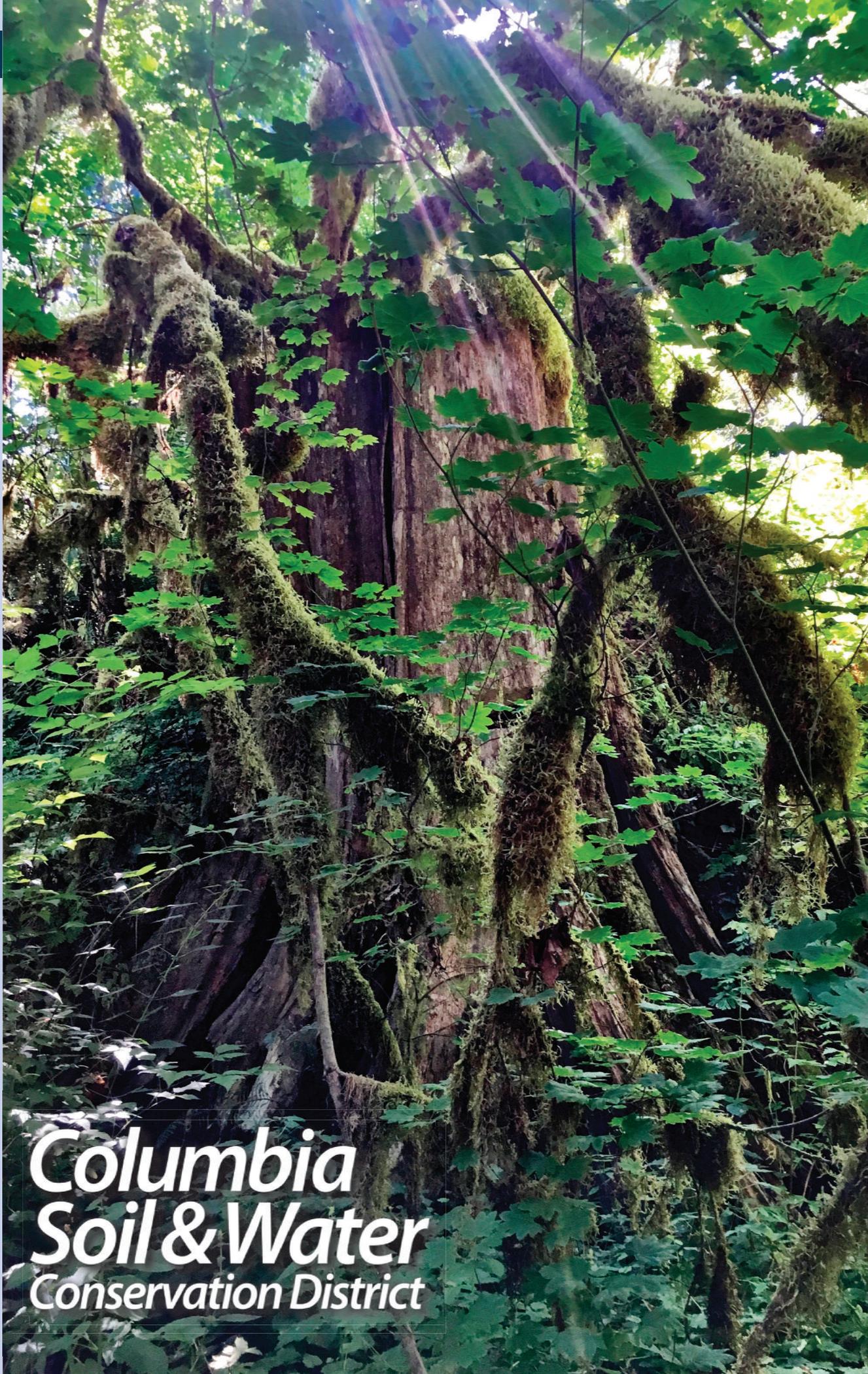


2017-18

ANNUAL REPORT



**Columbia
Soil & Water
Conservation District**





Table of Contents

Who We Are and What We Do.....	3
Board of Directors.....	4
Finances	5
Staff Bios/Get involved.....	6
Staff Bios.....	7
RCPP	8-9
Letter from the Manager.....	10
SBWC Report.....	11
LCRWC Report.....	12
UNWC Report.....	13
NRCS Report.....	14-15
Introducing Pacific Lamprey	16-17
What's that Growing in the Water?.....	18-19
Working in the Weeds.....	20-21
Pasture Grass 101.....	22-23
Thank You.....	24

The Columbia Soil & Water Conservation District

35285 Millard Road, St. Helens, OR 97051 • 503.433.3205
Hours: 8:30 am to 4:30 pm (Monday-Friday)
information@columbiaswcd.com • www.columbiaswcd.com



Who We Are And What We Do

The Columbia SWCD was created in 1946 and has been serving the citizens of Columbia County ever since

The SWCD's of Oregon were created gradually starting in 1939. To date, there are 45 districts serving Oregon. They are considered subdivisions of state government, but function as local units led by a locally elected board of directors.

District directors are elected on Oregon's general election ballot and serve terms of four years without pay. Directors are members of business, professional and agricultural communities who understand the ecological relationships of soil, water, plant, and animals.



RIGHT: Monica Blanchard performing a snorkel survey in Rock Creek on a project site in Vernonia.

OUR MISSION

Offering people of our community assistance to sustain local natural resources.

OUR GOALS

- Effective Natural Resource Management
- Local and Regional Conservation Partnerships
- Conservation Planning and Implementation
- Watershed Enhancement
- Invasive Species Identification and Control
- Informed Citizens and Public Representatives
- Fiscal Accountability
- Financial Assistance for Conservation Effects

CONSERVATION PLANNING

With the assistance of the Natural Resources Conservation Service (NRCS), we can create a Conservation Plan for your property. These plans serve as a guide to protecting your natural resources and improving your land's productivity.

WEEDS

The Columbia SWCD is the county lead on noxious weed issues. We have numerous partners who assist us and are always happy to talk weeds with anyone!

Whether it's talking to landowners or school kids, we are always striving to spread the word about conservation. If you are interested in learning more or having us speak to your group, please contact us.

TECHNICAL ASSISTANCE

The SWCD and its board members have been at this for a long time. If you have a question, feel free to ask. If we don't know the answer, we have an extensive network of experts who will.

The Board of Directors



Randy Bergman
SECRETARY



Jason Busch
DIRECTOR ZONE 2



Kay C. VanNatta
TREASURER ZONE 3



Dave Freytag
DIRECTOR ZONE 4



Craig Ellis
DIRECTOR ZONE 5



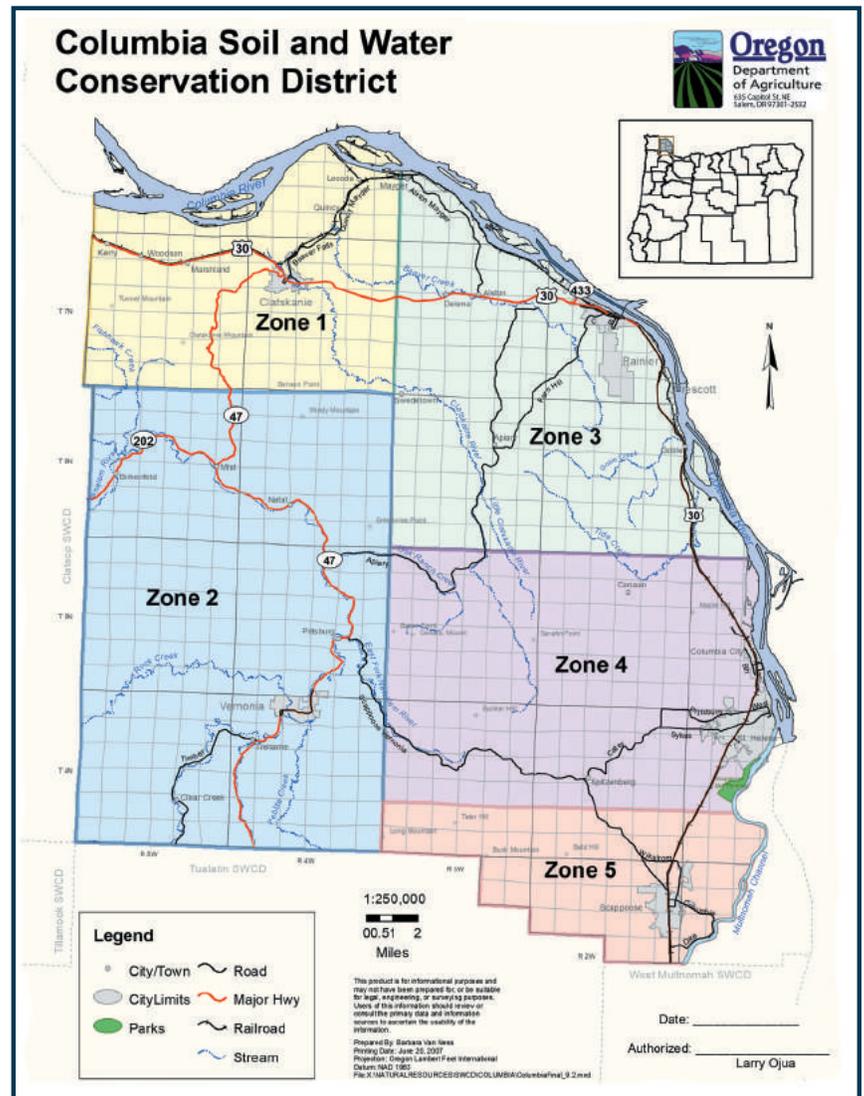
Bill Eagle
VICE-CHAIR AT LARGE 1



Lona Pierce
CHAIR AT LARGE 2

The Columbia SWCD Board of Directors is made up of citizens and landowners of Columbia County. The county is broken up into five zones, of which there are representatives for each. The director must own at least 10 acres of land to qualify.

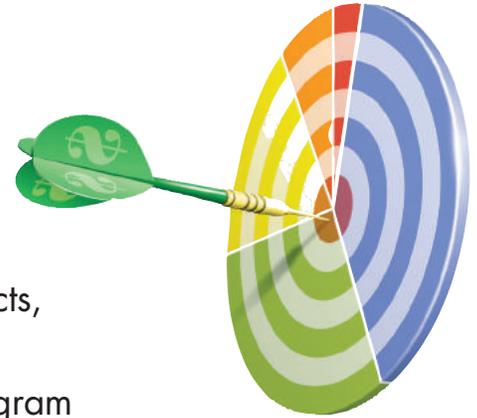
In addition, the Board has two “at large” positions. These can come from anywhere in the county and there is NO land requirement. Directors serve four year terms and are elected just like any other government official.



The Board of Directors meets the 3rd Wednesday of every month at 7:00 PM in the Columbia SWCD office: 35285 Millard Road, St. Helens, OR 97051

Finances

What Are Your Tax Dollars Doing for Columbia County?



- Increased staff to address client inquiries, develop projects, and provide technical assistance
- Development of more comprehensive noxious weed program and educational outreach
- Ability to develop long-term restoration plans and partnerships

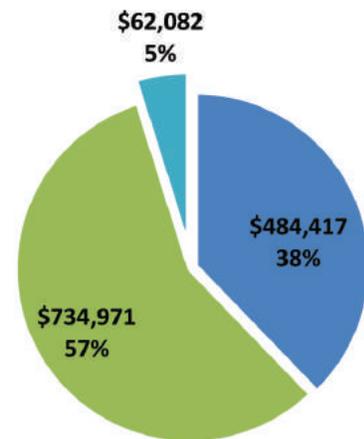
BALANCE SHEET

COLUMBIA SWCD
Summary Balance Sheet
As of June 30, 2018

ASSETS	
Current Assets	
Checking/Savings	135,122.70
Accounts Receivable	1,394.00
Other Current Assets	38,037.85
Total Current Assets	174,554.55
Fixed Assets	1,269,386.26
TOTAL ASSETS	1,443,940.81
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	14,534.71
Credit Cards	4,067.71
Other Current Liabilities	91,422.58
Total Current Liabilities	110,025.00
Long Term Liabilities	339,086.65
Total Liabilities	449,111.65
Equity	994,829.16
TOTAL LIABILITIES & EQUITY	1,443,940.81

*Audit available for review at the District office after 12-31-18

RESOURCES 2017-2018



■ Tax Levy \$0.10/\$1,000 ■ Grants ■ Other

ADDITIONAL RESOURCES PROVIDED TO THE COMMUNITY

- Review Land Development Service Applications and respond to field referral for many different land use issues.
- Partner with Columbia County Roads Dept on bridge and culvert projects.
- Historic documents available for viewing.
- Resource for drainage districts, improvement companies, and diking districts.
- Partner with local school districts' agriculture and natural resource programs.
- And much more...

Get Involved:

THERE ARE MANY WAYS TO GET INVOLVED AND HELP KEEP OUR COUNTY VITAL, HEALTHY AND PRODUCTIVE:

- If you are interested in issues involving land management, conservation, and restoration, consider running for one of our Board positions.
- Volunteer or be an Associate Director. Whether you have a special skill set to offer, are studying to go into the field of natural resources, or are just generally looking to help out, volunteers are always greatly appreciated.
- Implement conservation practices on your

land. Call our office or the NRCS to get more information about what you can do to improve soil health, water quality, and habitat on your land.

- Start a community work group. Identify common interests or concerns among friends/neighbors and rally for the cause. Check out SOLVE's website for volunteer opportunities across the state and to learn how to become an Event Coordinator.

The Staff:

Kari Hollander,

DISTRICT MANAGER

503.433.3205 x102 • kari.hollander@columbiaswcd.com



Kari Hollander, District Manager, has been with the District since September 2006. She sees that the vision and mission of the district are met and seeks new opportunities that will benefit the citizens of Columbia County. When not working, she spends time with her two daughters, painting, cooking, baking, and traveling near and far. She also volunteers in neighboring Cowlitz County with underserved communities developing leaders and mentoring teenage girls to pursue their dreams.

Selene Keeney,

RESOURCE CONSERVATIONIST

503.433.3205 x104 • selene.keeney@columbiaswcd.com



Selene Keeney, Resource Conservationist, joined the District in July 2016. She has a B.S. in Science and a minor in Botany from Portland State University. Prior to joining the Columbia Soil and Water Conservation District, Selene worked as an Ecologist/

Project Manager for a private consulting firm. When not working, she enjoys spending time with her family, exploring and being on or in Pacific Northwest rivers, streams and lakes.

Monica Blanchard,

RESOURCE CONSERVATIONIST

503.433.3205 x109 • monica.blanchard@columbiaswcd.com



Monica Blanchard, Resource Conservationist, joined the District in August 2016. She works on the Technical Assistance aspects of the District's mission and is our resident fish expert/enthusiast. She has worked in streams in Alaska, Washington, Oregon, and Utah since graduating from Western Washington University in 2008. She followed her passion for streams to a graduate degree in Watershed Science/Fisheries at Utah State University. When not working in streams she still loves walking along and paddling in them. She also enjoys backpacking, snowboarding, cooking, and traveling near and far with her friends and family.

Malysa Legg,

ASSISTANT DISTRICT MANAGER

503.433.3205 x107 • malysa.legg@columbiaswcd.com



Malysa Legg, Assistant District Manager, has been with the District since April 2009. Malysa handles the day to day operations in the office as well as fiscal and grant management. When not working, Malysa enjoys cooking, baking, reading, watching lots of sports with her husband, and playing with their adorable cats Sharkie and Lou.

Nathan Herr,

SENIOR RESOURCE CONSERVATIONIST

503.433.3205 x101 • nathan.herr@columbiaswcd.com



Nathan Herr, Senior Resource Conservationist, has been with the District since January 2012. He has a BS in Environmental Science and a minor in Fisheries from Oregon State University. He oversees field staff operations and is the lead on the ODA water quality program for Columbia County. In his spare time, Nathan enjoys being outdoors with his dogs, wife, and three daughters or out hunting and fishing as much as possible.

Crystalyn Bush,

RIPARIAN SPECIALIST

503.433.3205 x108 • crystalyn.bush@columbiaswcd.com



Crystalyn Bush, Riparian Specialist, was hired in March 2016. She has a B.S. in Environmental Science from Oregon State University and a B.A. in English Literature from Middlebury College. Crystalyn oversees the District's noxious weeds program and the

development of outreach materials/activities, engages with local schools and educators, provides field support to staff and technical assistance to landowners. She enjoys discovering things with her family, her job, walks in the woods, gardening to excess, making the house smell delicious, and never having enough time for it all.

Jennifer Steinke,

OFFICE AND OUTREACH COORDINATOR

503.433.3205 x100 • jennifer.steinke@columbiaswcd.com



Jennifer Steinke, Office and Outreach Coordinator, has been with the District since March 2016. In addition to her administrative and reception duties, Jennifer helps support the rest of the staff and handles the outreach materials for the district such as the newsletter,

updating social media sites, district website, and more. Jenn is also the person to contact if you would like to join the newsletter mailing list or have questions regarding the meeting room facilities. In her spare time, she enjoys spending time with her puppy and fiancé, being outdoors, baking, exploring vineyards and wineries, and trying new things.

NRCS/LCEP Staff

Don Mehlhoff,

DISTRICT CONSERVATIONIST

503.438.3146 • don.mehlhoff@or.usda.gov



Don Mehlhoff, District Conservationist, has over 31 years with NRCS. He began working for the agency in North Dakota followed by several years in eastern Washington, northern Idaho and now Oregon.

He has been a certified crop advisor since 1997 and has been certified as a journeyman conservation planner with Oregon NRCS since 2000. Don and his family have resided in St. Helens since 2000 when he accepted the NRCS position here. "My favorite thing about working for NRCS is the opportunity to work with farmers, ranchers and forest operators. The chance to visit their farms, discuss their operations and their interest in conservation makes the job rewarding. I have typically learned more from them than I have probably provided in return."

Dee Robinson,

PROGRAM SUPPORT TECH

503.438.3147 • dee.robinson@or.usda.gov



Dee Robinson, Program Support Tech, began working for the Northwest Oregon RC&D Council in 1987, and was converted over to SCS/NRCS in 1989. Over the past 29 years, Dee has served in many different capacities, providing assistance to RC&D and the North Coast Basin NRCS. She and her husband, Vic, live in Forest Grove, where they also own and operate a music store, Vic's Guitar Cave. They enjoy music and reading.

The ABCs of RCPP

History:

RCPP stands for Regional Conservation Partnership Program. It is a program administered under the Natural Resource Conservation Service which leverages federal dollars to maximize on-the-ground conservation work. The Columbia SWCD learned of this opportunity back in 2015 while strategizing on how to bring more restoration dollars into Columbia County. This led to the formalization of the Lower Columbia Watershed Partnership, a group of local, state, and federal partners dedicated to restoration work in Columbia County. In 2016, the Columbia SWCD's proposal was accepted with NRCS committing approximately 3 million dollars over the course of 5 years for projects that address fish and wildlife habitat enhancement and improved water quality.

Where:

Our RCPP is focused in a portion of the Lower Columbia Watershed which equates to roughly the greater Rainier/Clatskanie area. The target area identified is approximately 147,000 acres in size and includes the following priority streams: Clatskanie River, Stewart Creek, Graham Creek, Beaver Creek, Carcus Creek, Fox Creek, Plympton Creek and tributaries of Westport Slough.

Why:

The project area was selected based upon the identification in numerous reports and studies of inadequate habitat for spawning and juvenile salmon. This area is home to three populations of salmon listed as Threatened under the Endangered Species Act. Historic and current land and water use practices have resulted in the degradation of water quality and aquatic habitat. State and federal recovery plans place a high priority on addressing the habitat concerns in these watersheds for the recovery of

salmon populations in these systems.

Project Activities:

Projects implemented under RCPP may include any or all of the following general activities: 1) Replacement or removal of culverts; 2) Installation of in-stream large woody debris; 3) Erosion control activities; 4) Riparian plantings and maintenance of noxious weeds; 5) Creation/reinitiation of in-channel, side-channel, or floodplain habitat; 6) Installation of livestock exclusion fencing; and 7) Implementation of other beneficial land use practices.

Goals:

At the completion of RCPP, we anticipate the completion of 6 fish passage projects, 4 floodplain enhancements, 8 streambank stabilization projects, 7.5 miles of large woody debris installments, and riparian plantings in conjunction with each project. In addition to these goals, the RCPP also includes enhanced monitoring and data collection throughout the target area.

Where We Are Now:

Since receiving the notice of selection back in 2016, the Columbia SWCD was faced with a year of emergency repair work caused by flooding in December 2015. As soon as that wrapped up, we immediately began working with NRCS personnel and other partners to accomplish the necessary research, paperwork, and reviews. Because this type of RCPP has never been done in the State of Oregon and has only been done three times ever in the whole country, there have been many hurdles to face. The Columbia SWCD and NRCS have been working together closely to address obstacles and continue moving the process forward. The partnership has been working hard to reach an approved watershed plan so that project implementation can begin. Hopes are high that the first RCPP projects could kick off next year.

Examples of Potential Projects Under RCPP:

CULVERT REMOVALS OR REPLACEMENTS.

Undersized, damaged, and perched culverts represent obstacles to fish passage, preventing fish from reaching their crucial spawning and rearing grounds. They also cause unnatural changes to water flow, sediment transport, and flooding. The bottleneck caused by these culverts has negative impacts upstream as well as downstream.



EROSION CONTROL/RIPARIAN PLANTINGS.

The channelization (or confinement of streams to simplified channels) coupled with a lack of riparian vegetation results in varying degrees of streambank erosion. This in turn contributes to poor water quality through unnatural sediment loading and degrades aquatic habitat. It also causes concern for landowners who helplessly watch as pieces of their property slough off and slide away every winter when the high flows return.

LARGE WOOD INSTALLMENT/RIPARIAN PLANTINGS.

The lack of trees in a riparian area and the subsequent lack of woody debris in the stream results in decreased water quality and diminished habitat for fish and wildlife. Large wood provides many important benefits to streams including, but not limited to: shade for decreased stream temperatures, soil stabilization, organic inputs for food, refuge for fish from predators and high flow velocities, sediment trapping, and filtration of runoff and pollutants.



Letter From The Manager



“Write the vision and make it plain so the one who reads it can run.” — Habakkuk, 7th Century BC

I think we got the run part down. The Columbia SWCD has been on a fast-paced course for a few years now with new partnerships, new staff, revived programs. While new relationships continue to open and programs are developing more deeply; this year we have been able to settle in, find our pace, and catch our breath. Our strategic plan through 2021 is on track to be very successful. Most programs have been formed sooner than planned, and that now leaves time and space to develop them deeper and connect with others with similar goals and objectives to widen our reach and impact to the community. We will soon be looking at modifying our strategic plan to take us beyond 2021.

One of the gems that has come out of our vision and planning is our sponsorship of the Agriculture building at the Columbia County Fair and Rodeo. This is proving to be a great outlet for SWCD community awareness. It is still baffling to me; as it is for districts across the state and even country, that Soil and Water Conservation Districts are not very widely known. We have asked ourselves many times, “How do we connect with those that are not the traditional farmer or forester? How do we reach the new small acreage landowner that has questions and needs help?” Since this sponsorship began, I receive calls or have people stop me in town almost weekly saying thank you for our sponsorship and then ask about what we do. In talking with them they are often surprised at what we offer and that our services are free, and if they don’t need assistance themselves they usually have a neighbor, friend or family member they refer to us. I think the sponsorship is already paying out dividends to the district

and community at-large.

One of the core values of our mission, “Offering people of our community assistance to sustain local natural resources,” is to give people the tools and knowledge to do for themselves. The sponsorship at the fairgrounds is giving us another venue to do just that. One future project is the installation of a raingarden on the exterior of the building. This will assist with the mud issues around the building, and will also be host to many native plants that are great out in the country, but can also create a beautiful and functional landscape for the average residential yard. Being able to showcase an example of this we hope will inspire and encourage others to think about their landscape in a new way and possibly implement some of the practices in their own space.

Our next step is bringing community together to plan the next phases of the agricultural building revitalization. What can be done on the inside to improve use of the space? Should new displays be constructed by local partners? Should we add colorful elements to the interior giving each visitor coming through its doors a welcoming feel that makes them want to stay awhile and enjoy the various items on display? Maybe we should have scheduled presentations in the building throughout the fair. Ideas are infinite, and all are welcome to join in the fun of reviving this Columbia County Fair classic.

Another relationship that is blossoming into a really great partnership is the Scappoose Bay Watershed Council and the Columbia SWCD. Before I go into the bigger relationship, I need to put a plug in for their native plant nursery located in the Scappoose High School complex. They have an amazing group of volunteers that keep it running with Amber Kester at the helm. If you haven’t met Amber yet;

you need to, she will brighten your day. Visit the nursery any Thursday and check out what they have going on. Be careful though in the midst of a tour of the facility she might put you to work.

The Scappoose Bay Watershed Council has been working on a strategic plan for their watershed and as that has been vetted and finalized this past summer key focus areas for the Columbia SWCD and the Scappoose Bay WC have lined up pretty nicely. The Area that is the Milton Creek watershed is a focus area for the Columbia SWCD for Ag Water Quality, it is a focus for the Watershed Council for riparian health and water quality, and the SWCD’s noxious weed program ties in right along side both of those priorities setting us up to make some great improvements to this watershed with the help of the local landowners. We are hoping this watershed is only the beginning of many more joint efforts to reach landowners with education and outreach, technical assistance, conservation planning, and weed control that meets the property owners needs while helping to improve the stream health for salmon and other wildlife.

Run well and win in this race of life by converting your time into added values. Sunday Adelaja

I believe the staff at the SWCD has been running a really great race this past year. Each one taking the time they devote to their respective jobs and turning that time into tangible value for the people of Columbia County. I hope the community agrees and sees the impact this office has in the county and for individuals as well. That said, I am privileged to have such a great staff and dedicated board of directors, and look forward to seeing what this next year will bring.

A handwritten signature in blue ink that reads "Kari Hollander".

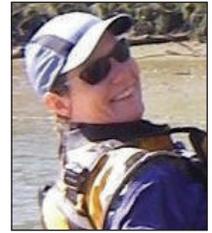
Kari Hollander
District Manager

SBWC Annual Report

Pat Welle

SCAPPOOSE BAY WATERSHED COUNCIL COORDINATOR

503.397.7904 • Pat@scappoosebay-wc.org



The SBWC had a very productive and rewarding year. The Scappoose Bay Watershed Strategic Action Plan (SAP) was finalized in May with the support of a number of individuals and organizations who helped develop the plans that will lead us forward. The SAP was designed to increase the pace and sustainability of natural resource restoration in the Scappoose Bay Watershed. Understanding existing conditions, limiting factors, current knowledge, and potential future impacts to natural resources is critical to supporting a healthy watershed.

Outlining concerns and opportunities, and actions to address them, will provide a path to achieving sustained improvements. The plan offers land managers, landowners, and the community partners inspiration and a prioritized guide toward protecting and enhancing the watershed's natural resources. You can find the SAP on our website.

We are managing three large restoration projects this year and several small grants focused on riparian enhancements. We installed approximately 350 large wood pieces to build 60 new log structures along a 2.5 mile stretch of Upper Milton Creek. These will improve stream function by retaining and sorting gravels, creating pools and providing additional shading areas. We will also plant over 3000 conifers this winter for future wood recruitment to continue supporting stream



health.

Our Dart Creek fish passage project replaced a failing culvert on Robinette Rd., west of St. Helens, with an open arch bridge structure. This design allows a natural stream corridor for salmon and other aquatic species, and provides fish access to upstream habitat.

The South Scappoose Creek restoration project, along Veteran's Park and a section of private land south of JP West Rd in the City of Scappoose, underwent major construction activity during the summer. The restoration included laying back steep banks to minimize erosion and provide capacity during high flows, creating floodplain benches to help with seasonal flood flows, and reconnecting side channels to support historic salmon habitat once again. The goal is to restore and enhance fish and wildlife habitat while addressing soil and flooding concerns. The next phase

of the project will be to plant native species along the entire constructed reach, establishing a riparian buffer to continue supporting the constructed elements.

The Native Plant Nursery will be providing a large percentage of the native plants being used in our restoration projects this season. Twice a year, the Native Plant Nursery offers plants for sale to the public. The sales are held on the second Saturdays of April and October.

Additional projects we are working on include designing restoration activities in the lower portion of Milton Creek, installing large wood along a 0.5 mile reach of lower North Scappoose (in design phase with construction expected summer 2019), and supporting planning efforts on Sauvie Island.

For more information go to our website at <http://www.scappoosebay-wc.org>

LCRWC Annual Report



Allan Whiting

LOWER COLUMBIA RIVER WATERSHED COUNCIL COORDINATOR

503.789.9340 • allan@whitingenv.com • <https://www.lowercolumbiariver.org/>

This has been an exciting year for the Lower Columbia River Watershed Council.

The Council's board with help from Network of Oregon Watershed Council has worked diligently on internal stuff to strengthen its governance and strengthen its path toward the future. The council has taken a cutting edge approach to Watershed Council coordination through the hiring of two local consultants, Allan Whiting of Whiting Environmental LLC and Kevin Cronin of West Coast Cronin Clan, Inc.

Through their help, the LCRWC was able to obtain full funding from OWEB for council support to position them to build off of more than 20 years of successful restoration projects in partnership with SWCD staff. Mindful of the past, the LCRWC is pivoting strategically to focus on cost-effective projects for the future. Goal setting has been initiated along with strategic action planning to add precision to areas of the watershed previously unexplored. A component of the strategic action plan is an outreach strategy to recruit new interest in watershed health related issues in light of socio-economic changes afoot to the communities of Lower Columbia watersheds. Highlights of our renewed organization include:



- Website development
- New proposals in collaboration with our partners
 - Site specific restoration projects (3)
 - Basin-wide WQ monitoring strategy
 - Rapid Bio-assessments to identify high productivity areas for salmon
- Community based mapping that aligns Council goals with existing restoration opportunities
- Speaker series at Council meeting on issues relevant to improved understanding of our

region's watersheds.

Please tune in the next year as we generate new ideas for partnership, board development, and outreach to the broader community.

Through our renewed efforts we have witnessed an instant response from local community groups and schools. We are also generating a list of innovative project to position the Council for long-term funding stability and resiliency in light of climate change.

Please provide feedback on our emerging website and we look forward to seeing you at our meetings.

UNWC Annual Report

Maggie Peyton

UPPER NEHALEM WATERSHED COUNCIL EXECUTIVE DIRECTOR

503.396.2046 • Maggie@nehalem.org



This our 22nd year in existence has been very productive for the Upper Nehalem Watershed Council across a wide spectrum of activities including:

3 salmon passage projects implemented restoring access to over 20 miles of productive aquatic habitat

- Oak Ranch Creek — open concrete bottom arch
- Deep/Lane — bridge
- Calvin — bridge

27 Beaver Dam analogues installed on 4 upper Nehalem anchor habitat reaches on ODF managed public land enhancing 5+ miles on

- Lousignont — 8
- Upper Rock Creek — 3
- Bear Creek — 7
- Buster Creek — 9

33 Large Woody Debris dams installed along salmon anchor habitat reaches enhancing 2+ miles on

- Olson Creek — 5
- NF Lousignont Creek — 15
- Beaver Creek — 13
- Hyla woods — 2

Water quality samples were collected again this year

- Turbidity — 30-50 sites during winter raining season
- Temperature — 30+ sites during summer low flow season



CONTRIBUTED PHOTOS

Kynsi Construction did the work for the Columbia County Road Department. UNWC worked on this project with Lower Columbia Engineering and ODFW for 8 years and we finally got the job done.

Continued riparian reforestation on 30+ acres including the ODA strategic Implementation Area projects in partnership with Col. SWCD and CRYC crew.

Our riparian reforestation is supported by the Nehalem Native Nursery located at the Vernonia School District campus with the help of the forestry class and volunteers we now have a 8,000 plant capacity in the outdoor nursery and are filling the greenhouse with locally collected native seeds.

We plan to wrap up the Nehalem Strategic Plan with the Wild Salmon Center and our multi stakeholder team this winter.

This process lays the foundation

for future salmon anchor habitat improvements to be made in high priority sub-basins and stream reaches thru out the Nehalem watershed.

We continue to improve our base operation, computer networks, website, outreach activities and staff development with the support of the UNWC Board of Directors.

Special mention to our funders OWEB, ODFW, DEQ, NOAA, NFWF and BLM, and primary partners ODF, ODFW, Columbia County Road Department, Weyerhaeuser Company and Stimson Lumber Co., and a multitude of qualified contractors who make the restoration world go around.

Looking forward to another productive year ahead.

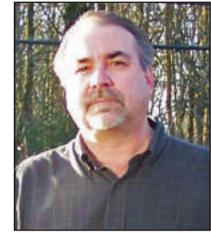
Respectfully,
Maggie Peyton
UNWC Executive Director

NRCS Annual Report

Don Mehlhoff

NRCS DISTRICT CONSERVATIONIST

503.438.3146 • don.mehlhoff@or.usda.gov



In a smaller county, like Columbia County, with a small agricultural base, compared to many counties in Oregon, we are always looking at ways to address the natural resource concerns we have that best serve our local agricultural operations, and to bring in local or federal funds to help those operations succeed.

As some of you may know, the U.S. House and the Senate have come up with their suggestions for a new Farm Bill that will most likely be rolled out for 2019. Although there are differences between those versions of legislation, there are also similarities. It appears that Congress as a whole, is still very supportive of conservation programs on private lands, and with helping rural America by assisting small farms, forest operations and communities. They understand the importance of maintaining strong programs for food security, fiber and natural resources. That is where we fit in. The USDA Natural Resources Conservation Service (NRCS), in partnership with the Columbia Soil and Water Conservation District (SWCD) help deliver conservation planning and financial programs to rural America to maintain our important natural resources like; soil quality, clean and abundant water, habitat for fish and wildlife, healthy plant communities, clean air and more. Other partners like our



Watering on private landowner's property to maintain proper grass grazing heights. This is an important practice for pasture management and livestock operations.

Columbia County OSU Extension Service, Columbia County Land Development Services and our Watershed Councils help make this work.

In Oregon, NRCS takes the locally led process to another level. Instead of having Washington D.C. dictate how and where we spend farm bill funds, we use a locally led process. At least once a year, we call in local groups, agencies and operators to tell us what needs to happen out there. What is important for Columbia County. Through that process, the group decides what natural resources need to be prioritized, and what areas of the county to target. I encourage you to take part in this. The local operators know more than others about what is important to their

areas of the county, and where federal tax dollars need to be used. This is your opportunity to have a voice in that process.

From that feedback over the past few years, NRCS with the help of the SWCD have developed two new Conservation Implementation Strategies (CIS) in Columbia County. We are excited to role these out and offer them to local operators. The first one is for the Upper Nehalem Watershed, which covers the Vernonia/Birkenfeld area. It is called, Upper Nehalem Floodplain Recovery. We will address priorities like soil health, water quality and fish and wildlife habitat in the floodplains of the Nehalem Valley. Practices that improve pasture and hayland health, and practices that help the effort to

restore Coho Salmon habitat will be emphasized. This is a 5-year program through our Environmental Quality Incentives Program (EQIP). We will take applications from landowners in that area whenever they want to consider improvements to their floodplain lands. Just contact us.

The 2nd CIS will address soil health and water quality issues in what we are calling the “Columbia Corridor”. This strategy to improve small farming operations and livestock operations will stretch from the Scappoose area through the Clatskanie area. It is also intended to extend through a 5-year period, assuming we have interested operators that apply. This CIS offers conservation practices that help improve soil quality/health issue throughout these watersheds. Again, contact us if you are interested.

For one final year (2019), we will also continue our Forest Diversity Program efforts that cover the Clatskanie, Rainier, Goble, Tide Creek areas of the county. Through this successful program in its 7th year, we offer things like funding for the development of a forest management plan. Owners/operators may also be eligible to implement practices with financial incentives that improve forest diversity such as pre-commercial thinning, tree planting, brush management, pruning and others.

Feel free to contact us and we will lead you through the planning process and the program application process.

I would encourage you to contact people who have participated with us in these programs to find out their experiences and their advice. Don't just take my word for it, listen to neighbors who have worked with us.

As mentioned our farm bill programs are voluntary, but they are in place to help landowners make improvements as well as meet federal and state regulations that are intended to protect the public's right to clean water, fish and wildlife, healthy soil, plants are air quality.

For more information about programs and assistance



Tree planting on private forestland. This practice is crucial to improve forest diversity.



Raised bed garden on private landowner's property. This strategy helps improve small farming operations within the county.

available through the NRCS and the Columbia SWCD, contact us at 503-397-4555 or stop by and see us at 35285 Millard Road, St. Helens, OR 97051.

PRACTICES IMPLEMENTED IN 2018

- Upland Wildlife Habitat Management — 1423 acres of land improved for wildlife habitat.
- Herbaceous Weed Control — 25 acres
- Tree and Shrub Plantings — 15 acres
- Forest Stand Improvement — 135 acres.

Pre-commercial thinning and release projects

- Forest Slash Treatment — 64 acres
- Early Successional Habitat Management – 31 acres
- Forest Management Plans — 7 plans
- High Tunnel — 2 (2@2160sq.ft)
- Provided brief technical assistance to over 227 customers



Photo from: US Fish and Wildlife Service website: www.fws.gov/oregonfwo/articles.cfm?id=149489457

Introducing PACIFIC LAMPREY

BY: MONICA BLANCHARD

Resource Conservationist

The majority of stream restoration efforts in Columbia County have been directed at improving salmon habitat. However, numerous other species of fish live in our streams, including Pacific Lamprey (*Entosphenus tridentatus*)! Lampreys, and their relative the hagfish, make up a unique group of fish known as cyclostomes or “jawless” fish. These “eel-like” fish are in fact not eels, but rather a very ancient line of fish that evolved over 450 million years ago, over 200 million years before the age of the dinosaur! There are many unique characteristics that distinguish lamprey from other fish: they are scale-less, have disc-shaped sucker mouths (hence the name jawless), and are bone-less (have cartilage skeletons). They also lack paired fins like other fish, have 7 breathing holes on each side of the bodies

instead of gills, and different species are identified by the number and pattern of their teeth.

LIFE HISTORY OF PACIFIC LAMPREY:

Like salmon, Pacific Lamprey are anadromous—they are hatched in the freshwater, swim to the ocean to mature, and return to spawn and die in the freshwater. However, Pacific Lamprey also vary significantly in their life history strategies compared to salmon. The larval stage (also called ammocoetes) spend 2 to 7 years living buried in the sand and slit along the river bottom. They are eye-less at this stage and filter feed to obtain nutrients. Over the course of several months, larvae mature into juveniles (called macrophthalmia). At this stage they develop eyes and teeth, emerge from the substrate, and swim to the ocean between late fall and spring.

As adults in the ocean, Pacific Lamprey are

parasitcal and latch on to their hosts using their sucker mouth. They attach to various other fish including salmon and rockfish, and are important food sources for sharks, sea lions, and other marine mammals. After spending 1-3.5 years in the ocean, lampreys return to freshwater between February and June, possibly relying on the smell of ammocoetes to guide their way to good spawning grounds. Returning adults are usually between 15 and 25 inches long. Adults will hold, not eating, for roughly a year until they spawn between March and July. Both males and females work to make the nest, called a redd, by moving rocks with their mouths or by holding on to a larger rock with their mouth and vibrating their tails quickly to sweep aside detritus and small substrate. Much like salmon, the adults die after spawning.

THREATS TO PACIFIC LAMPREY:

Just like Pacific salmon, Pacific Lamprey are very important to our ecosystems in the Pacific Northwest. They are an integral part of the food web, possibly taking predation pressure off of salmonids, and are very culturally significant to tribes across the Northwest. Just like Pacific salmon, Pacific Lamprey have numerous threats challenging their survival and their current population estimates are far below the historic quantities. Impaired passage, simplified habitat, rising stream temperatures, dewatering, dredging, and invasive fish are all threats to Pacific Lamprey. In the past



Above: Pacific Lamprey return to freshwater for spawning in the Clatskanie River. Photo taken by Monica Blanchard during a snorkel survey.
Photo on left from: forestryimages.org.

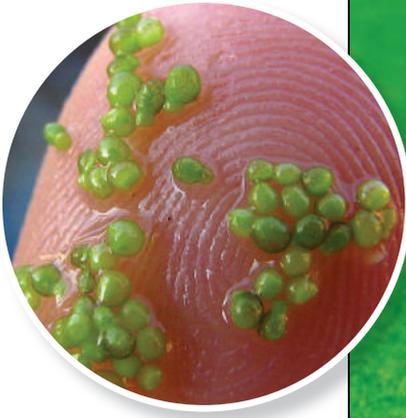
few years, Pacific Lamprey have moved into the spotlight and more restoration work has been focused on including them as target species. For example, in the past, passage improvement projects strove to boost salmonid migration survival. However, the designed modifications that are beneficial for salmon are not always effective at allowing lamprey past. Sharp angles, high velocities, and screens can prevent lamprey from passing a barrier or can ensnare the weak swimming juveniles. More often now, alterations to dams, culverts, water diversions, and tide gates

also include improvements to passage up and downstream for Pacific Lamprey.

There is still a lot of unknowns and mysteries that scientists are investigating when it comes to Pacific Lampreys! However, every project is a chance to learn more and improve our understanding of these fish. Bringing this species into the spotlight and incorporating restoration improvements that will target Pacific Lamprey is a goal of the Columbia Soil and Water Conservation District moving into the future.

For more information about these fascinating fish, try visiting these websites:

- <https://www.fws.gov/pacificlamprey/mainpage.cfm>
- <http://www.critfc.org/fish-and-watersheds/columbia-river-fish-species/lamprey/>



This native aquatic plant species watermeal, or *Wolffia* spp., is the world's smallest flowering plant. It grows free floating, on top of the water's surface. This tiny bright green plant is about the size of a grain of rice and can be found growing all over the world!



What's that growing **IN THE WATER?**

BY: SELENE KEENEY
Resource Conservationist

Before working in natural resources, I wouldn't have known the extent of aquatic plants that occur in and along bodies of water in our region. Depending on the species, aquatic plants can be free-floating (growing on the surface of the water), or can grow attached to the bottom of waterbodies either totally submerged beneath the



This beautiful native plant Mexican water fern /Mexican mosquito fern (*Azolla mexicana*) also grows free floating and can cover entire ponds during certain times of year.



Yellow pond lily (*Nuphar lutea*) grows from long stems attached to large tubers that root in the bottom of waterbodies. The large tubers are something to see, they look like reptiles not plants!



water's surface or emergent (growing half-in, half-out of the water). Next time you're out enjoying the great outdoors check out local bodies of water and see what types of aquatic plants are growing.

Native aquatic plants, which evolved along with other plants and animals in the Northwest, offer many benefits for healthy water and aquatic habitats and are an important component of pond, lake and slow water movement systems. Necessary to the well-being of water bodies, aquatic plants play a significant role in water

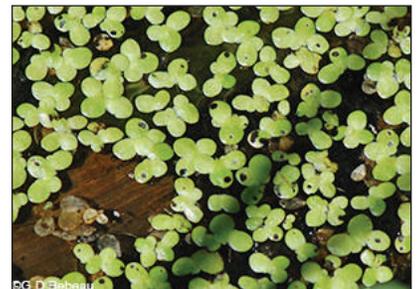
quality and can indicate the health of a waterbody. Some benefits include providing food and shelter for bugs, fish, and other organisms, oxygen production, pollution filtration from adjacent activities, erosion control, and shorelines stabilization. Native aquatic plants also add to the beauty of a natural areas.

The following is a brief introduction to some of our amazing native aquatic plants. So next time you're out and about, you'll be able to answer the question "What's growing in the water?"



Common mare's-tail (*Hippuris vulgaris*) is an attractive native aquatic plant that grows half-in and half out of the water. This plant can be confused with other non-native invasive aquatic plants and horsetails. But Mare's tail is distinguished by the stout, hollow, unbranched stems arising from the roots.

Duckweeds, or Lemna spp., are another free floating species. Its also a small plant, but not nearly as small as watermeal! You can identify this plant by the distinctive roots coming off the bottom of the leaves.



Working in the weeds

BY: CRYSTALYN BUSH

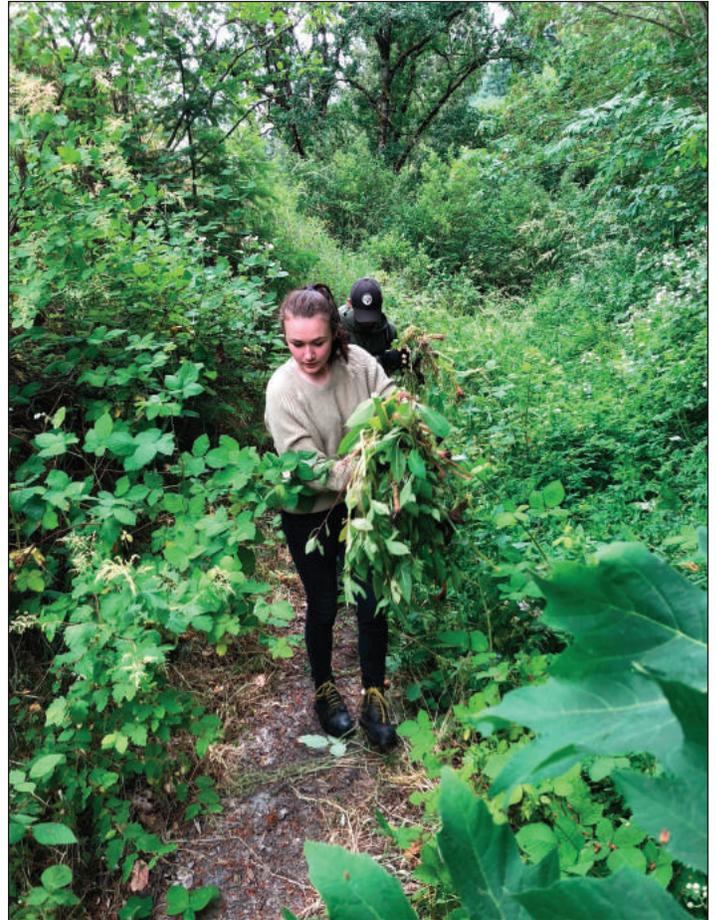
Columbia SWCD Riparian Specialist

This last year the Columbia SWCD made some important strides towards expanding our noxious weeds program. We applied for funding through the Oregon State Weed Board to continue both our Garlic mustard and Knotweed treatment programs as well as to reinvigorate our local noxious weeds workgroup. While we did not receive funding to work on Knotweed this year, both of our other programs were fully funded. Treatment of Garlic mustard took place in the spring throughout properties along parts of North and main Scappoose Creeks. This year we were able to do more extensive treatment, surveying, and one-on-one outreach with landowners. Additional funding allowed for more thorough and comprehensive coverage of the affected areas and also led to the discovery of new infestations that we began work on and are now tracking.

The local workgroup meets twice a year and is reestablishing old partnerships and finding new ways to work together to manage, control, and eradicate noxious weeds in Columbia County. The Columbia SWCD is working to develop mutually beneficial relationships with land managers and other agencies to lead to better prevention, reporting, tracking, control, and treatment of noxious weeds. The group is also working on the following short term priorities:

- 1) Development and dispersal of better outreach materials,
- 2) Weed ID and management workshops for vegetation management crews; and
- 3) Identification of new potential projects and funding sources.

In addition to these grant-funded programs, the Columbia SWCD conducted several smaller noxious weeds projects last year. In March of 2018 we confirmed a report of Policemen's helmet (*Impatiens glandulifera*) along a stretch of abandoned Hwy. 30 leading to Little Jack Falls in Goble. With help from the Columbia River Youth Corps., we performed a manual removal of the infestation in June 2018. Thanks to helpful landowners, we were



able to identify the source of the infestation and educate neighbors about its destructive impacts. The Columbia SWCD and CRYC also performed removal of Scotch broom in McCormick Park in honor of Noxious Weeds Awareness Week in May 2018. Finally, we have been working hard to continue getting the word out about invasive species through our Native/Invasive calendar, quarterly newsletters, website, Facebook page, and other outreach opportunities. We take great pride in the fact that we are receiving more and more requests for information and assistance with noxious weeds. We are dedicated to the continued expansion of this program and to finding more ways to assist the residents of Columbia County with the prevention and management of invasive species.

Did You Know ... Noxious weeds are not the only plants that can be harmful?



Noxious weeds are state designated non-native, invasive species identified by the Oregon Department of Agriculture as a threat to any or all of the following: 1) The environment; 2) The economy; 3) The physical welfare of humans and/ or livestock. However, there are plenty of other non-native plants that can have devastating effects on local environments. The following are a few that are making their way around Columbia County. While it is nearly impossible to find funding to combat un-listed plants it is still important to be aware of them and to try to keep them

from escaping into natural areas. If you have these species growing in your yard you can help by making sure they stay in your yard, properly disposing of yard waste (never dump yard debris - always compost it or put it in your yard waste container for pick up), and deadheading plants before seeds form.

For help identifying a plant or advice about noxious weed management please contact Crystalyn at Crystalyn.bush@columbiaswcd.com or call the Columbia SWCD. To report an invasive species please call our hotline at 1-800-741-6105 or email: weeds@columbiaswcd.com.

QUESTIONS?

If you ever have a question about noxious weeds or need help identifying a plant please stop by our office, email, or call us at the numbers listed above. You can help us to fight the spread of noxious weeds by:

- 1) reporting sightings
- 2) controlling weeds on your property
- 3) starting neighborhood work parties to protect the areas you love
- 4) choosing natives when planting
- 5) brushing off clothes, shoes, pets, and cleaning equipment before leaving a site where noxious weeds could be present
- 6) spreading the word not the weeds.

Weeds



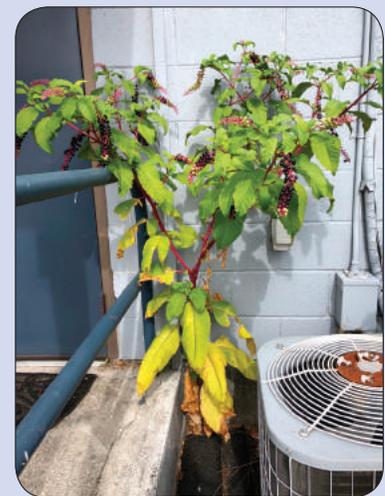
Periwinkle (*Vinca major*)



Italian arum (*Arum italicum*)



Spotted jewelweed (*Impatiens capensis*)



Pokeweed (*Phytolacca americana*)

Botany for the Farm

Pasture Grasses 101

Anyone who has ever endeavored to raise livestock will confirm that you spend a lot of time evaluating your animals to make sure they are growing in a way that will yield the highest outputs. However, the most successful livestock producers know that the trick is to be first and foremost a grass farmer. Just like humans, livestock perform better with high quality and well balanced ingredients. So what does this mean for those of us who raise animals? Well, it means that we can all benefit from becoming aspiring botanists.

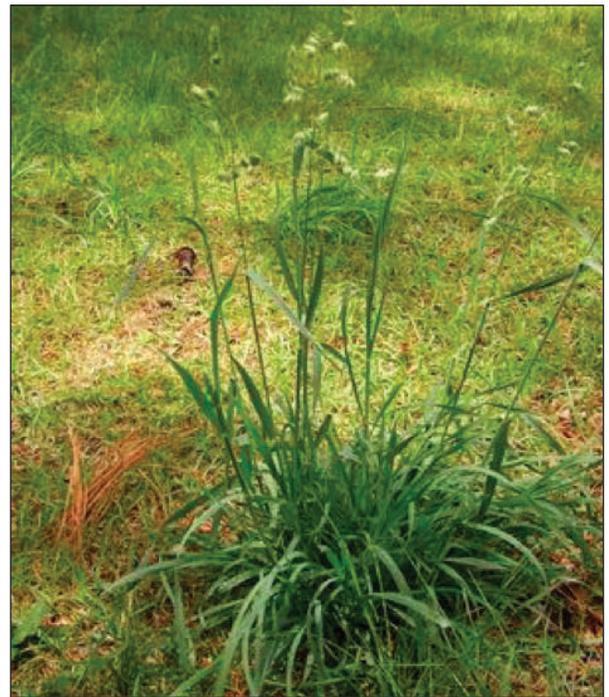
If you have never given much thought to what's growing in your pasture this will serve as a brief introduction. This information comes from my experiences on my own farm raising pigs and sheep, as well as being in the fields with other producers. One caveat here: each livestock producer will tell you something different about which pasture grasses you absolutely must have and not have in your field. More than likely they are all correct. There is no one template for the best pasture. It depends on the type of livestock, moisture levels, soil type, management style, and any number of other factors. Learning about the different types of grasses and legumes will help you to identify which ones will be best suited for your operation. A quick disclaimer: Here at the Columbia SWCD, we often promote the benefits of native plants. However, pastures are different from restoration sites and most of what's in your pasture will likely not be native. Most of the grasses/legumes on this list were introduced to the Pacific Northwest by European settlers.

ORCHARD GRASS (*DACTYLIS GLOMERATA* L.)

Orchard grass is a cool season bunchgrass. This grass has a wide tolerance for different conditions and can be found growing pretty much everywhere. It is a great grass to have in the pasture for forage. The easiest way to determine if you have orchard grass in your field is by looking at the seed. The seeds of the orchard grass are all on one side of the plant, and are extremely fuzzy.



Seeds on Orchard grass are growing on one side and have a fuzzy feel and appearance. <https://content.ces.ncsu.edu/orchardgrass>



Notice how the other grass is smaller and this orchard grass is growing in a big "clump" or bunch. www.sharpseed.com/index.cfm?fuseaction=plants.plantDetail&plant_id=100398

RYEGRASS (LOLIUM L.)

Ryegrass is something that I like to use in freshly tilled areas, or anywhere there is open ground in your pasture that you would like to cover quickly. Both Annual and Perennial Ryegrass give that first look of green extremely quickly, and they usually get outcompeted fairly quickly by more desirable species in the later spring and summer. While there are better species for protein and nutrition, Ryegrass growth in the early season is second to none. My favorite way to use ryegrass is to seed it in my fields that are bare during the late summer/early fall (September/October) right before the first rainfall. Doing it like this gives the ground some green going into winter which will help with erosion/mud issues while giving the livestock something to eat during the early spring months when I put them back on the fields.

Ryegrass is commonly confused in the field with Tall fescue and Kentucky bluegrass. Kentucky bluegrass has a very distinct boat shaped leaf structure (The blades of grass look like a v hulled boat). It's more challenging to distinguish between tall fescue and ryegrass. What has been successful for me is to look at the grassblade. Ryegrass has two sides to the blade, a real rough (like a cat's tongue) side, and a smooth side. Tall fescue doesn't.

Clover is a legume that is high quality in any pasture. It has an extremely high protein value as well as being a nitrogen fixing plant. Livestock will eat this readily. In Columbia County's climate clover will perform better under consistent grazing conditions than other legumes like alfalfa. There are several different types of clover that are available in seed mixes that work well in this area. Overall, at least when it comes to pasture grazing, there is not much difference between the types of clover, just as long as it makes it into your pasture mix. Clover is something that is fairly easy to identify in the field, thanks to leprechauns!

While this is a good start to making your pasture dangerously delicious for livestock, there is definitely more to know. For more information or to schedule a site visit with SWCD staff, please contact Nathan Herr at the SWCD at 503-433-3205 or Nathan.herr@columbiaswcd.com.



<http://www.onlineverdieneen.info/pages/p/perennial-ryegrass-characteristics/>



Seed head of Ryegrass. <https://stephenville.tamu.edu/topics/forages/forage-species/cool-season-annuals-perennials/annual-ryegrass/>



Red Clover. <https://fettlebotanic.com/products/red-clover-blossom>



White Clover. <http://www.johnnyseeds.com/farm-seed/legumes/clovers/new-zealand-white-clover-cover-crop-seed-979.html>



Crimson Clover <https://www.cotswoldseeds.com/product/crimson-clover-trifolium-incarnatum-organic>



THANK YOU

Thank you to our Partners and many local contractors that we have had the pleasure of working with this year.

Natural Resources Conservation Service
Lower Columbia River Watershed Council
Scappoose Bay Watershed Council
Upper Nehalem Watershed Council
Lower Columbia Estuary Partnership
Oregon Department of Forestry
Oregon Department of Fish and Wildlife
Oregon Department of Agriculture
Oregon State University Extension Service
Department of Environmental Quality
Oregon Watershed Enhancement Board

Army Corps. of Engineers
Department of State Lands
Bureau of Land Management
National Marine Fisheries Service
Northwest Oregon Restoration Partnership
Port of St. Helens
City of Scappoose
City of St. Helens
City of Rainier
City of Clatskanie
Columbia County

Columbia County Fairgrounds
Columbia River Youth Corps.
Rainier School District #13
St. Helens School District #502
Clatskanie School District #6
Vernonia School District #47J
Lower Columbia Engineering
Kynsi Construction
Biohabitats LLC
Aptum Inc.
Ash Creek Forest Management