CLACKAMAS COUNTY SOIL AND WATER CONSERVATION DISTRICT
Good dirt. Clean water.

CONSERVATION ACTIONS: AUG-SEP 2012

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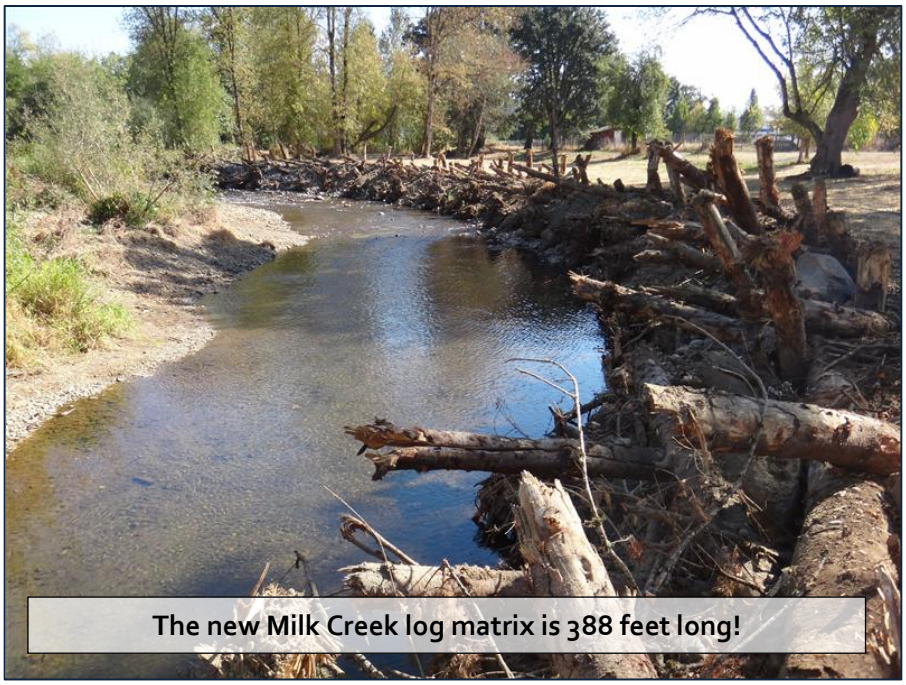
Getting it done

When do we implement many conservation practices? Summer. We tend to focus on planning in the winter and installing practices in the summer.

This year, we took advantage of our long, dry summer by working with more people on more projects than ever. We invested more time, money, and energy in conserving and restoring natural resources than ever.



The new Milk Creek log matrix is 388 feet long!

One of our most spectacular accomplishments is featured in this edition of Conservation Actions: rebuilding a streambank on Milk Creek to control erosion, improve fish habitat, and protect water quality. Despite the extra time required by this project, we continued serving more customers to address a wide variety of natural resource concerns.

How were we able to do these things without hiring more employees? We found ways to work better.

We've worked for a year to streamline our conservation planning process. Our internal steps for funding conservation work are clearer, so funding moves more quickly. We are increasing our use of contractors to help get conservation practices installed. We are leveraging the skills of our partners. And we continue to reinforce our focus on providing good service and getting the job done.

I am delighted with the progress we've made…but our work to improve what we do and how we do it is not over. A new conservation planning system is being developed that should make our internal work flow more seamless, assuring even better service for our customers. We will be adding a vehicle to our fleet so staff can work with more customers.

At the same time, we're preparing to take a look at our long-term goals. Are we in the right location to best serve our customers? Do our programs and services meet the needs of people and natural resources in Clackamas County? What can we do to be certain we'll be well positioned to serve our customers for the next several decades?

These kinds of questions can be difficult to ask and difficult to answer, but the answers are vital if we are going to continue to make a difference. I know all of us in the Clackamas County SWCD enterprise are ready to roll up our sleeves this winter and find some good answers. All of us here look forward to sharing those answers with you!

Tom Salzer

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Projects

Here you'll find highlights of some of our larger initiatives. Typically, these address multiple conservation needs, making them more complex to plan and implement.

Milk Creek Instream and Riparian Habitat Enhancement Project

Overview: Eroding streambanks, a scoured channel, and lack of habitat for fish are the focal points for our Milk Creek project. Funding is being provided by a variety of partners. This is a complex project because it involves working in the stream bed, reshaping a streambank, and restoring appropriate native vegetation. Cleaner water and better habitat conditions are the primary benefits of this work.

Our big story for this edition of Conservation Actions is the installation of a streambank protection and habitat improvement structure that is 388 feet long! This is one of the largest projects we've undertaken. By persevering and remaining flexible, we overcame obstacles and finished installing the structure in September.

Although the project spent a couple of years in development, the final pieces fell into place in August, triggering intense activity as we launched into the installation phase.

Funding and permits

Funding was obtained from a variety of funders, and the District provided the additional funds to make the project a reality. Three grant agreements were signed in August. Funders include the Department of Environmental Quality ($35,050), the Oregon Watershed Enhancement Board ($30,580), and the Oregon Department of Transportation ($34,800). Those sources make up about one-half of the project cost.

Still, we could not proceed without the last two permits. Late in August, we received notice from the Oregon Division of State Lands and U.S. Army Corps of Engineers that our permits were granted.

And then things really took off:

- We finalized our contract with Aquatic Contracting LLC.
- Staff obtained the wood needed for the designed structure.
- We held a pre-construction meeting with all parties.
- Equipment was mobilized to the project site on August 27th, marking the start of building the structure.

Construction

Most construction worked occurred in September. Throughout the project, we maintained project management and engineering oversight. As excavation commenced, we found site conditions were somewhat different than expected, and that required immediate changes to the design.

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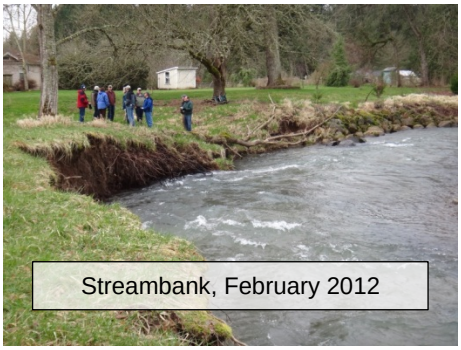
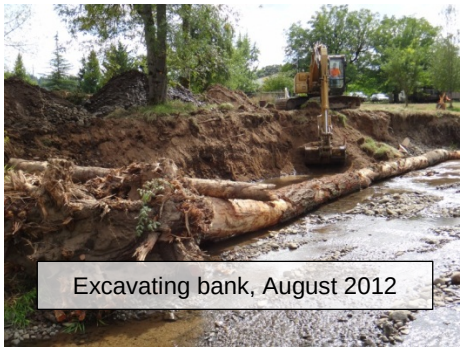
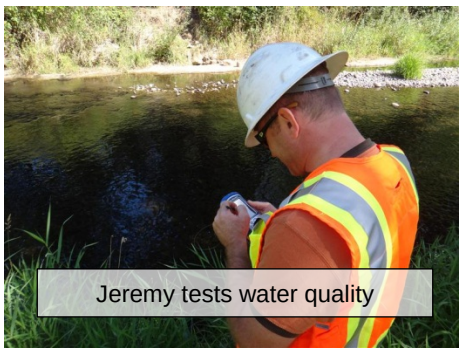
We maintained a daily log of photographs to document progress. You can find daily photo galleries on our website at http://conservationdistrict.org/tag/milk-creek and we have a time-lapse video showing a collection of daily photos from start to finish of the installation at http://vimeo.com/50800282


Streambank, February 2012

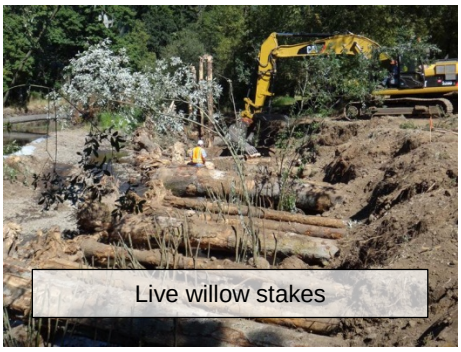

Excavating bank, August 2012

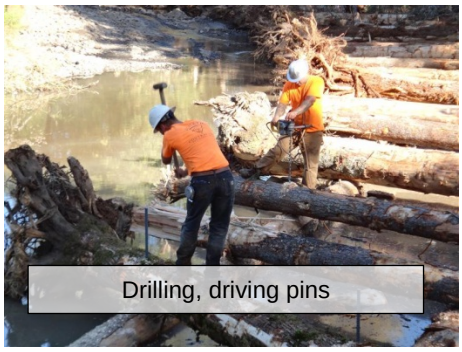

Keying log into bank


Project Manager Jenne

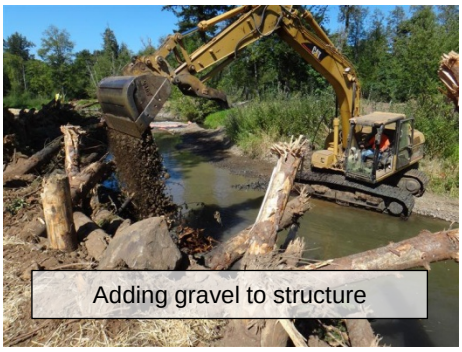

Jeremy tests water quality


Sediment control worked

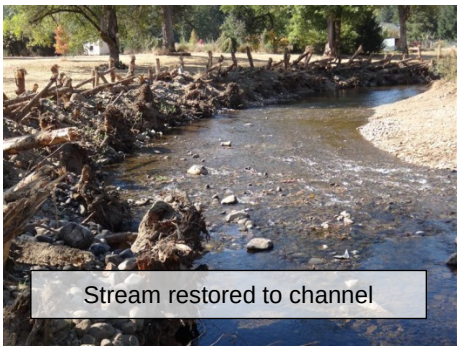

Live willow stakes


Drilling, driving pins


Boulders embedded


Adding gravel to structure


Gravel is packed in place


Stream restored to channel

Aquatic Contracting did an excellent job on this project, maintaining high standards, exhibiting flexibility, and working reliably to install the main structure and some smaller downstream structures. They mobilized equipment to the project site late in August and got set up to launch into the construction phase.

To start, they excavated a diversion channel to let Milk Creek flow unimpeded around the construction site. Sediment control curtains were installed to protect water quality during construction. Fish caught in the dewatered section were netted and returned to the creek. Boulders at the site were salvaged for use later in ballasting the log structure.

How was the structure built? The photographs on our website tell the story in pictures. The general sequence after mobilizing equipment to the site is listed below.

- The creek was diverted and fish were salvaged.
- The bank was excavated and topsoil was set aside.
- Two lines of logs were placed on the stream bottom.
- On top of those logs, root wads were placed. The root wads were pinned to the underlying logs and the trunks were slotted into the streambank. The root wads face the creek to help reduce the erosive power of the creek and provide hiding places for fish.
- Angled logs and some vertical logs were then placed into the structure to add more roughness. Willow cuttings were added in and around the structure at this point.
- Then layers of slash (branches and small trees) and gravel were packed in around all of the logs.
- Boulders were added on and around logs to help keep them submerged during high water events.
- When the structure was back to the original grade of the streambank, the topsoil that was saved at the beginning of the project was spread over the restored streambank.
- A native seed mix was spread on the topsoil, and straw was distributed to help the seed germinate.

After the main structure was constructed, crews moved across the stream to install three smaller engineered log jams immediately downstream.

Why this project?

The project is on Milk Creek, a major stream in the Lower Molalla River watershed in western Clackamas County. Work occurred on three adjacent private properties on both sides of the creek.

Milk Creek is a primary production stream for coho, listed spring chinook, listed winter steelhead, and resident cutthroat trout. Assessment, TMDL, and salmon recovery plans for the Molalla and Milk Creek watersheds recommend riparian and in-channel restoration, sediment reduction, large wood placement, and restoration of channel hydrology.

Watershed issues addressed by this project include: the lack of in-stream habitat; simplified channel structure; changes in stream hydrology; sediment inputs from bank erosion; high water temperature; and the need for watershed stewardship education of local residents.

Solutions included: bank shaping; placement of a vegetated log matrix; removal of invasive non-native vegetation; heavy planting of native trees, shrubs, and cuttings; and outreach and education.

Conservation goals

The two structure types – the vegetated log matrix and the three engineered log jams – will accomplish many important conservation goals including:

- Reduce bank erosion and sediment inputs into the creek.
- Reduce water temperature by providing shade.
- Provide cover, shade, and refugia for threatened and endangered fish during various life stages.
- Restore habitat diversity and complexity.
- Provide a source of large wood for future fish habitat.
- Enhance the long-term stream processes and functioning of Milk Creek.
- Increase habitat diversity for birds, pollinators, and other wildlife.

More work to do

Later this fall, we'll plant a variety of native plants to help provide more habitat value, protect soil, and add even more roughness to the structure. We also have additional weed control to complete.

Across from the large structure, and slightly downstream, we installed three engineered log jams to help protect that bank and improve fish habitat.

Monitoring

During construction, we sampled water quality, watched for trapped fish, and maintained a daily log of photographs showing all phases of construction. We are coordinating with Clackamas County to get a stream gauge installed on the bridge over Milk Creek at Beavercreek Road and Highway 211. We are looking upstream for a spot to capture better rainfall data. We'll continue to regularly document site conditions and the performance of the installed structures.

Conservation easement

A key part of this project was developing a new conservation easement tool. We worked with an experienced tax attorney to develop a way for landowners to improve public resources without being burdened by a big tax obligation. The solution is a temporary easement that gives us permission to access the project site for design, installation, maintenance, and repair of the installed practice. This is not a permanent easement; the term is negotiated with the landowner based on our expected life of the practice.

This easement approach is very new to us. We pioneered it for the Milk Creek project. This winter, we'll review what we learned from this very large project. What we learn will help us become better able to meet landowner needs and conserve natural resources.

A team approach was crucial

The Milk Creek project was started two years ago, and to bring it from concept through funding, permitting, and landowner agreement to completion has been quite a feat.

Throughout, we've considered the people involved as part of the Milk Creek team. Landowners have been involved in many of the design discussions, and of course they were frequently present during construction.

Funding agencies bought into the goals we outlined for this project, and most agency participants expressed quite a bit of interest in the project as we proceeded with installation. We coordinated with Molalla River Watch who completed a fish survey in Milk Creek during the project.

Contractors were not only interested in what we were doing but also helped us find sources of materials when the project required additional materials. The Natural Resources Conservation Service and National Oceanic and Atmospheric Administration contributed staff time during the design and construction stages.

The Clackamas County SWCD Board of Directors fielded the policy challenges brought to them and helped build solutions that would move the project forward. Almost every employee for the District was involved at some time in this project, with overall project management provided by Jenne.

Without this team approach, we could not have completed the installation of the log matrix and log jams this fall. Credit goes to every member of the Milk Creek team, and our particular thanks go to the private landowners who entrusted us with the ability to work on their property.

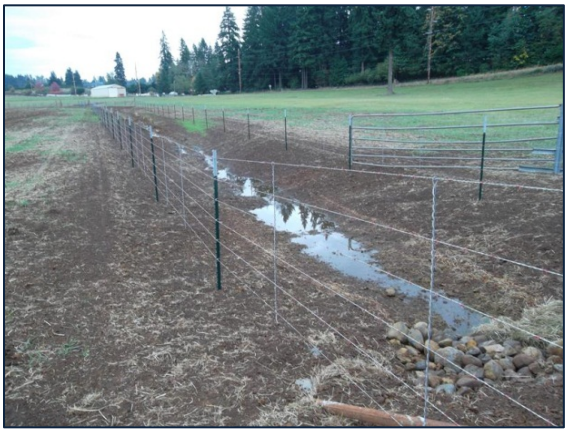
3D Water Quality Project

Overview: Our "3D" project is funded through a grant from the Oregon Department of Agriculture. Two years of water quality sampling in Deep, Doane, and Dolan creeks revealed some specific water quality problems, mainly involving nutrients, bacteria, and pesticides.Currently, we are reaching out to streamside landowners to establish filtering buffers to keep soil out of these streams. We are actively partnering with the Clackamas River Basin Council. Their Shade Our Streams program meshes well with our project. Cleaner, cooler water and better habitat conditions are our goals.

Even though we were intensely focused on the Milk Creek project, Jenne still found time to make more site visits to the 3D area (Doane, Dolan, and N. Fork Deep creeks) with Clackamas River Basin Council (CRBC) staff.

We sent streamside landowners a newsletter, resulting in several new inquiries. As folks learn about the work the District and CRBC are doing in their watershed, they seem to be getting more interested in the condition of their own streamside areas.

The photo at right shows a site where stream shading will be provided through CRBC's Shade Our Streams program. The District is also providing reforestation help to this landowner to provide cover and shelter farther away from the stream.



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Nursery Rainwater Harvesting for Irrigation

This is a large project, consisting of a 300,000-gallon storage tank to hold rainwater collected from many greenhouse roof structures. The nursery will use that water to reduce groundwater withdrawals.

Jason worked extensively with Northwoods Nursery and the USDA Natural Resources Conservation Service as this project moved toward completion. The District, NRCS, and the nursery are committed to seeing the rainwater harvesting system completed and functioning. We worked with the nursery to redesign some sub-systems to reduce costs while still assuring the system would function. The nursery is obtaining the last parts of the system to be installed this fall. In our next report, we expect to have pictures showing the new system is functioning.

Heavy Use Area for a 55-Horse Stable

Several months ago, the District agreed to assist an equine boarding stable with the cost of installing an aerated manure composting facility on their small acreage. Jason has been working on this project since then and we're delighted to report it has been completed. Funding came from several sources, including: a cost-sharing grant from the District; a grant from the Oregon Watershed Enhancement Board; and money and labor contributed by the cooperator.

Water ~ Weeds ~ Wildlife

WATER QUALITY and QUANTITY = Protecting and restoring the quality of surface and ground water, and assuring future supplies of water for people, plants, and animals. *District programs include water quality monitoring and many conservation practices. Rain gardens and bioswales help clean water before it infiltrates into ground water. Rainwater harvesting and irrigation system improvements are good examples of water quantity practices.*

Rainscaping

Rainwater for the nursery and farm

As noted above, a 300,000-gallon rainwater harvesting system is nearing completion.

Clair received a request for a visit from a landowner wishing to explore the possibility of rainwater harvesting for an orchard. The orchard has been under water stress due to our extended dry season. The few inches of rain that we usually get in August never arrived. The little bit of rain received in September was hardly enough to settle the dust!

Rainwater for garden and home

A 1,550-gallon rainwater harvesting system was completed with a homeowner in Damascus. This system will provide drip irrigation for a garden and help alleviate the need to use municipal water during the dry months of the summer. Rainwater harvesting helps reduce the demand on water treatment plants in urban areas and may help mitigate some impacts of changing weather patterns.

Clair received a request for help from a landowner who has been withdrawing creek water for their home water supply. The creek had gone dry for a day or two at a time before, but this year – for the first time since they bought the house eight years ago – the creek went dry for an extended period, cutting off their home water supply. We started working with this landowner a year ago and they are just about ready to begin implementing a home rainwater system.

We also received a request from a homeowner whose local municipal water system failed. They are interested in learning about the viability of a rainwater harvesting system. They are located in one of our five groundwater-limited areas where the municipal system is dependent on groundwater. Converting some homes to have backup supplies of water captured from rainfall would decrease the load on the municipal system and conserve groundwater.

Rainwater at school

Erik is working with a local school on the design and installation of a rain garden. That rain garden will help manage stormwater runoff and also transform the school's courtyard into an outdoor science laboratory. The District has awarded the school a Water Quality Small Grant of up to $2,500 to help with the cost of materials, installation, and interpretive signage.

Riparian Function and Runoff Control

Jason is completing the planning for a riparian fence and gutter project in Sherwood. Riparian fencing keeps animals out of surface water, and the gutters will help keep surface runoff from entering the nearby stream.

Water Quality Monitoring

It's the end of summer, so Jeremy resumed our annual cycle of water quality monitoring around various projects. This work includes six sampling sites on Doane Creek and Dolan Creek, both tributaries to the Clackamas River.

We continue to slowly expand our water quality monitoring program. We recently added a nitrate sensor for our portable water testing meter. Jeremy is our staff lead for water quality monitoring.

Nitrates are essential plant nutrients, but in excess amounts they can cause significant water quality problems. Together with phosphorus, nitrates in excess amounts can consume most of the oxygen in a water body, dramatically changing the types of plants and animals that can live in the stream. Excess nitrates can be toxic to warm-blooded animals at higher concentrations under certain conditions.

The natural level of ammonia or nitrate in surface water is typically quite low (less than 1 milligram per liter of water, abbreviated as mg/L). In the effluent of wastewater treatment plants, it can range up to 30 mg/L. Sources of nitrates include wastewater treatment plants, runoff from fertilized lawns and cropland, failing on-site septic systems, runoff from animal manure storage areas, and industrial discharges that contain corrosion inhibitors.

WEEDS = Detecting, controlling, and eradicating invasive plants. *Invaders affect wildlife and crop production. In some cases they pose health risks to people and animals.*

Helping Private Landowners

Sam and Jeff responded to a number of landowner assistance calls and emails for information regarding control of:

- Tansy ragwort (*Senecio jacobaea*);
- Scotch broom (*Cytisus scoparius*);
- Japanese knotweed (*Fallopia japonica*);
- Garlic mustard (*Alliaria petiolata*);
- Spurge laurel (*Daphne laureola*);
- Yellow archangel (*Lamiastrum galeobdolon*);
- English laurel (*Prunus laurocerasus*);
- English Ivy (*Hedera helix*);
- Himalayan Blackberry (*Rubus aremeniacus*); and
- Stinking tarweed (*Madia glomerata*) which is a native but is a nuisance in pastures and hay fields.

Tansy Ragwort was the weed of the month for callers complaining about it and wanting to know how to control it. To be most effective, the right treatment needs to occur at just the right growth stage, and much of our conversation with landowners the past few months has been focused on familiarizing them on these points. These contacts set the stage for another productive treatment season next year.

Jeremy and Sam worked with a spray contractor to treat six acres of Scotch broom and blackberry (both Himalayan and Evergreen) in the Carus area. This work focused on treating the large amount of weed seed at the site, returning the area to pasture and opening up a forested wildlife area. We expect native plant regeneration will provide additional wildlife habitat.

Erik lent one of our "lake rakes" to a new pair of landowners wanting to clean out a stormwater detention pond on property they recently purchased. The landowners are eager to clean the algae from the water and control the ivy and holly that is encroaching upon the pond.

Oregon Invasive Species Hotline Action

Yes, the Hotline was active! Staff responded to Oregon Invasive Species Hotline reports of Shining geranium (*Geranium lucidum*), Japanese knotweed (*Fallopia japonica*), and a naturalizing population of Ribbon grass (*Phalaris arundinacea*).

We also responded to a Hotline report of Patterson's curse (*Echium plantagineum*) near a school greenhouse in West Linn. Since this is a Class A noxious weed, we immediately coordinated with the Oregon Department of Agriculture Noxious Weed Division. Fortunately, the area in question did not have Patterson's curse, but the report allowed us to meet with school facilities managers about other weeds on the site.

Assisting Public Entities

Sam and Jeff worked with weed control contractors to treat various invasive species in a portion of West Linn's Wilderness Park. This activity was undertaken in coordination with Nature Conservancy restoration efforts undertaken at West Linn High School and Cammasia Nature Preserve.

Sam began coordinating with Clackamas County Roads and Water Environment Services to control a knotweed patch targeted by the county near West Linn. This effort is aiding in increasing dialogue among the various county departments regarding invasive species control across county departmental management boundaries, and we hope it will result in consistent reporting and treatment protocols.

Sam also followed up with staff from the Portland Water Bureau to coordinate final reporting on the Bull Run Gate weed control project, which was funded by the Oregon Watershed Enhancement Board.

Jeff is coordinating with the City of Lake Oswego to get the weed data and observations from their parks department into the regional weed database, known as iMapInvasives.

Outreach

Sam and Jeff completed a mailing in support of fall control of False brome. This mailing went out to 272 owners of riparian land in the heavily impacted Dubois Creek Watershed. Numerous landowner inquiries and follow ups have been undertaken in support of this effort.

We completed joint Knotweed and False brome mailings in support of fall treatments to all riparian landowners along the Upper Eagle Creek, North Fork Eagle Creek, Lower Eagle Creek, Upper Milk Creek, Middle Milk Creek, and Lower Milk Creek watersheds. The mailing went out to 914 landowners in these areas and has generated numerous inquiries.

Three new program brochures are available for the WeedWise Program. These brochures will aid in the identification, outreach, and control of Japanese knotweed, False brome, and Tansy ragwort. Sam continues to develop the 2013 WeedWise program calendar.

Orange Hawkweed Control

Jeff worked with crews to treat Orange hawkweed at sites in Colton, Estacada, and Welches.

Site Surveys

Jeff also made site survey visits to check Garlic mustard occurrences in Oak Grove and Carver. We were alerted to these sites through our mail campaigns to specific neighborhoods.

Non-Chemical Controls

Staff delivered burlap coffee bags to a cooperator who wished to use non-chemical methods to control weeds in his garden. The bags eventually decompose, providing organic matter for the garden. We also provided information to a landowner interested in restoring a natural area near their home, and referred them to a source of free coffee bean bags to aid in natural weed suppression.

Sam participated in the City of Wilsonville's Goat Appreciation Day and disseminated weed control information to attendees. A reporter for the Wilsonville Spokesman was present and the paper published a story on August 29th that prominently featured information about our WeedWise Program and several targeted species, including Garlic Mustard (*Alliaria petiolata*) and Giant Hogweed (*Heracleum mantegazzianum*).

WILDLIFE = Developing habitat conditions to enhance the life cycle of wild creatures. *CREP and riparian restoration activities are focused on habitat but offer additional benefits.*

"Moss Animal" (Also Called a "Dragon Booger") Spotted!

WeedWise Program staff came across an interesting critter while on a site visit at Mt. Hood Village. Very little is known about the ecology or life history of *Pectinatella magnifica*. Similar in composition to a bowl full of jelly, this species is currently being studied by the US Fish and Wildlife Service. We contacted USFWS staff and also researchers with the Center for Lakes and Reservoirs to learn more about this rarely encountered species.

Riparian and CreekCare Work

Erik will be assisting a local landowner on a riparian buffer planting plan for a new home constructed adjacent to a wetland in the Mt. Scott area.

Jenne reports that two more properties on Badger Creek were enrolled into the CreekCare Program this month. She will be drafting plans for the properties this fall.

Eco-Lawn for Wildlife

Erik met with a landowner to discuss lawn alternatives on a large one-acre residential property. They want to keep the lawn aesthetically pleasing, cut back on the maintenance, and still enhance wildlife opportunities. Sounds like an eco-lawn may be a good solution!

Power Line Corridors

Clair and Rhoda met with the vegetation management coordinator for Bonnville Power Administration to better how they are working to increase wildlife diversity on lands that are in the BPA right of way. We called this meeting when a landowner having BPA right of way on their land expressed interest in enrolling their property in the Oregon Wildlife Habitat and Riparian Tax Incentives program.

Our Other W's

WATERSHEDS = Working toward stronger, more resilient watershed conditions.

What We Do Benefits Watershed Health

From a water quality and quantity perspective, the three key functions of a watershed are to capture water, store it, and safely release it. In-stream, near-stream, and upland habitats are all affected by how well a watershed fulfills these three functions.

Much of what we do with private and public entities directly or indirectly benefits watershed health. Weed control is often the first step in returning habitat to conditions more beneficial for our native plants and animals, and help the land act more like a sponge during rain events. Our streamside/riparian work is closely connected to how well a watershed functions, so restoring better riparian conditions can provide relatively quick benefits to a watershed.

Rainwater harvesting can temporarily store rain so it can be used later, and can reduce demands on surface and groundwater. Using rain gardens and bioswales to reduce stormwater runoff filters pollutants out of the water and allows the watershed to store water.

Our work on farms, stables, nurseries and other lands helps keep water clean, weeds under control, and habitat healthy. Every land parcel is part of the larger jigsaw puzzle that makes up a watershed, and the way each puzzle piece is managed affects the whole.

Even though we report our activities as discrete actions on individual parcels, every action affects the watershed in which it occurs. Our partnerships with other organizations allow us to extend our reach and positively affect more people, land, and resources in the big, complex puzzles we call watersheds.

Clackamas Basin

Jenne and Marlene attended a field trip with the Clackamas Stewardship Partners that focused on in-stream fish habitat projects in the lower portion of the Clackamas Basin. Projects underway and completed by Metro, North Clackamas Parks and Clackamas River Basin Council were highlighted.

Sam contacted the Clackamas River Basin Council to continue coordinating weed control efforts within the Clackamas River Basin. We are working with CRBC's Shade Our Streams program to present a unified message to landowners and to promote best management practices for controlling weeds. We donated 400 of our new knotweed brochures to the Shade Our Streams program for use in their outreach and restoration efforts.

Council of Councils Met in September

One of our success stories is working with watershed councils. We have ten councils in Clackamas County, so coordinating efforts and investing across the many landscapes these councils represent can be quite challenging.

A few years ago, we began meeting with watershed councils once a quarter to share information about challenges and opportunities. This continues to be a productive investment of time and energy. Not only has the District benefited, but the watershed councils have also learned a great deal of useful information from each other. September's quarterly meeting was no exception!

We are looking forward to being able to take council folks out to the Milk Creek site once the as-built drawings are completed and winter streamflow is higher. Our approach to streambank protection and habitat improvement on the Milk Creek site is rather unusual for our region, and the discussion as we look at the structure is going to be particularly informative.

WEATHER = Developing responses to our changing climate, and to floods and droughts.

Increasing the amount of weather data collected locally is a baseline strategy to help us deal with weather-induced changes.

Changing Weather Patterns

Sam attended a global climate change workshop at the Ecological Society of America meeting to investigate the status of current predictions and methodologies for planning future conservation and weed control efforts. The information will be shared with the District's climate change technical committee. Erik has expressed interest in joining that committee; it will probably meet this winter to discuss District programs and goals related to weather and climate.

District Weather Station is Online

We installed our new weather station on our office building in Oregon City. Weather Underground has designated it as station KOROREGO14. Visit http://www.wunderground.com and enter our station in the search box. You can also see live data from our station at http://rainwise.net/weather/ClackamasSWCD

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WILDLANDS = Working to improve and protect wildlands, including prairies and forests. *One way we address wildland issues is by working with the Clackamas Stewardship Partners. Encouraging fire breaks and fire-resistant native plants around buildings also helps protect wildlands.*

Wildfire

If you followed the news this summer, you probably saw many stories about catastrophic wildfires in several western states, including Oregon. Some wildfires are made much worse by the invasion of highly flammable non-native plants. We are interested in healthy habitats that support native plants and animals, and such habitats can reduce the severity of fire in a landscape.

Erik has been providing a conservation perspective on wildfire fuels reduction methods for a homeowner's association in urban Clackamas County. The questions and conversations have been diverse, ranging from chemical weed control to stormwater management, yet always productive. We hope the District can work with the HOA on a long-term management plan that balances wildfire protection and wildlife habitat enhancement.

Can The Trees Be Saved?

Erik also consulted with a local landowner on the health of two large Douglas fir trees on their property. Unfortunately, neither tree is very healthy. There might be a chance, however, to leave one of the trees as a snag to provide habitat for local wildlife.

Many people seem to think that planting trees solves all problems. It is easy to forget that some creatures need open grasslands. As ground-nesting bees, native bumble bees actually need bare soil for their nest burrows. Conserving open habitat like grasslands, prairies and oak savanna is probably going to be on our radar in 2013 as this realization becomes more commonplace among conservation organizations and funders.

WORKING LANDS = Providing service to help keep agricultural lands healthy and productive.

Our work with nurseries, Christmas tree farms, crop and food producers, and farmers markets all fit in this category.

Fencing and Water for Livestock

Jason helped minimize costs for a landowner interested in providing upland livestock watering away from surface water. The landowner also wanted to split his pasture into smaller pieces. By siting the watering facility so it was accessible from both fenced pastures, one facility serves the purpose of two!

The gravel base under the tank and gate so overflow won't create a mud problem.

Improving Our Financial Assistance Programs

With most soil and water conservation district cost sharing programs, the SWCD grants the landowner a certain percentage of the total cost, and the landowner covers the difference. Cost sharing occurs on a reimbursable basis, meaning that the landowner first pays 100% of the cost and then waits for the SWCD to reimburse part of that cost.

A quietly controversial aspect of SWCD cost-sharing programs is they don't work well for people who don't have the time, physical capability, or financial capability to participate. This has the potential to create situations where those who can afford to participate get their needs met, while natural resource issues remain unresolved for those who can't afford the up-front cost.

We are working toward making our programs available to a wider range of potential participants. One new tool is our grant-plus-loan program. Essentially, we can pay 100% of the cost for small projects and the landowner share is paid back to us over time. What's the difference between traditional cost sharing and our grant-plus-loan tool? Instead of the landowner pulling 100% of the cost out of his or her bank account and waiting for reimbursement, the District pays

100% of the cost and the landowner pays back part of this over time. Our grant-plus-loan program is gaining traction as landowners recognize how much easier it is to implement conservation practices this way.

Our First Grant-Plus-Loan is Repaid!

In April, the Clackamas County SWCD awarded a small dairy a grant-plus-loan package so they could purchase an agitator for their manure pond. The agitator allows the operator to better utilize nutrients in their pond on their fields, and the more frequent and smaller applications help protect water quality in the local stream. But…the operator didn't have the discretionary cash to make this purchase. We implemented our first grant-plus-loan solution by paying the vendor for the full amount for the agitator, with an agreement that the cooperator would repay us 25% of the cost over four months. The dairyman has paid off the loan on schedule and the agitator is working well.

Bridge Loan to Install a Hoop House

Another example of how we're trying to help cooperators implement conservation practices is our bridge loan. Recently, we became aware of a small vegetable farmer who was awarded USDA Environmental Quality Incentive Program (EQIP) funds to install a high tunnel hoop house, which can have both environmental and economic benefits. EQIP funds are paid out on a reimbursement basis.

Two problems surfaced: the farmer did not have the cash on hand to buy the materials, and the vendor would not deliver the materials without payment.

That's where the Clackamas County SWCD stepped in. We agreed to pay the vendor for the materials so the farmer could install the hoop house. Once the installation is complete, USDA will reimburse us, using the farmer's EQIP funds. If the installation isn't completed this fall or doesn't pass inspection, the farmer will begin repaying the District the cost of the materials, plus interest. Either way, our investment will be repaid. This is the first 100% loan we have made with no grant component. Having the assurance that the USDA will assign payment to us gave us the confidence to give this type of "bridge loan" a try.

Cost Sharing for Conservation Cover

We have a new cooperator who recently purchased 34 acres that the previous landowner had cropped, leaving bare ground. Winter rains can easily erode bare soil, and such ground provides little habitat value. The cooperator is working with Kris Homma of NRCS. The District agreed to provide cost sharing assistance to prepare and seed a conservation cover to prevent soil erosion. This will help the cooperator get the land in shape for their new operation, protect soil from excess erosion, and protect water quality.

Mud and Manure Becomes the Theme When Rain Returns

We have plenty of horses in Clackamas County. They eat, and whatever is not fully processed and burned by the animal for energy and growth comes out the other end. When poorly managed, animal manure pollutes surface water and can threaten drinking water in nearby wells.

One way to help deal with excess manure is composting, and when you have a lot of manure, you need a lot of space and a lot of time to fully compost it. But not always! Jeremy has been working with a stable owner who recently completed the construction of an aerated compost facility. By aerating the manure, composting takes less time and requires less space. A more useful final product is more quickly produced.

Jeremy is at the beginning phase of implementing a heavy use area with the same stable owner. This HUA will complete a conservation plan drafted in 2009 to address runoff from manure piles and muddy paddocks. Jeremy also made two site visits to other stable owners interested in addressing water quality and pasture quality issues.

Jason made three site visits to landowners wanting to control mud and manure this winter. He also coordinated the installation of two heavy use areas (one in Lake Oswego, and one near Molalla). Both HUAs will prevent the development of muddy paddocks, provide healthy turnout areas this winter, and make it easier for the operators to properly and safely handle manure.

Jenne continued to develop a plan for off-channel livestock watering and livestock exclusion fencing for two waterways in the Clear Creek drainage. The Clackamas River Basin Council will supplement the District's conservation efforts on this site with weed control and riparian buffer work through their Shade Our Streams program.

WORKSHOPS, OUTREACH, EDUCATION = Reaching and teaching citizens, agencies, partners, and others.

Clackamas County Fair Booth Awarded a Ribbon!

Kudos to Lisa for our award-winning Fair booth this year! Her good work was recognized with a second-place ribbon. The habitat felt board was a big hit with young kids…and yes, even with some of us older kids, too. District Directors and staff pitched in to staff the booth, and we were all happy to be close to the pie stand, the ice cream stand, and the new bathrooms. Oh, and we had plenty of good conversations with customers this year: the explosion of Tansy ragwort was a common theme.

Cows Eat Weeds

We sponsored a unique workshop on training livestock to eat weeds. At certain life stages in the growth of some weeds, the plants are not only palatable to livestock but can contain more protein than in pasture grasses. Several staff participated, and Sam helped identify weeds brought in by attendees.

Small Farm School

This is another great success story. The first annual Small Farm School was held on September 8th at Clackamas Community College to a packed crowd. Attendees were very attentive to the high-quality presentations, and the presenters provided interesting and useful information. Clair, Lisa, Rhoda, Jason, and Tom provided support. Chair Ron Oberg was a strong supporter and was present. We saw people from other soil and water conservation districts filtering through the sessions and we could tell they were thinking hard about bringing this idea to their community.

More Videos Completed, More Coming

Erik and Jason finished our "Conservation Clips" videos about installing a rain garden. These short videos are presented in small, bite-sized pieces so viewers can get the knowledge they need without sitting through a long presentation.

Lisa worked with a videographer to shoot the Small Farm School event. This video will be used to promote the event next year. We are also working on a video about watershed councils and how our partnership with them benefits landowners and natural resources.

Mud (It's a Seasonal Theme!)

Lisa submitted an article to the Wilsonville Connection encouraging landowners to take action now to prevent mud problems this winter. An informative advertisement for District services was also purchased.

Cooperators of The Year: Jim and Mary Toops

Lisa took photographs, prepared information, and created a plaque for our cooperators of the year, Jim and Mary Toops. These folks have gone beyond our standard practices in their reach for a sustainable, low-impact farm. We applaud their commitment and achievements!

Meadowscaping

Erik represented the Clackamas area at an urban meadowscaping workshop hosted by the Backyard Habitat Certification Program in Portland. The workshop was well attended and provided detailed information on how to use urban meadows as an alternative to lawns. Seed packets with oak savanna wildflower mixes native to the Willamette Valley were made available to the participants. You can expect to see a follow-up workshop here in Clackamas County!

The native seed coasters we developed for a customer appreciation event have been quite popular. We have given away just about our entire stock. The coasters can be planted and contain seeds of native plants that are beneficial to pollinators. We think of them as pollinator dots you can place in corners of your landscape. We'll have more produced this winter but in bookmark form to reduce our cost.

Flock and Fiber Festival

Clair and Rhoda had many good interactions with livestock owners who visited our display at the Oregon Flock and Fiber Festival at the Clackamas County Event Center. This annual festival is a great opportunity for Clackamas County folks who raise sheep and llamas to talk with us, and many did. We discussed a variety of resource concerns ranging from pasture and manure management to invasive weeds and water conservation.

Rainwater Harvesting

Clair moderated a session at the annual American Rainwater Catchment System Association meeting in Raleigh, North Carolina, and gave a presentation on what we're doing in Clackamas County.

WORKING TOGETHER = Developing and nurturing key partnerships to help achieve our conservation mission. *Captured here are actions that help us build and maintain important conservation relationships.*

Weed Program Database

Jeff shared our progress with the West Multnomah SWCD in using a database to help manage early detection and rapid response (EDRR) activities. They have a similar EDRR program with similar data management needs.

Support Grants Are Just Around the Corner

Each year, we offer funding opportunities to the farmers markets and watershed councils in Clackamas County. Why? Because well-managed local farms have fewer weeds and do a better job of protecting water quality, and because watershed councils get good work done that matches some of our conservation goals.

Applications were sent out on September 21st. We'll be evaluating applications in October and expect the Clackamas County SWCD Board of Directors will make awards at their November 20th regular meeting. That means we'll likely get support grant payments sent out in December.

Earlier this summer, Clair and Tom visited most of the markets in Clackamas County at least once, and several were visited multiple times. We assessed the amount of local food being sold and whether sufficient signage was present to help direct customers to the markets. Many of the markets are a bit hard to find unless you're familiar with where they are located.

What To Do About Failing Septic Systems?

Soil and water conservation districts are comfortable talking about manure and water quality, because it is central to what we do and connects to one of our core groups of customers. But discussion often becomes more strained when we talk about human waste and water quality. When private on-site septic systems fail, the health of domestic and wild animals can be affected, there is a human health risk, and runoff can enter surface and ground water. We'd probably all agree that failing systems are not what we want to see…or smell!

A big question we're grappling with is: does the Clackamas County SWCD have a role in protecting water quality from failing on-site septic systems? We are working with a core group of folks to develop a proposal for consideration by the Board of Directors. Specifically, we are working hand-in-hand with Clackamas County Water Environment Services (WES) and Clackamas River Water Providers to explore solutions for homeowners who have failing septic systems.

WES has enforcement authority throughout Clackamas County, but their service district boundary does not cover all areas. Clackamas River Water Providers represents several water utilities that use Clackamas River water as a drinking

water source. Both of these partners would like to prevent leaks from failing septic systems from entering water bodies.

Part of the solution is undoubtedly education. Part of the solution is better maintenance of existing systems. And part of the solution is repairing and replacing some systems. We are considering whether our financial assistance tools like our grant-plus-loan package or 100% loans would make a meaningful difference. We are the recipients of a large grant to create a loan fund, and we're talking with the granting agency to see if this kind of program would fit inside the sideboards of that grant.

There are a number of details to work out, but this type of coordinated, collaborative effort could lead to a key role for the District in helping to protect our streams, in a way we haven't previously imagined.

Street Trees and Christmas Trees

Erik is working with the Oregon City Natural Resource Committee to help revise and update the City's approved street tree list. The updated list will coincide with Oregon City's efforts to receive a Tree City USA designation.

One of the most delightful things we do each year is staff a booth at the annual meeting of the Pacific Northwest Christmas Tree Growers Association. Jeremy staffed our booth this year. The live trees, fresh wreaths, and Christmas ornaments make the room look and smell like the holidays. This year, we noticed attendance was lower than usual.

Helping Other SWCDs

Jason assisted the Polk SWCD with implementing a good backup system for their server, and also helped them migrate their email system to Google Apps.

Sam provided information to the Wasco County SWCD regarding the formation of a cooperative weed management area (CWMA) and current CWMA boundaries across the state.

Shade Our Streams

Lisa and Rhoda worked together to provide a booth at the Shade Our Streams celebration hosted by the Clackamas River Basin Council at Metzler Park. We had our *Build a Habitat* display board out, plus the felt board we had brought to the Clackamas County Fair. Tom showed up to refill some brochures, and we all enjoyed the interaction with conservation-minded folks, the food, and the live music. CRBC did a great job with this event.

School Science

Erik met with Friends of Trees and the science teachers from Trillium Primary School to discuss ways to incorporate an upcoming wetland revegetation project into the classroom science curriculum. The first planting event is scheduled for December 1st.

Greenroof Think-Tank

Erik participated in a monthly meeting of the Greenroof Information Think-tank group in Portland.

Talking About Grants

We were pleased to host a presentation by Mary Rose Navarro about Metro's Capital Grants Program. The presentation focused on funding opportunities available through Metro as well as application tips based on recently awarded projects. We had good attendance with representatives from local school districts, city planning offices and neighboring SWCDs. A big thank you to Erik for coordinating this useful presentation!

Watershed Tour

Erik is working with the Oswego Lake Watershed Council to organize a watershed tour focused on low-impact development projects in the Lake Oswego area. Tour stops will include residential rain gardens, green street bioswales, a green roof and permeable paving projects. The tour is scheduled for Saturday, October 13th from 9:00 am to noon, starting at the Uplands School on Wembley Park Road.

WORKPLACE = Assuring accountability and the sound delivery of services.

What's going on with ERP?

Late in September, the District suspended our Equipment Rental Program. Historical usage data showed very few rentals of the equipment, and we were unable to reach agreement on an updated arrangement with the vendor who had been renting equipment for us.

Board Director Jesse Nelson volunteered a spot to store our equipment while we look for a new vendor. Jeremy moved all of the equipment except the big no-till drill. The big drill will be moved when repair work is completed.

Stayed tuned for the re-emergence of the Equipment Rental Program. If you know of a vendor who might want to rent this District-owned equipment to the public, please contact Jeremy Baker at 503-210-6009.

DOGs and CATS

One of our financial assistance tools is called a DOG, for Dollars On the Ground. In a moment of whimsy, we named our new customer tracking and planning database CATS, for Conservation Activities Tracking System. Jason and Tom have met with the contractor who is developing the system, and the first working prototype will be ready for testing by Christmas.

Training and Workshops

Tom attended two days of advanced facilitation skills training.

Erik attended a graywater re-use workshop hosted by the Oregon Department of Environmental Quality and East Multnomah SWCD. The state started permitting graywater reuse projects in spring 2012 so this topic is very current. You can probably look forward to a similar workshop appearing in Clackamas County.

Sam attended the 97th Annual Ecological Society of America meeting hosted in Portland this year. The event featured thousands (yes, thousands!) of presenters in more than 30 concurrent sessions, including multiple concurrent sessions dedicated to invasive species research and management.

Erik attended an urban ecology brownbag talk to learn more about Portland's urban forestry program. The presenter shared a lot of useful statistical data about tree mortality rates for trees planted by volunteers versus trees planted by contractors. Portland has also started a street tree pilot project that provides large native trees, such as Oregon white oak and Western red cedar, at no cost to landowners who have eight-foot-wide planters with no overhead utility lines. Sounds like a great idea to implement here in Clackamas County!

OUR PEOPLE

Board of Directors

Chair – Ron Oberg
Vice Chair – Mike Weinberg
Secretary – Joan Zuber
Treasurer – Don Guttridge
Member – Jan Lee
Member – Jesse Nelson
Member – vacant

Associate Directors

Roger Fantz, Lowell Hanna, Janiece Miller, Jim Toops

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Find our staff online at http://conservationdistrict.org/about/district-staff

COMMON ABBREVIATIONS

APHIS – USDA Animal and Plant Health Inspection Service
ARCSA – American Rainwater Catchment Systems Association
BLM – Bureau of Land Management
BMP – Best Management Practice
BOLI – Bureau of Labor and Industries
CCC – Clackamas Community College
CCE – Common Computing Environment
CCSWCD – Clackamas County Soil and Water Conservation District
CEDARS – Clackamas Early Detection and Reporting System
CIG – Conservation Innovation Grant
CRBC – Clackamas River Basin Council
CSP – Clackamas Stewardship Partners
CSP – Conservation Stewardship Program - NRCS Cost Share Program
CWMA – Cooperative Weed Management Area
DEQ – Oregon Department of Environmental Quality
DOG – Dollars On the Ground (CCSWCD cost-share program)
EDRR – Early Detection and Rapid Response
EQIP – Environmental Quality Incentives Program - NRCS Cost Share Program
ESA – Endangered Species Act.
FEMA – Federal Emergency Management Agency
FSA – Farm Service Agency
GIS – Geographic Information Systems (Mapping Software)
GOCWC – Greater Oregon City Watershed Council
IPM – Integrated Pest Management
ITB – Invitation to bid
LGIP – Local Government Investment Pool
LID – Low Impact Development
MOA – Memorandum of agreement (aka MOU)
MOU – Memoradum of understanding (aka MOA)
NCPRD – North Clackamas Parks and Recreation District
NCUWC – North Clackamas Urban Watersheds Council
NOAA – National Oceanic and Atmospheric Administration
NPDES - National Pollution Discharge Elimination System
NRCS – Natural Resources Conservation Service
OACD – Oregon Association of Conservation Districts
OAN – Oregon Association of Nurseries
OCEAN – Oregon Conservation Employees Association Network
ODA – Oregon Department of Agriculture
OAN – Oregon Association of Nurseries
OSU – Oregon State University
OTAC – Oregon Technical Advisory Committee
OWEB – Oregon Watershed Enhancement Board
OWHCMP – Oregon Wildlife Habitat Conservation and Mgt. Program
PGE – Portland General Electric
PRWC – Pudding River Watershed Council
RAC – Resource Advisory Committee
RC&D – Resource, Conservation and Development
RWH – Rainwater Harvesting
RFP – Request for proposal
RUSLE – Revised Universal Soil Loss Equation
SDAO – Special Districts Association
SHPO – State Historic Preservation Office
SWCD – Soil and water conservation district
UERC – Urban Ecosystem Research Consortium
USDA – United States Department of Agriculture
USFS – United State Forest Service
USGS – United States Geological Survey
WES – Water Environment Services

 ~ Conclusions or opinions expressed in this document may not represent the official position of the Clackamas County SWCD. *The Clackamas County Soil and Water Conservation District (CCSWCD) prohibits discrimination in all of its programs and activities on the basis of race, color, national origin, age, disability, gender, marital status, religion, sexual orientation, genetic information and political beliefs. CCSWCD is an equal opportunity employer.*