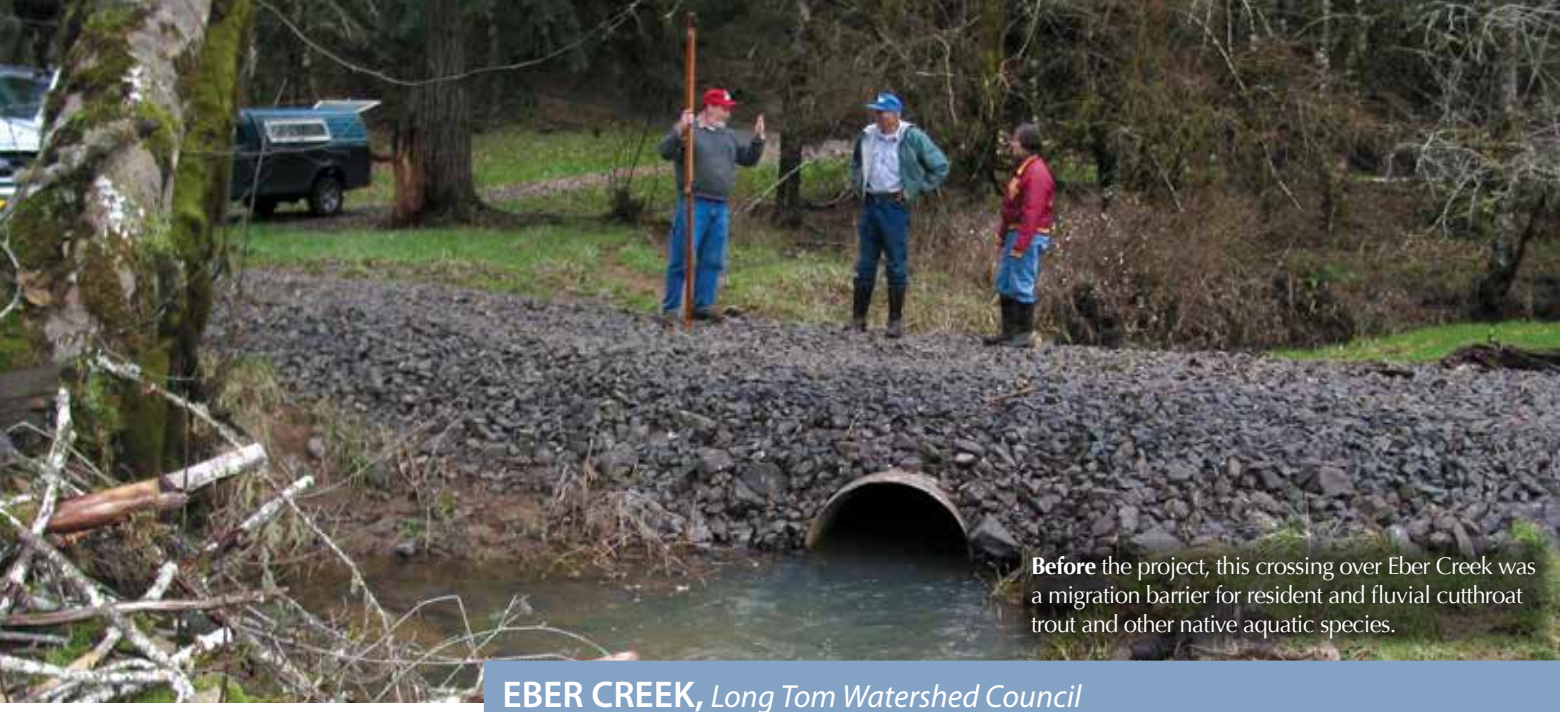
The Walla Walla Basin Watershed Council worked with project partners to secure funding for design, permits, and construction of a new fish-friendly structure. The project involved temporarily de-watering the work area, cutting an eleven-foot wide, one-foot deep v-notch into the concrete grade control structure, and installing a 45-foot "u-shaped" roughened channel of boulders immediately downstream of the concrete structure to ensure fish passage up to and through the notch in the concrete sill.

Funding for the project was provided by the Oregon Watershed Enhancement Board, US Fish and Wildlife Service, the Confederated Tribes of the Umatilla Indian Reservation Fish Habitat Program, Oregon Department of Environmental Quality, Bonneville Power Administration, and the Milton-Freewater Water Control District. Technical support was provided by Oregon Department of Fish and Wildlife and the Confederated Tribes of the Umatilla Fish Habitat Program. Design plans and construction oversight were completed by GeoEngineers, Inc. ◆

Improving Fish Habitat

Fish need clean, cold, oxygen-rich water to survive and reproduce. Sedimentation from activities along waterways, pollution from urban runoff, and high summer water temperatures have serious impacts on Oregon's fish populations. By restoring riparian areas, improving in-stream habitat, and ensuring proper flows, councils and their partners are working toward a healthy future for the state's fish.

Photo by Dave Herasimtschuk / Freshwaters Illustrated

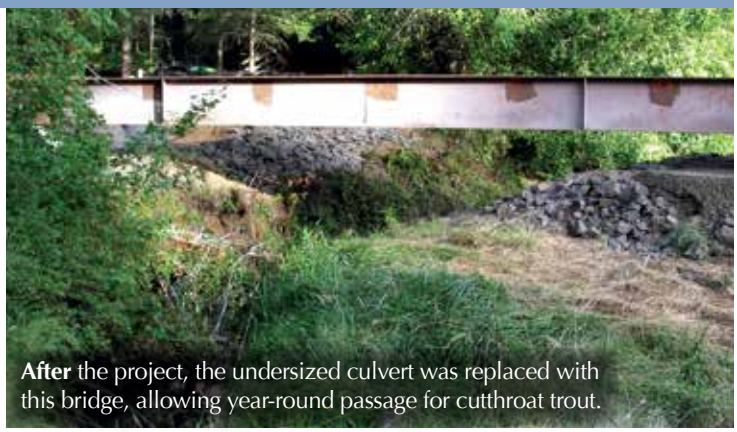


Before the project, this crossing over Eber Creek was a migration barrier for resident and fluvial cutthroat trout and other native aquatic species.

EBER CREEK, *Long Tom Watershed Council*

Landowners Carrying the Torch for Stream Enhancement

Landowner Andy Thomson assists with the installation of steel bridge supports.



After the project, the undersized culvert was replaced with this bridge, allowing year-round passage for cutthroat trout.

Andy and Maryrae Thomson's family has lived and raised beef cattle on the land along Eber Creek, a tributary to Ferguson Creek, since 1881. Their project with the Long Tom Watershed Council (LTWC) began in 2005 when they chose to replace two undersized culverts that were acting as fish passage barriers. For the Thomsons, the project didn't just complement their values, it was a sound business decision. The bridge let the fish swim freely upstream again while providing the Thomsons with safer year-round access to a section of their timber.

The Thomsons have worked with the Council on a variety of projects to improve fish habitat on their property. In addition to the culvert replacement, they have also planted native vegetation and fenced 4,200 feet of stream. More recently, they worked with the Council to plant native vegetation and place logs on Ferguson Creek.

Work with the Thomsons is a result of LTWC's Sub-watershed Enhancement Program, which brings neighboring landowners together to discuss stream health, habitat conditions, and potential restoration projects in their creek basin. Ferguson Creek was the first basin to participate in this peer network for rural property owners. The Thomsons hosted meetings for their neighbors to discuss coordinated restoration plans for the creek. You could say they carried the torch for local stream enhancement.

For families like the Thomsons, the Council provides funding and technical expertise to help them meet their management goals as well as improve water quality and fish habitat. Since it began working in Ferguson Creek, LTWC has removed invasive species and planted native vegetation on over 4.5 stream miles and 40 acres, and removed or replaced five barriers to fish migration in the Ferguson Creek sub-watershed alone. In 2009, Meyer Memorial Trust pledged a 10-year investment to LTWC to increase the pace, scope, and effectiveness of restoration in three of the Long Tom's sub-watersheds. ◆

Youth Watershed Education

Creating opportunities for youth to be engaged in local restoration projects grows leaders who value natural resources. Councils across the state work with local schools to implement watershed education programs, taking students out of the classroom to gain valuable hands-on experience and job skills.

A student examines macroinvertebrates as part of the Coquille Watershed Council's youth watershed education program.

HARNEY BASIN GROUNDWATER STUDY, *Harney County Watershed Council*

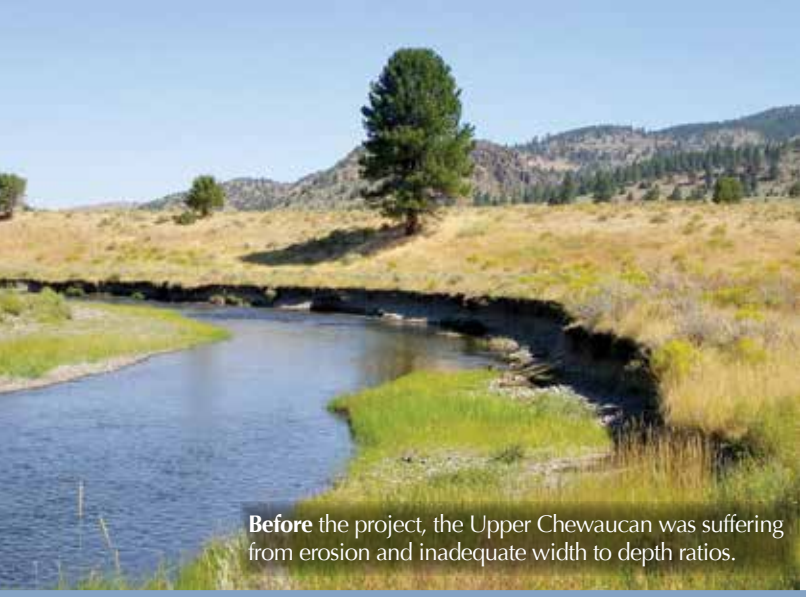
Planning for the Future

Harney County is the largest in Oregon, and its vast area involves complicated water resource issues.

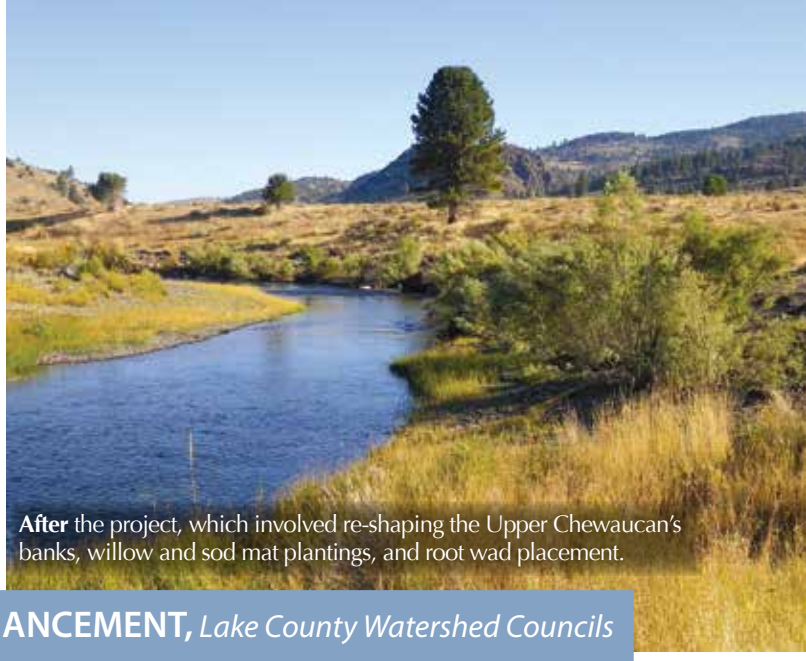
As the largest county in Oregon, Harney County represents an area of over 10,000 square miles. To better understand the groundwater resources of such a vast area, the Harney County Watershed Council (HCWC) is conducting the Harney Basin Groundwater Study. Once complete, the study will allow HCWC to better understand the connection between surface water and groundwater in the basin. This understanding is critical to direct regional water use planning and identify potential water quality issues the region may need to address.

The Council has gathered information and compiled data into a groundwater model using ArcGIS and Subsurface Analysis software. The project area includes over 2,100 wells and the study will help identify the number of aquifers in the region. The model is a critical part of community outreach efforts to gain additional support for ongoing projects that include water quantity and quality monitoring, as well as projecting current and future water needs.

Partners for the groundwater assessment include the Oregon Watershed Enhancement Board, Harney County Court, Oregon Water Resources Department, Oregon Department of Environmental Quality, and the Natural Resource Conservation Service. ◆



Before the project, the Upper Chewaucan was suffering from erosion and inadequate width to depth ratios.



After the project, which involved re-shaping the Upper Chewaucan's banks, willow and sod mat plantings, and root wad placement.

UPPER CHEWAUCAN AQUATIC HABITAT ENHANCEMENT, *Lake County Watershed Councils*

Landowners Working Together

The Chewaucan River is located south of Paisley, Oregon in Lake County. The river serves as important habitat for native redband trout populations once considered for protection under the Endangered Species Act. In years past, the river suffered from erosion and inadequate width to depth ratios caused by management practices and environmental conditions dating back to the late-1800s and mid-1900s. Bare banks contributed to excess sedimentation and increased stream temperatures.

Since 2009 the Upper Chewaucan Watershed Council has been working collaboratively with the Fremont-Winema National Forest and three privately owned cattle ranches in the Chewaucan Valley to make aquatic habitat improvements to the upper 15 miles of the Chewaucan River. To date, partners have worked together to re-contour and stabilize 7,000 feet of stream bank and establish over 10,000 feet of willow root wads and sod mat plantings. Not only is this project expected to have tremendous long-term benefits for the watershed, it is also proof that by working together we can do big things.

The partners for this project included: O'Leary Ranch Inc., Murphy Ranch Inc., J-Spear Ranch, Upper Chewaucan Watershed Council, US Forest Service, Oregon Watershed Enhancement Board, Lake County Cooperative Weed Management Area, Western Native Trout Initiative, and Lake County RAC. ◆

Protecting Rare Habitats

Eastern Oregon is home to a number of endangered species, including the Sage-Grouse. Once seen in great numbers across the West, Greater Sage-Grouse have declined in number over the past century because of the loss of sagebrush habitats essential for their survival. Watershed councils in Central and Eastern Oregon are working to restore these and other rare habitat types to ensure survival of endangered species in our state.

Photo by Kyle Smith

FIVEMILE-BELL WATERSHED RESTORATION, *Siuslaw Watershed Council*

Basin-Wide Restoration

Fivemile-Bell sub-watershed is the largest tributary to Tahkenitch Lake, a wild coho stronghold basin within the Siuslaw Watershed on the Central Oregon Coast. Along with a diverse group of partners, the Siuslaw Watershed Council (SWC) is undertaking restoration of the entire sub-watershed. The environmental assessment process for the project was completed through a unique public-private collaboration that utilized local partners and contractors to support and assist federal agency staff. This project is taking a whole watershed or basin approach to address a multitude of impacts negatively affecting habitat in the sub-watershed.

Overstocked upland forest in the sub-watershed was thinned to encourage an increase in plant diversity, improve wildlife habitat, and provide a local source for in-stream large wood.

The upland forests are overstocked and lack diversity. In the valley bottom, the main stream channel was rerouted and straightened in the last century, resulting in down-cutting and disconnection from the floodplain. In-stream wood was removed, decreasing stream complexity. Historically, native riparian and wetland vegetation was removed, allowing invasives and non-native pasture grasses to establish and then dominate the surroundings. Undersized culverts beneath the county road restrict natural hydrology, aquatic species passage, and sediment transport.

Working to address many issues, the Siuslaw National Forest is leading the design process, with the Siuslaw Watershed Council and other partners leading restoration efforts. On-the-ground restoration activities include thinning dense forest stands, decommissioning historic logging roads, re-meandering and adding large wood to the stream, regrading the valley bottom to restore floodplain connection, establishment of diverse native upland, riparian, and wetland plant species, replacement of problem culverts with fish-friendly crossings, monitoring, and more. The entire project is expected to take almost 10-years.

In 2012, the Siuslaw Watershed Council, the Siuslaw National Forest, and others implemented the first phase of restoration using OWEB and other state and federal funding. Local heavy equipment operators were hired to fall trees and de-compact and re-contour the historic logging roads. A botanist was contracted to develop the vegetation strategy. A heavy lift helicopter moved felled trees from the uplands into two miles of creek, increasing stream complexity. Native trees, shrubs, and grasses - provided by local growers - will eventually be planted along Fivemile Creek.

Project partners have secured and are seeking funding for future phases of the project. Partners include the Siuslaw National Forest, the Siuslaw Watershed Council, Ecotrust, the Siuslaw Institute, Umpqua and Siuslaw SWCDs, Siletz Tribes, other tribal representatives, local schools, and community volunteers. These groups are collaborating to restore the Fivemile-Bell sub-watershed from ridgetop to creek bottom, while creating and maintaining economic opportunities. ◆

Nearly 350 trees were placed in Fivemile Creek to increase habitat complexity for wild coho salmon.

THOMPSON CREEK HABITAT RESTORATION, *Applegate Watershed Council*

Creating Local Jobs

Located in Southern Oregon, Thompson Creek is one of the most important fish-bearing tributaries of the Applegate River. It has some of the best habitat potential for Coho, steelhead, Chinook, and trout of any stream in the Middle Applegate. As with many other Applegate Valley streams, most of the fish-bearing portion of the reach is home to small farms and ranches, which offer both restoration challenges and opportunities. Despite high intrinsic potential for fisheries, historic logging, pasture encroachment, channelization, and levee construction have limited fish habitat and caused significant habitat degradation.

Degraded riparian areas along Thompson Creek.

In 2012, the Applegate Partnership and Watershed Council solidified agreements with ten landowners to restore in-stream and riparian habitat along approximately two contiguous miles of Thompson Creek. This reach represents a significant portion of the sub-watershed's degraded area. The strategic prioritization of restoration on Thompson Creek resulted from a 2004 OWEB-funded Middle Applegate Assessment. Strong community participation and involvement followed from extensive outreach conducted around development of the Thompson Creek Action Plan in 2008.

Restoration work began in 2012 with the receipt of Blue Sky Habitat funds. This work has brought thousands of dollars to local contractors and employed Job Council youth crews. The project has also attracted the attention and support of numerous agencies and partners, including the US Forest Service, Oregon Department of Fish and Wildlife, and the Bureau of Land Management, due to the its watershed-scale focus and engagement with local landowners. The project promises to be a model for community-based restoration and strategic prioritization of restoration resources. ◆

Job Council youth crew at work planting riparian areas along Thompson Creek.

90 Cents of Each Dollar Invested Stays in Oregon

Total Jobs Supported by OWEB Investments

2,700

1 OWEB Grant Dollar = 2.5 Dollars to the Economy

Data available online from OWEB at http://www.oregon.gov/OWEB/.

Creating a Restoration Economy

A recent research project from the University of Oregon Ecosystem Workforce Program shows that every $1 million of public investment in clean water and habitat restoration creates about 15-24 jobs.

The Ecosystem Workforce Program describes this as an emerging "restoration economy" - a marketplace for watershed restoration goods and services. Organizations that receive OWEB grants typically hire local businesses. Most of these businesses are small, with less than $1 million in revenue. The research shows that 90% of OWEB investments stay in Oregon.

Every dollar invested in watershed restoration projects travels through Oregon's economy. Restoration project managers hire consultants, contractors, and employees to design, implement, and maintain projects. Consultants and contractors hire field crews, rent or purchase equipment, and buy goods and services. Employees spend wages on goods and services in their local communities. Habitat restoration projects yield immediate jobs at a level very similar to traditional infrastructure investments.

Photo by Devin Best / Crooked River Watershed Council

Photo by Brian O'Keefe

Put a Salmon On Your Plate

Proceeds from the sale of salmon plates are divided between Oregon Parks and Recreation Department and the Oregon Watershed Enhancement Board. By putting a salmon on your plate, you help support watershed restoration and salmonid habitat improvement everywhere fish call home!

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