BENTON SOIL AND WATER CONSERVATION DISTRICT

HORIZONS

Exploring Our Home Place

Sharing Stories that Celebrate the People and Places of Benton County.

Boot photo © Sue Tangeman

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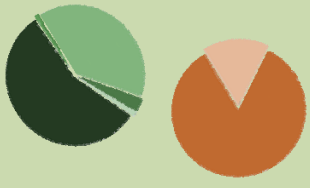
Welcome to the 2016-2017 Annual Report. Along with the mandatory financial report, we've collected some of the stories of people and places that make the mid-Willamette Valley notable.

We extend a heartfelt thanks to you: our partners, volunteers, program participants, and funders, for helping define the character of this very special conservation community.



HOLLY CROSSON

Home Place and the View from Space

As a kid I spent countless hours exploring the wild meadows, woods, and ponds of my grandparents' farm in the Amish country of southeastern Pennsylvania. One of my earliest memories of Hillvue House Farm is of the night-time wonder I felt sitting on the porch of the 200+ year old stone farmhouse, settled on my grandmother's lap and gazing at the full moon while listening to the great horned owl hoot from the field's edge.

My grandmother always encouraged me to imagine what the Man-in-the-Moon saw when he looked back at us on Earth. In springtime he could see us flying high on the rope swing that hung from the gnarly old apple tree, full of fragrant blossoms and buzzing bees. In summer he watched us casting for sunfish from my grandfather's wooden rowboat. In autumn he had a bird's-eye view of us tending and harvesting our bountiful gardens, the fruits of which filled the root cellar.

Many moons have passed since I sat on my grandmother's lap. Now I view the night sky from my home in the Willamette Valley. This past December 3rd, clear skies made it possible to view the Supermoon, which appeared 14% larger and 30% brighter than normal. As I pulled out my binoculars to get a better view, I couldn't help but think of my grandmother, and imagine my current Home Place from the Man-in-the-Moon's perspective. In spring, he sees the pollinators eagerly visiting the early blossoms of the Indian plum. In summer he relishes the increasingly healthy expanses of Oregon sunshine and meadow checkermallow blanketing our restored prairies. In fall he delights in the return of the rains and running of the salmon. It is as clear to me now as it was as a child that if the Man-in-the-Moon is looking he sees the love and hard work our community puts into caring for our Home Place.

This edition of our Annual Report highlights Benton SWCD's focus on conservation and restoration of essential habitats, from aquatic and riparian, to meadows, prairies, and oak woodlands. These places are special in their own right and because of the opportunities they provide for us to connect with the land, water, and each other. Thank you for joining our conservation community as we continue to discover, protect, and restore our Home Place in Benton County.

—Holly Crosson, Executive Director

HEATH KEIRSTEAD

Exploring Our Home Place

Above, Spanish-immersion students learn salmon biology from Brooke Penaluna, who works for the U.S. Forest Service at the Corvallis Forestry Sciences Lab. Brooke connected us with most of the other wonderful bilingual volunteers.

Salmon Watch

Salmon are a culturally, ecologically, and economically significant species of the Pacific Northwest. We believe every kid who grows up here should witness the power of the salmon story first hand.

Our goal is for all students in Benton County to attend a Salmon Watch field trip before they graduate. 74 amazing, dedicated volunteers - including 14 students from College Hill Alternative High - made 16 field trips possible for 681 students who attend school in Benton County. We extend a special thanks to Ron Leonard, who taught Riparian Ecology on 11 trips! This year, we were able to provide bilingual sessions to our Spanish immersion schools, with the help of nine bilingual volunteers who came to us from US Forest Service, the International Cultural Services Program, the Heppell Lab at Oregon State University, and one retired teacher. Visit LBSW.org to learn more.

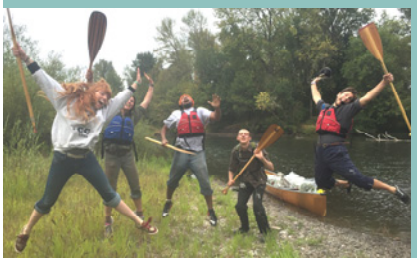
Steering Committee: Calapooia WC, S. Santiam WC, BSWCD, ODFW, Siuslaw NF, Pam Wilson, Jana Seeliger, Ron Leonard

Discovering Sequoia Creek

This year we noticed that relatively few Corvallis residents are familiar with Sequoia Creek, although probably everyone who lives here has crossed its path countless times. It originates in the hills off the west side of Highland Drive and flows southeast past Wilson Elementary, under 9th Street by Coffee Culture, and out past Republic Services to eventually empty into Stewart Slough, across from Waldorf School near Highway 20. The stream flows through an increasingly dense residential area as it heads down hill, and enters its most urbanized stretch as it hits the valley bottom. Unlike many of the urban waterways in Corvallis, Sequoia re-enters a markedly less urban corridor before converging with the Willamette.

We toured Sequoia Creek for the 10th annual urban creek tour, held June 10, 2017. Twenty-four people attended the tour by trolley and about 19 by bicycle. The tour was planned in partnership with the Sierra Club, Corvallis Sustainability Coalition, and City of Corvallis Stormwater Program. For more information about Sequoia Creek, download the tour brochure at www.bentonswcd.org/assets/Sequoia17.pdf

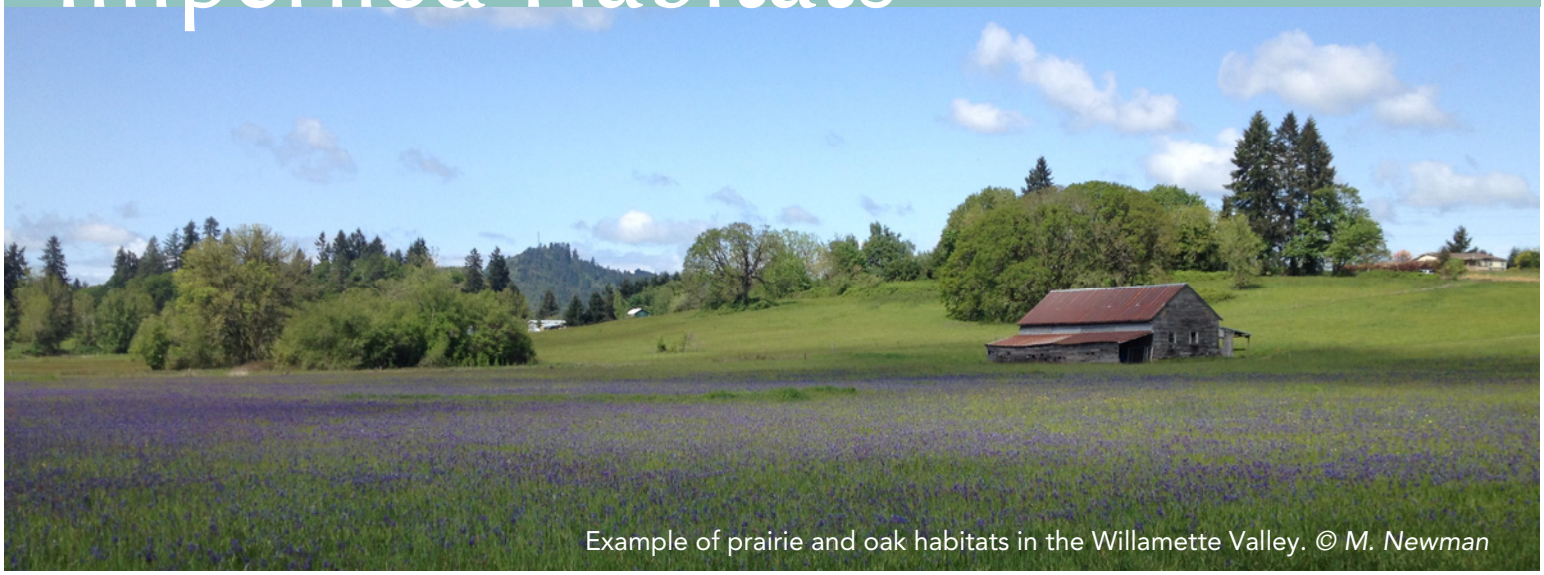
MELISSA NEWMAN



Removing Weeds from the River and River Banks

We conducted two volunteer weed pulls this summer in partnership with Willamette Riverkeeper to hand-pull small populations of *Ludwigia* and yellow floating heart along the Corvallis to Albany reach of the Willamette River, and to learn how to spot and dispose of them properly. Over 40 landowners, river recreators, Oregon State University students, Northwest Youth Corps young professionals (pictured above), and natural resource managers and practitioners participated in the events. These events, made possible with funding from the Oregon Department of Agriculture and Meyer Memorial Trust, are key to successful detection and management of new weeds along the river.

Imperiled Habitats



Example of prairie and oak habitats in the Willamette Valley. © *M. Newman*

Oak woodland, oak savanna, and upland prairie habitats occur in the foothills of the Cascade Mountains and Coast range. Wet prairies are found in the poorly drained soils of the Willamette Valley floor. These oak and prairie habitats are some of the most culturally important and imperiled ecosystems in Oregon. According to Oregon Department of Fish & Wildlife, only 7% of historic oak woodlands and 4% of oak savanna and upland prairie habitats still exist, and most of it is in private ownership[1].

Our regional oak woodlands are dominated by an overstory of Oregon white oak (*Quercus garryanna*). The open understory accommodates grasses, forbs, and shrubs, which provide habitat for a number of sensitive or at-risk species including western gray squirrel, acorn woodpecker, and slender-billed nuthatch. A large group of acorn woodpeckers can be seen in the oaks right by the headquarters office at Finley Wildlife Refuge.

Oak savannas are dominated by grasses and forbs, with widely spaced, open-crowned white oaks. Upland prairies have a very similar species composition but without the oaks and usually with deeper, moister soils. Some of the rare species found in oak savannas and upland prairies include: Kincaid's lupine, peacock larkspur, golden paintbrush, Willamette daisy, Fender's blue butterfly, Taylor's checkerspot butterfly, and Oregon vesper sparrow.

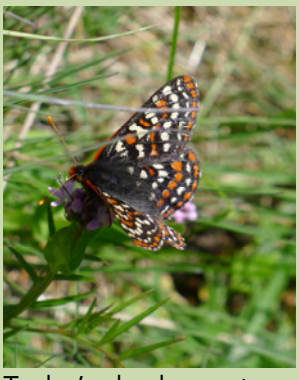
A number of Benton SWCD's programs and outreach efforts focus on restoring these special habitats, as described in the pages that follow.

[1]*Oregon Department of Fish and Wildlife report "Ecoregions: Willamette Valley Ecoregion", 2006.*

Indian paintbrush
© *M. Newman*

Acorn woodpecker
© *Gary Kramer*

Peacock larkspur
© *Jeff Dillon, USFWS*



Taylor's checkerspot
© *M. Newman*

Kincaid's lupine
© *M. Newman*

DONNA SCHMITZ

Partnerships for Oak Habitats

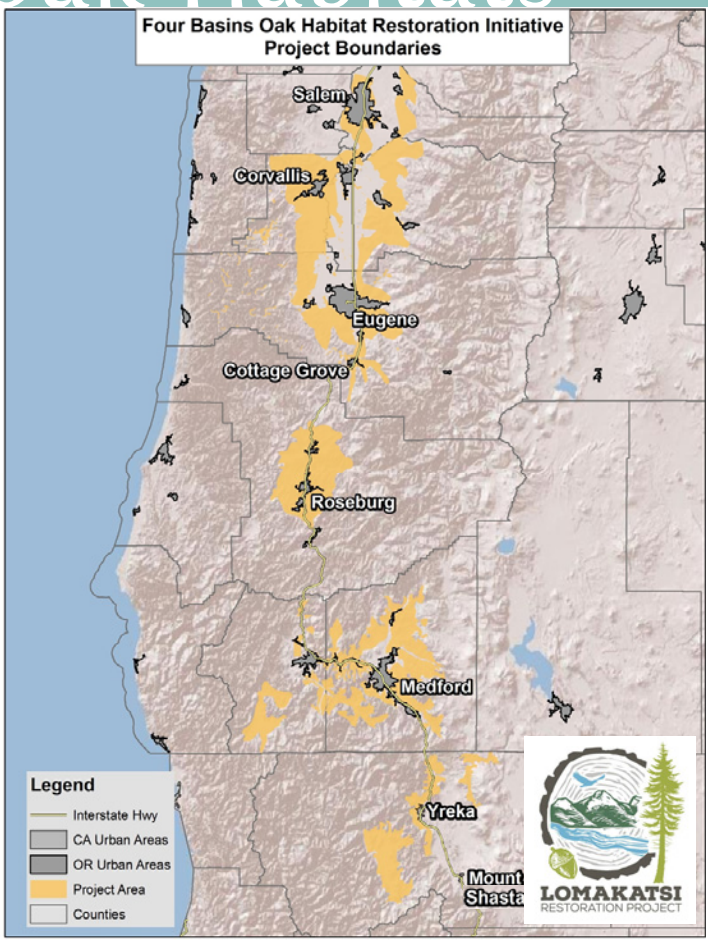
OWEB Restoration Grants

In 2016-17 we worked with local landowners to secure two OWEB restoration grants to improve wildlife habitat. One project is primarily oak woodland thinning and native understory plantings on 172 acres near Wren. The other project is restoration of a variety of habitats including oak woodland and savanna on a 100-acre parcel south of Corvallis.

Regional Conservation Partnership Program (RCPP)

A team of many partners throughout the Willamette Valley, southwest Oregon, and Northern California requested Natural Resources Conservation Service's Regional Conservation Partnership Program (RCPP) dollars for oak savanna and woodland restoration. RCPP funds will help many more landowners in sensitive priority areas to restore and conserve oak habitats.

Oregon white oak and rose checkermallow. © *M. Newman*



RCPP Partners

Benton Soil and Water Conservation District
Bureau of Land Management
Center for Natural Lands Management
Coast Fork Willamette Watershed Council
Confederated Tribes of Siletz Indians
Confederated Tribes of the Grande Ronde
Cow Creek Band of Umpqua Tribe of Indians
Ecotrust Forest Management
Greenbelt Land Trust
Karuk Tribe
Klamath Bird Observatory
Linn Small Woodland Association
Lomakatsi Restoration Project
Long Tom Watershed Council
McKenzie River Trust
Oregon Department of Fish and Wildlife
Quartz Valley Indian Reservation
US Fish and Wildlife Service
The Nature Conservancy in Oregon

TERESA MATTESON

Prairies are for Pollinators

Young Kenny Fender, an avid Yamhill County entomologist, shared his collection of a small blue butterfly with his friend Ralph Macy. In 1931 Ralph was credited with a new species description, the butterfly now known as *Icaricia icarioides fenderi*. Ralph later became a biology professor at Reed College and Portland State University and wrote the definitive book titled *Butterflies*. Fender's blue butterflies were found in the eastern foothills of the Oregon Coast Range until 1937, after which time the species was presumed extinct. After WWII, Kenny worked as a postal carrier. His route included his blue butterfly collection site and the surrounding rural landscape where he continued his entomological studies. Fondly remembered by daughter Laura McMasters, Kenny and his wife, legendary worm expert Dorothy McKey-Fender, raised their four children on a healthy dose of naturalist, complete with Sunday field trips, survey transects, and insect identification.

In 1989, Paul Hammond, OSU Department of Entomology, rediscovered Fender's blue in Butterfly Meadows, a rare remnant of steep, south-facing upland prairie in the McDonald-Dunn Forest. Since its rediscovery numerous academics, non-governmental organizations, and agency staff have joined landowners to locate and manage Fender's remnant habitats. The concerted efforts have also focused on restorative plantings of Kincaid's lupine and the nectar plants vital to the Fender's survival.

The Fender's known distribution is currently 32 sites in Yamhill, Polk, Benton, and Lane Counties. When left alone, these sites will inevitably be overgrown by woody shrubs and trees. For a prairie to persist requires natural or human-induced disturbance, such as fire. On the other hand, the decline of Fender's blue has been attributed to human impacts, such as the introduction of invasive non-native plants, and land use shifts from prairie and pasture to agriculture and development. The formula for the Fender's survival must include conscientious management with a gentle footprint.

Prairie Soils for Sustainable Restoration

It is not clear why some upland prairie restoration projects are more successful than others. To dig deeper, NRCS and Benton SWCD collected soil data from 136 remnant prairie and restored prairie sites. The data will be analyzed, along with vegetation surveys and management history, to determine the role of soil in prairie restoration success.

Fender's blue butterfly on Kincaid's lupine. Credit: unknown

Our PSSR Partners: NRCS, Red Hill Soils, Marys River Watershed Council, Yamhill SWCD, Long Tom Watershed Council, OSU Myrold Lab, OSU Parke Lab, OSU Central Analytical Lab, Fitzpatrick Ecological Consulting, Duncan Thomas, Lorene Becker, Candice Weems-Landry, 23 landowners, and OSU Students Logan Bennett, Andy Perry, Jordan Coelho, Erika Mittermaier, & Claire Delacruz.

HEATH KEIRSTEAD

Pollinators at Home

Jerry Paul inspects a mason bee nest box with Scottie Jones and guests at Leaping Lamb Farm Stay in Alsea.

Bee Buddies

Inspired by trainings provided by the Linn County Master Gardeners, Benton SWCD's Director Jerry Paul developed the popular new Bee Buddies Program. Bee Buddies are community members who host a populated mason bee nest box at their orchard or garden. Mason bees are gentle, solitary-nesting, super-pollinators, which makes them ideal for active management.

In early April 2017, we installed nest boxes for 24 Bee Buddies. About 1,400 cocoons were distributed with the nest boxes. The bees' short active cycle was complete by the beginning of June, when Jerry picked up all the nest boxes for proper summer storage. In October, just over 2,000 mature cocoons were harvested and cleaned for winter storage, which means we will be able increase the number of Bee Buddies this year. To participate in the Bee Buddies program, submit your application every year by March 1.

Applications are available on our website at www.bentonswcd.org/activities/landowners/bee-buddies/.

Fun Fact
One female mason bee is the pollinating equivalent of 100 honey bees!

Surprisingly little is known about the nesting preferences of mason bees, so Jerry tested hollow plant stems, paper tubes, and wooden nest blocks. Whenever the bees had the option, they used the natural materials first.

TERESA MATTESON

Beneficial Insects Help Farmers

Integrated Biological Pest Management (IBPM), also called conservation biocontrol, focuses on increasing the on-farm occurrence and diversity of beneficial insects that are already present in the area…by providing food, shelter, and other habitat components. 2017 was an exceptional year of IBPM education thanks to USDA Risk Management Education Partnerships Program funding and the leadership of Gwendolyn Ellen.

The IBPM education project depended on contributions from many valuable partners: SWCD staff and OSU Extension agents; farmers, entomologists, wildlife biologists, and botanists; state and federal agency staff; college and K-12 instructors, and enthusiastic volunteers!

IBPM project partners delivered 24 educational courses and field days based on presentations and hands-on activities developed by Gwendolyn Ellen over decades of work with farmers. Cooperatively, we reached 561 contacts from 20 Oregon and 4 Washington counties. All told, 104 farmers and experts delivered presentations on: insect identification, insectary design and management, and additional topics such as birds of prey and financial and technical resources available for IBPM implementation.

Gwendolyn Ellen, *center*, recognizes Peter and Alana Kenagy, who support beneficial insects on their family farm in North Albany.

6 Habitats for Beneficial Insects[1]

1 Field Borders

Strips of native grasses and wildflowers planted along field edges, farm roads, underneath power lines, or in the corner areas of center-pivot irrigated fields.

2 Pollinator Hedgerows

Linear rows of flowering shrubs, trees, perennial wildflowers, and grasses in the understory. Located along property boundaries, fence lines, roads, and as barriers to separate crop fields.

3 Streamside Buffers

Multi-level native vegetation maintained along streams, creeks, and rivers.

4 Beetle Banks

Grassed elevated berm that provides shelter and overwintering habitat for predatory ground beetles. Planted next to or through the center of crop fields.

5 Cover Crops and Alley Crops

Temporary or permanent plantings of ground cover on fallow crop fields, between rows of berry crops or nursery stock, or in the understory of vineyards and orchards.

6 Insectary Strips

Strips of pollen and nectar sources planted between crop rows.

[1]From *Crop Pests* field chart by Lisa Kilders and Chelsea White-Brainard. Access at www.bentonswcd.org/programs/native-plants/ibpm/.

IBPM Partners: Gwendolyn Ellen (OSU Integrated Plant Protection Center), Lisa Kilders (Clackamas SWCD), Drew Harper (Curry SWCD), Stacey Garrison (Polk SWCD), Juli Waarvik (Tualatin SWCD), Karen Lamson (Wasco SWCD), Dan Richardson (Underwood CD), Heidi Noordijk (OSU NWREC), Dana Kristal (OSU SOREC), James Cassidy (OSU Crop & Soil Sci.), Miriam Edell (LBCC), & Toni Kessler (Linus Pauling Institute).

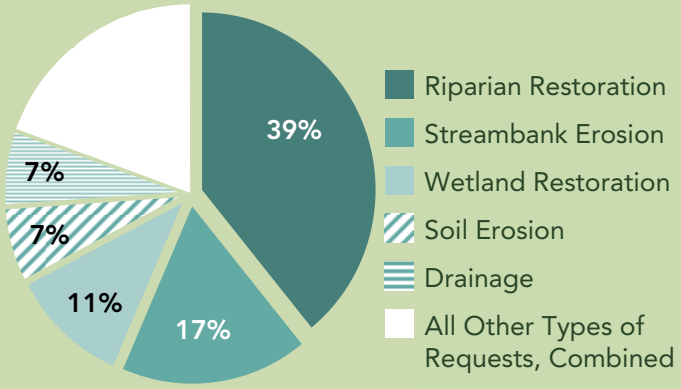
DONNA SCHMITZ

Along the River's Edge

High flows during storm events caused streambank erosion along Greasy Creek south of Philomath.

From July 2016 to June 2017, precipitation in the Corvallis area exceeded the annual average by almost 27%. During this same time period, Benton SWCD received a higher than normal proportion of requests for technical assistance to help with erosion and drainage issues.

Technical Assistance Requested in FY 2016-2017



Streams in the Willamette Valley have been dredged and straightened to move flood waters quickly downstream. Urbanization adds impervious surfaces, such as rooftops and streets, to the watershed, which result in earlier peak storm flows and higher volumes than "natural" streams would experience.

We can never return our streams and riparian areas to their pre-development conditions, but the enhancement of streamside vegetation can restore some of their important functions. Healthy riparian forest buffers can help reduce flood damage, improve water quality, decrease soil erosion, and increase wildlife habitat diversity.

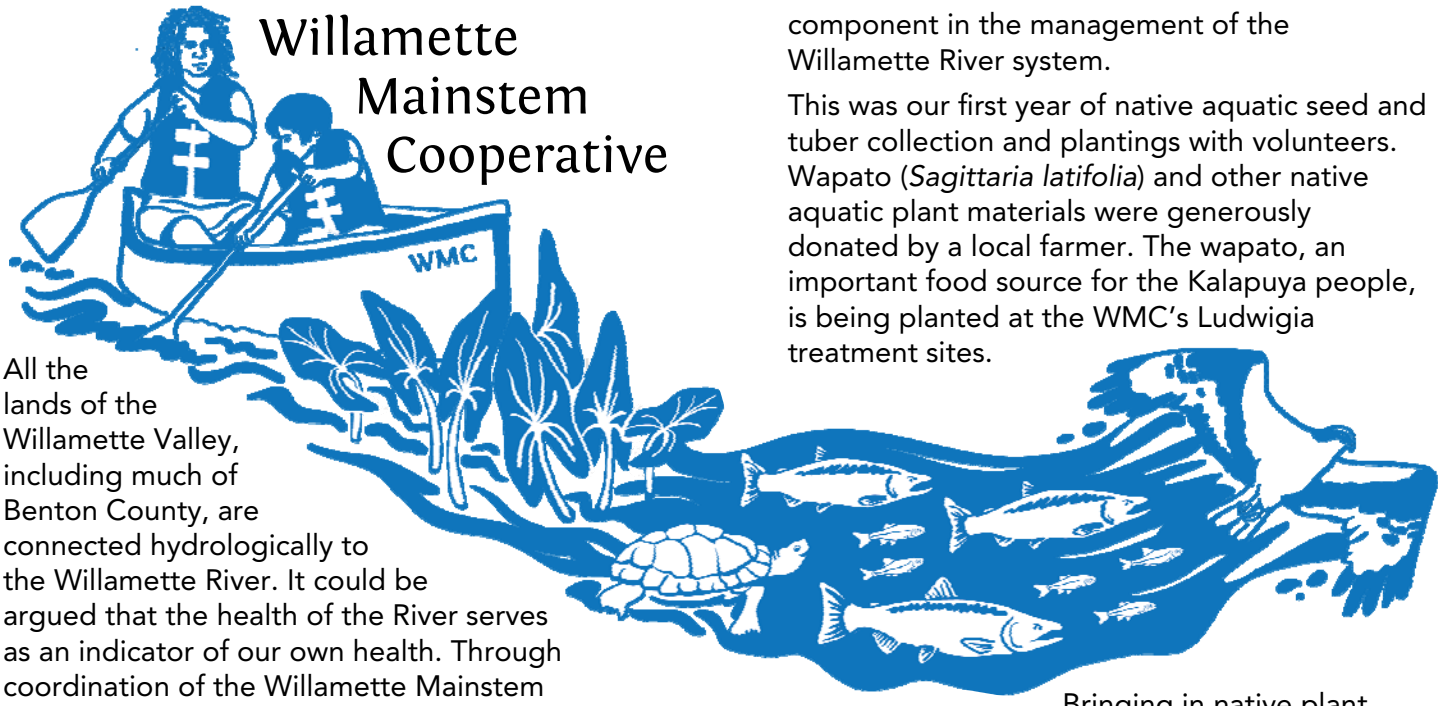
Heavy flows of runoff eroded the top soil from this Christmas tree operation in southern Benton County.

State and Federal funds are available to help landowners pay for riparian restoration. During the last fiscal year in Benton County, two riparian buffers were implemented with help from the Conservation Reserve Enhancement Program (a Federal Farm Program), two large Oregon Watershed Enhancement Board (OWEB) grants were secured for over 270 acres and three OWEB small grants provided assistance for projects on about 13 acres. If you have restoration needs, contact Donna Schmitz at Benton SWCD. If your property is eligible, she'll help you apply for funding.

Oregon Watershed Enhancement Board and CREP funded riparian forest buffer and fencing along Bummer Creek in Alsea.

MELISSA NEWMAN

Restoring River Habitats



Willamette Mainstem Cooperative

All the lands of the Willamette Valley, including much of Benton County, are connected hydrologically to the Willamette River. It could be argued that the health of the River serves as an indicator of our own health. Through coordination of the Willamette Mainstem Cooperative (WMC), Benton SWCD works to enhance and restore open water and side-channel habitat for native fish and wildlife species.

Ludwigia hexapetala, commonly called Ludwigia, continues to be a large focus for control treatments in the WMC project area, using grant funds from the Oregon Watershed Enhancement Board, Oregon Department of Agriculture Oregon State Weed Board, and Meyer Memorial Trust. Many additional partners are now focusing efforts on control of Ludwigia in a number of reaches of the Willamette River. This effort is key to the success of reducing Ludwigia populations throughout the river system.

To learn more about the impacts of Ludwigia and other aquatic invasive species on water quality and aquatic plant community composition we are partnering with U.S. Geological Survey, Portland State University, Oregon Parks and Recreation Department, and Willamette Riverkeeper on a regional monitoring effort . Assessing the effects of Ludwigia and its treatment on the aquatic plant community and water quality is an important component in the management of the Willamette River system.

This was our first year of native aquatic seed and tuber collection and plantings with volunteers. Wapato (*Sagittaria latifolia*) and other native aquatic plant materials were generously donated by a local farmer. The wapato, an important food source for the Kalapuya people, is being planted at the WMC's Ludwigia treatment sites.

Bringing in native plant materials to help supplement natural recruitment of native plants at restoration sites will help create high quality habitat to support our native fish and wildlife species.

Sister River Exchange

As part of Meyer Memorial Trust's Willamette River Initiative, Benton SWCD staff members participated in the Willamette-Laja Twinning Project Exchange, where the Willamette River restoration community got the opportunity to visit with representatives from the Rio-Laja River Basin in Mexico, for a weeklong exchange of knowledge and practice in watershed restoration. As a result, we have begun working with the Laja visitors and other Willamette restoration groups to develop a shared Willamette-Laja watershed education project for youth.

WMC Partners: Local landowners, Bonneville Env. Fdn., Calapooia WC, Carex Working Group, Cascade Pacific RC&D, City of Albany, City of Corvallis, Confederated Tribes of Siletz Indians, Confederated Tribes of Warm Springs, Gilmour Farms, Greenbelt Land Trust, Kenagy Family Farm, Linn SWCD, ODFW, Oregon Parks and Recreation, OSU Extension Forestry, Portland State University, USGS, Willamette Riverkeeper.

Upcoming Events

A Forward Look: 2018

January 10, 6-7:30 pm Corvallis Public Library	Providing for Pollinators: Backyard to Large Scale Prairies	Gain a better understanding of prairie habitats and learn how you can contribute to their abundance.
January 27, 9 am - 5 pm OSU Bee Lab	Bee ID Workshop	Learn bee ID, then commit to regular collecting for one year. Registration required, space limited.
February 10, 9 am -1 pm Benton Co. Fairgrounds	Bee Buddy Outreach Winter Farmers Market	Visit our booth to learn how you can support native bees through our Bee Buddy Program.
February 24, 9 am - 2 pm Benton Co. Fairgrounds	Native Plant Market	Purchase native plants for restoration and gardening. We'd love for you to volunteer at the Market, too!
March 10, 1 - 4 pm The Arts Center	Bee Bundle Craft Activity	Wrap teasel bundles in yarn to create decorative homes for solitary nesting bees.
May 6, 1 - 4 pm 3 stops	Prairie Tour Natural Areas Celebration Week	Join us and Finley Wildlife Refuge staff for a tour of an upland prairie, wet prairie, and backyard prairie.
May 10, 6 - 7:30 pm Finley Wildlife Refuge	Prairie Plant ID Walk Natural Areas Celebration Week	Learn to identify the flowers you see while strolling through the prairie at Finley Refuge.
May 12, 1 - 4 pm The Arts Center	Paper Making Craft Activity Natural Areas Celebration Week	Join us and The Arts Center staff to use invasive plants in a creative way – make paper with them!
May 19, TBD Various locations	Let's Pull Together Invasive Weed Awareness Week	Help maintain the natural areas you love and meet new friends!

Native Plant Sale Changes

The Native Plant Sale will be held at the Benton County Fairgrounds on Saturday, February 24 from 9 am to 2 pm. Although you won't be able to place your order in advance this year, we will have over 100 native plant species available at the market—our largest selection ever!

Come shop at the market early to maximize your options, or come later for reduced prices. All plants will be half price from 1-2 pm. In January, check the plant catalog on our website to see what plants we will offer at the market.

We hope you choose to be part of our plant sale volunteer family this year. Volunteers make this community event possible - and fun!

People of Benton SWCD

Staff

Holly Crosson *Executive Director*
Donna Schmitz *Resource Conservationist*
Teresa Matteson *Soil Health Coordinator*
Heath Keirstead *Communications, & Community Engagement Program Manager*
Melissa Newman *River Restoration & Invasive Species Program Coordinator*
Janette Byrd *Administrative Specialist*
Tom Snyder *NRCS District Conservationist*

Board of Directors *(Zone)*

Back Row, Left to Right
Cliff Hall, Chair *(3)*
Jerry Paul, Treasurer *(At Large)*
Pat Malone *(1)*
Grahm Trask *(4)*

Front Row, Left to Right
Heidi Goracke *(5)*
Faye Yoshihara *(2)*
Henry Storch, Vice Chair *(At Large)*

Benton Soil and Water
CONSERVATION DISTRICT

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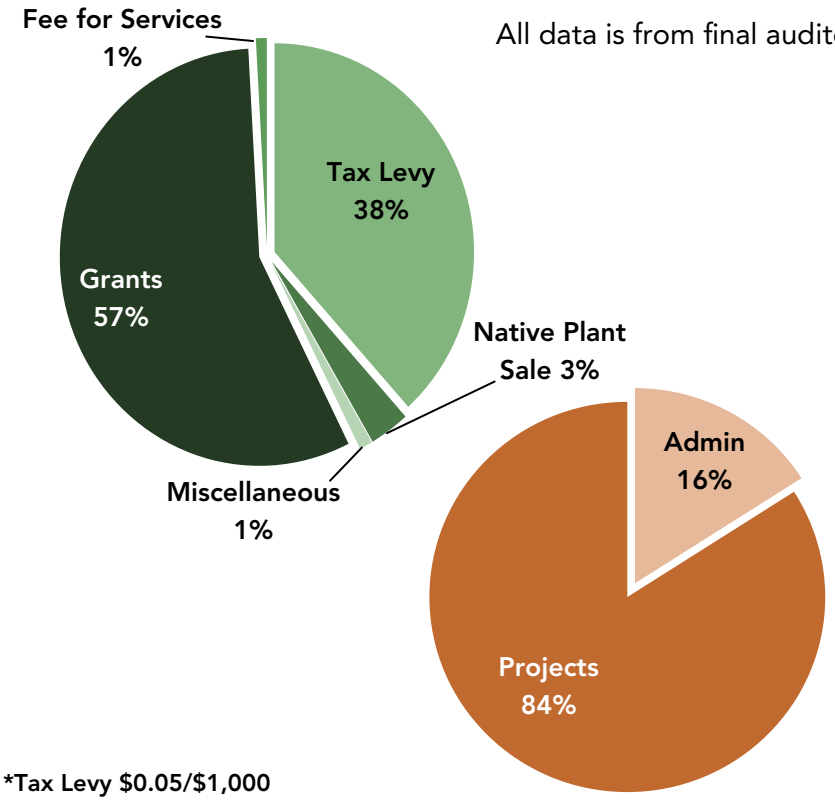
Fiscal Year 2016-2017 Financial Report

All data is from final audited financial information for FY 2016-17.



*Tax Levy $0.05/$1,000

Revenue ($)	
Grants	574,900
Tax Levy*	389,713
Native Plant Sale	33,076
Miscellaneous	10,718
Fees for Services	8,904
Total	**$1,017,312**

Expenditures ($)	
Admin	150,874
Projects	795,572
Total	**$946,446**
Net Change	**$70,866**