

Working together to protect and conserve our drinking water.

Annual Report

For Fiscal Year 2019-20

September 2020

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Background

The Clackamas River Water Providers (CRWP) is a coalition of water providers that get their drinking water from the Clackamas River. The organization is made up of representatives from the City of Estacada, City of Lake Oswego, City of Tigard, Clackamas River Water, the North Clackamas County Water Commission (Oak Lodge Water Services, City of Gladstone), South Fork Water Board (City of Oregon City, City of West Linn), and Sunrise Water Authority (City of Happy Valley, Damascus area). It includes two staff people, a Water Resource Manager and a Public Outreach & Education Coordinator. Combined we serve water to over 300,000 people in Clackamas and Washington Counties.

The CRWP was created by an Intergovernmental Agreement in the Fall of 2007 to coordinate efforts regarding source water protection and public outreach and education around watershed issues, drinking water, and water conservation. Our goal is to preserve the Clackamas River as a high quality drinking water source and minimize future drinking water treatment costs, while being good stewards of the river.

Through these efforts we have been working together for more than ten years to jointly fund projects and studies that would be too expensive to do individually, to foster closer relationships with each other as intra-basin water suppliers, and to speak in one voice when working with other stakeholders in the basin such as PGE. This has allowed us to realize the economies of scale and save money by sharing in the costs of staff people to manage and coordinate programs that benefit all our agencies.

The following is a look at the year in review.

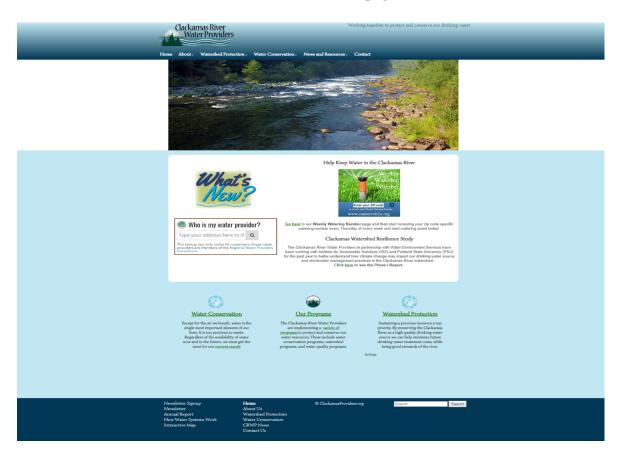
COVID 19

In March of 2020 COVID 19 changed how we do things and how we are interacting with our members, citizens, and watershed partners. Through this process we are doing most our work online and looking at ways to expand the programs that we implement into the virtual word. Due to the COVID-19 pandemic and the Stay Home, Stay Safe initiative and the following social distancing requirements many of the presentations and events that the CRWP typically participates in were canceled.

CRWP Website

The Clackamas River Water Providers website continues to be updated on a regular basis. The site includes information about CRWP members, our source water protection programs, and public outreach and water conservation programs, and is used as a tool for the Conservation Rebate and Landscape Audit Program. The Resources and Documents page contains CRWP outreach material, plans, and reports that can be downloaded. Go to www.clackamasproviders.org to visit the site.

CRWP Website Homepage



Source Water Protection Programs

In 2010 the CRWP completed the development of a Drinking Water Protection Plan for the Clackamas River watershed. This Plan acts as a road map of potential strategies and programs to implement over the next decade and beyond to preserve the Clackamas River as a high-quality drinking water source and to minimize future drinking water treatment costs. The CRWP continues to work on implementing elements of the Plan. The descriptions below describe the CRWP efforts for the 2019-20 fiscal year.

Basin Analysis: Studies, GIS, Modeling and Water Quality Monitoring Monitoring Contract with USGS

In August of 2016 the CRWP signed a Joint Funding Agreement with USGS to continue the data-collection program and provide the funding mechanism for the USGS to: (1) operate three continuous water-quality monitors in the Clackamas River (at Oregon City, Estacada, and Carter Bridge), and (2) operate a streamflow gage in the Clackamas River at Oregon City for a five-year period from October 2016 through September 2021.

These stations are strategically placed in the basin to provide a holistic view of water quality as water flows through the watershed. Although each station provides important information on their own, when used in combination the WQ monitors can pinpoint where turbidity sources originate (upper basin, middle basin, lower basin), help pinpoint changes in water quality based on land use in different parts of the basin, and can help identify where to start looking if a spill occurs.

These monitoring stations continuously log pH, specific conductivity, dissolved oxygen, temperature, and turbidity. The Estacada and Oregon City gauges also records chlorophyll and streamflow. In addition to the monitoring contract, the CRWP paid for replacement probes, solutions and cables, as well as the utility fees for the real time data signals associated with the USGS monitoring sites. The water quality data can be accessed via the web at https://or.water.usgs.gov/clackamas/monitors/

Macroinvertebrate Sampling

In 2012-13 the CRWP entered into a contract with Cole Ecological, Inc. to develop a long-term macroinvertebrate monitoring plan for the lower Clackamas River and its tributaries. This plan called for sampling from the lower mainstem Clackamas River and its major tributaries on a regular basis in order to produce a robust dataset necessary to identify changes in biological conditions when they occur. In September of 2019 the CRWP conducted another round

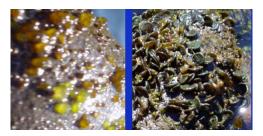


of macroinvertebrate sampling at five sites designated in the 2013 plan in the lower Clackamas River between river miles 0.5 and 20. These sites were selected to bracket the four drinking water points of diversion between river miles 0.8 and 3.1, and the Deep Creek sub watershed. A copy of this final report can be found by going to https://www.clackamasproviders.org/wp-content/uploads/2020/04/19-

128 CRWP Macros Final Rpt 4-6-20.pdf

USGS Blue Green Algae Study

In July of 2017 the CRWP and the U.S. Geological Survey (USGS) entered into a three-year joint-funding-agreement to assess the effects of harmful algal blooms on drinking water resources in the Clackamas River Basin. The study has 4 objectives:



- 1. Determine if benthic cyanobacterial populations are producing cyanotoxins.
- 2. Determine the presence/absence of cyanotoxins in key locations including at selected drinking water intakes using time-integrating Solid-Phase Algal Toxin Trackers (SPATTs).
- 3. Evaluate the occurrence of cyanotoxins in drifting algae at key locations, including at selected drinking water intakes.
- 4. Preparation of a peer reviewed interpretive report.

Sampling activities took place during the summers of 2017 and 2018. During 2019 and 2020 USGS will be writing up their findings in an interpretive report that will be shared with the CRWP in the fall of 2020.

Flow Calculator

The CRWP worked with the consulting firm Geosyntec to develop a web-based tool that automatically calculates and displays water provider withdrawals and river flows. The purpose of this tool was to provide CRWP members with a flexible platform that displays allowable withdrawals with real time river flows, which is adaptable as calculations, and data input changes while reducing user error. This web-based approach is customizable and will allow for additional features such as text message or email alerts in the future. During 2019-20 the calculator was updated to include Lake Oswego withdrawals into the tool since their withdrawals occur below the Oregon City gauge.

Groundwater Study

The CRWP contracted with Geosyntec Consultants to conduct a Groundwater Baseflow Study. The goal of this study was to see if we could identify relationship(s) between

snowpack, groundwater, and/or streamflow in the Clackamas River. As snowpack changes in the future due to climate change we strive to understand how resilient our watershed is to these changes to help inform drinking water management. The study found that: 1) More than 50% of the variability of the late-summer flow at the Estacada stream gauge is accounted for by the winter snow water equivalent for that same water year. 2) That this relationship does not provide the desired level of predictive power that would be useful for managing downstream flow requirements. 3) Data limitations (lack of groundwater information) and confounding factors in the watershed present obstacles to further statistical analysis.

Education and Research Assistance

Portland State University - Summer Watering Campaign Assessment

During 2019-20 the CRWP worked with Portland State University graduate students to conduct a focus group and survey of CRWP member citizens around the CRWP's *Fish on the Run. Irrigation Done!* campaign. The purpose of this work was to determine how the CRWP should adjust the campaign based on the finding of this work to help create large-scale behavior change. The Assessment recommendations included: 1) continuing to increase awareness and connection to the watershed, 2) increase personal efficacy by removing barriers to conserving water, and 3) ensure that the campaign address different audiences with different values.

Point Source Evaluation and Mitigation

Tracking, evaluating, and monitoring point sources (water quality and other permits)

The CRWP continues to review water quality permits that come up for renewal to see if there could be an impact on drinking water quality, and if there is an opportunity to provide public comment on these permits. The CRWP comments generally look at ways to enhance permit requirements and ways to better notify CRWP members of spills, overflows, or contamination events. In addition, this is another tool to help educate and remind permitees that the Clackamas River is an important drinking water source.

Portland General Electric (PGE) Blue Green Algae Team/Mitigation Fund Committee

The CRWP continues to be an active participant in PGE's Blue Green Algae Team which oversees PGE's Blue Green Algae Monitoring Program, and the PGE Mitigation Fund Committee. This year the Blue-Green Algae Team reviewed the 2019 Annual Blue-Green Algae Report, which included results from the yearly monitoring program. Monitoring was

conducted from early May through the end of September 2019. No blooms were observed at either Timothy Lake or North Fork Reservoir during the 2019 monitoring season, and no suggested changes were made for the 2020 monitoring.

In 2019, PGE's Mitigation Fund Committee receive an update on the projects from the 2015 funding cycle and approved full or partial funding for 6 projects for the \$1,841,000 available funds in the 2019 funding cycle. These included the following:

- Eagle Creek Large Wood Enhancement Clackamas River Basin Council (CRBC)
 Kingfisher Side Channel CRBC
- Shade Our Streams CRBC
- Clackamas River Invasive Species Program Clackamas Soil & Water Conservation District
- Suter Creek Fish Passage David Bugni
- Upper North Fork Reservoir Large Wood Fish Habitat Oregon Wildlife Foundation

Nonpoint Source Evaluation and Mitigation

Eco Biz Certification Support

The CRWP continues to look at ways to support the EcoBiz certification program. This certification program recognizes businesses that go beyond compliance with local environmental requirements and implement pollution prevention efforts in their work sites. Businesses are certified through an intensive application and evaluation process http://ecobiz.org/. The CRWP continues to provide funding to purchase EcoBiz Chinook Book Ads. *See Appendix A*.

Septic System Workshops

One septic system workshop was conducted in FY 2019-20 for 13 people at the Boring/Damascus Grange. The CRWP partners with DEQ, Clackamas County and the Clackamas Soil and Water Conservation District to put on these kinds of workshops. The purpose of the workshop is to provide information on how septic systems work, and why they need to be maintained, along with information on the financial assistance the CRWP provides for septic system owners in the Clackamas River watershed. *See Appendix B*.

Septic System Financial Assistance Program

The CRWP continued to offer septic system owners that live within the Clackamas River watershed financial assistance for septic system inspections and repairs. To be eligible for the program septic system owners had to live in the watershed upstream from CRWP drinking water intakes and use a DEQ Oregon Septic Smart certified business/contractor. A total of six cost share reimbursements for septic system repairs were processed for a

total of over \$5,200 in financial assistance.

Down the River Clean Up Sponsorship

For the eleventh year in a row the CRWP has provided funding to We Love Clean Rivers, Inc. to support the Annual Clackamas Down the River Clean Up which took place in September of 2019. The 17th Annual Down the River Clean Up included 170 volunteers who cleaned up 1.25 TONS of trash and recyclable materials from the Clackamas River. Since this event began 17 years ago, we've been able to remove over 29 tons of trash from the Clackamas River with the help of almost 3,800 volunteers. As an event sponsor the CRWP's logo is placed on event marketing and outreach material. *See Appendix C*.



Hazardous Material Spill Response Program

The CRWP contintues to work the Pollution Prevention Resource Center (PPRC), a nonprofit organization that is one of the Northwest's leading sources of high quality unbiased pollution prevention information, to implement both our technical and financial assistance for spill prevention efforts to businesses located within the Clackamas Industrial area. Due to COVID 19 the Facility Site Checklist which is typically done onsite was put online to so that facilities could fill it out and submit it remotely. Click on the following link to see which business we worked with https://www.clackamasproviders.org/wp-content/uploads/2020/09/CRWP-PPRC-19 20-Final-Report.pdf

Pesticide Reduction Efforts with the Clackamas Soil & Water Conservation District

The CRWP continues to support the Conservation District Windsock and Pesticide Sprayer programs. In October of 2019 the CRWP worked with the CSWCD and the Oregon Department of Agriculture (ODA) to coordinate a Free Pesticide Collection Event for agricultural users. This event collected 12,790 lbs pesticides for disposal. In addition, in the spring of 2020 the CRWP and CSWD created a Stop the Drift webpage to provide a place where growers could find more information on how to reduce pesticide drift. *See Appendix D*.

Pesticide Reduction Efforts with the Clackamas River Basin Council

For the 12th year in a row the CRWP has worked with Clackamas River Basin Council to support an outreach program for voluntary pesticide reduction through two mechanisms. One, is through the implementation of a Pesticide Pledge Program. This program is designed to educate property owners about the wise use of pesticides and to empower

them to use alternatives to pesticides. Pledge participants then have the opportunity to display a basin-specific yard sign that acts as a reminder of the steps they are taking to promote and enhance watershed health. 15 households participated in the program during the 2019-20 fiscal year. Second, is the distribution of 9 educational pesticide reduction fact sheets. These fact sheets were distributed by CRBC at landowner site visits, at community tabling events, as well as at Shade Our Streams graduated landowner site visits. The last four of these fact sheets were updated this year. *See <u>Appendix E</u>* or visit the http://www.clackamasproviders.org/pesticide-reduction-efforts/ to see CRBC report for FY 19-20 or to download the fact sheets.



CRBC Financial Support

The CRWP continues to provide funding for operational support for the Clackamas River Basin Council. The Clackamas River Basin Council is working to protect and improve water quality, and fish and wildlife habitat in the Clackamas River basin.

Clackamas Partnership

The Clackamas Partnership formally came together in 2015 through an Oregon Watershed Enhancement Board (OWEB) Focus Investment Partnership Capacity and Strategic Planning grant with the goal of increasing the pace, scale, and complexity of restoration project implementation in the Clackamas watershed. In January of 2019 the Partnership was informed that they were awarded a 6-year Implementation Grant totaling \$8,744,080

to support fish habitat restoration in the Clackamas River Basin benefitting Chinook salmon, coho salmon, steelhead, and other native fish species.

The CRWP is recognized as a Supporting Partner who provides technical support, participates in project prioritization and planning through the technical advisory committee (TAC), supports implementation through funding, technical assistance and other means, and participates in the Partnership's governance and decision-making. The CRWP is also part of OWEB's Technical Review Team reviewing all of the individual grant projects for the Clackamas Focused Investment Partnership. In 2019-20 the Technical Review Team reviewed two rounds of project applications.

<u>Disaster Preparedness and Response</u> The Clackamas Spill Committee

The CRWP convenes an Annual Clackamas Spill Committee meeting with stakeholders (staff from DEQ, Clackamas County, ODOT, as well as local hazmat and first responders) to talk about hazardous material spills and spill response. Due to COVID 19 the Committee did not convene in 2019-20. The CRWP continues to work with spill response partners to find more effective ways of communicating and responding to hazardous material spills and plans on convening a meeting during the fall of 2020.

Clackamas Basin Emergency Communications

Rather than conducting a Table Top Exercise this year the CRWP members chose to hold a communication workshop instead that would focus on inter basin communication around water related events involving one or all CRWP member organizations. Due to COVID 19 a larger scale workshop that would have included CRWP board members and member agency staff was change to a smaller online format. Due to a number of factors this workshop will not take place until October 2020.

In addition, in the spring of 2020 the CRWP entered into a three-year agreement with Regroup Mass Notification. This notification system allows Clackamas water providers to quickly and efficiently communicate if there are water related incidents or events by allowing us to send and receive messages via email, text/SMS, push notifications, desktop alerts, and voice calls. This system also allows us to address a long-term complaint from our first responder stakeholders (CFD#1 and CCOM) that the water providers do not have "one number" for notification in the case of an incident. This platform resolves this issue once our stakeholders were trained on how to use the platform to communicate with the water providers.

Public Outreach and Information Sharing

See the Public Outreach & Education Program section for additional information.

Annual Watershed Tour

The Annual CWRP Watershed Tour was held on Saturday, October 5th, 2019. This year's tour focused on the upper Clackamas watershed and included talks by the USFS, PGE and ODFW. The tour included a stop at the Fish Creek Campground and Cater Falls to talk with the Forest Service about Wild and Scenic River designations, the impacts of dispersed camping on the forest, and development of a new recreation site at Carter Falls. We also stopped in Milo McIver State Park to learn about a PGE side channel restoration project and how they are adding gravel back into the river system, and ODFW gave us a tour of the Clackamas Fish Hatchery and talked about some of upgrades they have been making to the hatchery.

2019 Watershed Tour







Source Water Protection Presentations

CRWP staff gave a number of presentations this year regarding how the Clackamas River Water Providers operate and function, and the source water protection and public outreach and education programs that we implement. *See <u>Appendix F.</u>*

Other Water Resource Activities

Stored Water Agreement with PGE

The CRWP continues to implement the Stored Water Agreement with PGE, providing us with the ability to call for water to be release from Timothy Lake at certain times of year for municipal water use.

Water Resource Related Committees

The Water Resource Manager continues to represent the interests of the CRWP on a number of different water resource related committees. These include: the Oregon Water Utilities Council, Clackamas County Local Emergency Planning Committee, the Clackamas Stewardship Partners, the Clackamas Partnership, Clackamas Technical Basin Workgroup, EcoBiz Pollution Prevention Outreach Team, the Drinking Water Source Protection Group, the PNWS-AWWA Water Resource Committee, and the American Water Works Association Source Water Protection Committee.

Public Outreach & Education Program

This program provides public outreach and education, as well as conservation services and programs to CRWP members. Some of the activities described below are not provided for the City of Lake Oswego or the City of Tigard. The primary focus of the program is on education and outreach efforts to the public regarding source water protection and watershed issues, drinking water treatment and distribution, indoor and outdoor water use, and water conservation. This allows us to provide a holistic view of how our water resources are connected and why it is important to protect and conserve the water we get from the Clackamas River. There are a number of individual programs or components that provide awareness, information, motivation and action for our customers. The following is a summary of what the public outreach and education program accomplished this past year.

Youth Education, Presentations, and Assembly Programs

The CRWP youth education program is an integral part of our outreach and education efforts. The goal of this program is to educate students about the Clackamas River watershed, the process for treating and distributing public drinking water, and water conservation issues so they develop overall awareness and water changing behaviors. The secondary goal is for students to take this information back to their parents.

The CRWP programs are offered at no cost to the schools and range from classroom presentations done by staff, assembly programs performed by contractors, as well as education resources for teachers. A total of 46 classroom presentations, assembly programs, and treatment plant tours were provided to approximately 3,368 students between July 1, 2019 and March of 2020 (these numbers do not include the Children's Clean Water Festival and the CCWET Celebrating Water Event). Due to COVID 19 and the remainder of the school being canceled, 5 scheduled stage shows were canceled.

See <u>Appendix G</u> for a list of CRWP schools. See <u>Appendix H</u> for a breakout by CRWP member of where these programs were completed.

Treatment Plant Tours

The Public Outreach & Education Program coordinates water treatment plant tours for the general public and CRWP member area schools. This year six tours of the South Fork Water Board drinking water treatment plant were given to 4th and 5th grade students from Bolton Primary located in the city of West Linn.

Mini Water Education Grants for Teachers

The youth education program offers Mini Water Education Grants to teachers. These grants of up to \$250 are intended to provide supplemental funding for water related projects or field trips to encourage water education in the schools. We processed 9 grants for 33 teachers this past year. *See <u>Appendix I</u>* for more detailed information.

Water Conservation Calendar

The Annual Water Calendar is a collaborative project with CRWP grade schools where local students participate in a coloring contest with a water education theme. The theme for the 2021 Calendar was "Healthy River, Happy Fish, Happy People". Because of the OCVID-19 pandemic and students being taught from home submitting pictures for the calendar posed some challenges. This year 19 classes from 10 different schools participated in the contest with approximately 200 entries.



Thirteen pictures were chosen from all the entries submitted and were posted on the CRWP website for one week (May 25th – June 1st,) so students, their teachers, families and friends, and the general public could vote for which one of the 13 pictures would be on the cover of the 2021 calendar. Each school that had at least one class participate in the contest will receive a box (125) of calendars to give out to family and friends or to use as fundraisers. Additional calendars are available to teachers, families, and the general public upon request. *See Appendix J* for a list of schools that participated in the project this year.

15th Annual Clackamas County Water Education Team (CCWET) Celebrating Water Festival

CRWP staff continues to Chair the CCWET. Made up of organizations working together on environmental, water and watershed related issues in Clackamas County. These community groups and local agencies promote programs and resources that included watersheds, water quality, water conservation, micro-watersheds, drinking water, salmon, enhancement, restoration and stewardship to help take care of our drinking water and our natural heritage of fish and wildlife in Clackamas County that depend on a healthy watershed.

While supporting each other's public education goals and efforts throughout the year the CCWET organizes an annual Celebrating Water event held at Clackamas Community College which host a day of water and environmental learning to approximately 500 4th and 5th grade students, their teachers, and chaperones from the Clackamas County area. The event includes an exhibit hall with more than 25 hands on exhibits, as well as 2 stage shows highlighting storyteller Will Hornyak, and Recycleman and The Dumpster Divers providing water and environmental education to the event attendees.

Because of the COVID-19 pandemic and the Stay Home, Stay Safe initiative, for the first time in event history the 2020 Celebrating Water Festival was canceled in order to ensure the health and safety of all who are involved in organizing and presenting the festival, the students, their teachers, and chaperones who would have attended the event.

27th Annual Clean Water Festival

CRWP staff is an active member of the Children's Clean Water Festival organization committee. The Children's Clean Water Festival is a free, day-long environmental education event engaging over 1,400 fourth-grade students from throughout the Portland, Oregon metro area. Each year, students come to a college campus for a day of learning and fun that includes more than 40 hands-on, water-focused activities, classroom presentations, and stage shows that reinforce STEM, Common Core, and Next Generation Science concepts. Because of the COVID-19 pandemic and the Stay Home, Stay Safe initiative, for the first time in festival history the 2020 Children's Clean Water Festival was also canceled in order to ensure the health and safety of all who are involved in organizing and presenting the festival, the students, their teachers, and chaperones who would have attended the one-day event.

Support of Clackamas County Sustainability Outreach to Businesses

The CRWP continues to partner with Clackamas County to support the Sustainability and Solid Waste Business Outreach Team by providing the County with bathroom/kitchen faucet aerators, industrial pre-rinse spray nozzles, and a number of water conservation

brochures to help business owners within the CRWP service areas learn how to be more efficient with their water and earn their "Leaders in Sustainability" certification. This year the Sustainability & Solid Waste business outreach team provided assistance to over 1000 businesses throughout the county, 16 businesses became certified or recertified representing over 1,700 staff as a Leader in Sustainability getting recognized for their efforts in waste and toxics reduction, green purchasing, corporate social responsibility, energy and water conservation. Overall, the County's Sustainability and Solid Waste Business Outreach Team provided businesses in our service areas with 40 - 1.5 GPM kitchen faucet aerators, 25 - 1gpm bathroom faucet aerators, and 10 pre-rinse kitchen spray nozzles.

Clackamas Community College Horticultural Department Water Efficient Demonstration Garden Restoration and Maintenance and IA courses

This past year the CRWP continues to work with Clackamas Community College Horticultural Department in supporting the update of the Water Efficient Demonstration Garden located at CCC which was originally installed in 2003. The CRWP financial support this past year paid for new plants and contracted demolition needed for the new gardens to be put in place. All other man power needed for the garden update is being provided by the students. The garden rehabilitation will progress in sections as to be relevant to student learning and time of year.

The CRWP has also collaborated with the Horticultural Department and the City of Lake Oswego to bring 3 of the Irrigation Association's certification classes to the college. The first class, a one-day Irrigation System Install and Maintenance class was held April 13th. Twenty - four landscape professionals attended the 8-hour class. The 2-day Irrigation and Design class held in the fall of 2019 had 14 participants. The second Irrigation System Install and Maintenance class scheduled for the spring of 2020 was canceled due to COVID 19.

Water Efficient Mobile Garden

In 2014, the CRWP entered into a MOU with a number of other water resource organizations in Clackamas County for the maintenance and care of the mobile water efficient demonstration garden. The group continues to take the garden to various events throughout the spring and summer to educate the public about native and water efficient gardening. This year the mobile garden visited the Stafford Family Festival in September of 2019. Because of the COVID-19 pandemic and the Stay Home, Stay Safe initiative, the garden did not visit the following annual public events: the Clackamas Lavender Festival, the Clackamas Master Gardner's Spring Plant Sale, the Clackamas County Fair, and various farmers markets within our collective areas.

Community Events

CRWP staff participated in a total of 7 community events within the CRWP service areas providing conservation, source water protection, drinking water information, and promotional items at these events. This gave staff the opportunity to engage in one on one conversation about water conservation and watershed issues with our customers. Because of the COVID-19 pandemic and the Stay Home, Stay Safe initiative the following public events were canceled: The Estacada Earth Day Event, The Home and Garden Event, and the City of Gladstone Public Works Event. *See Appendix K* for the list of events.

Adult Presentations

CRWP staff offer free presentations to adult audiences. These presentations give staff the opportunity to talk to members of our community as well as peers regarding the Clackamas River Water Providers group and how we operate, where our water comes from, how we treat the river water for public use and why watershed protection and water conservation are so important. The goal of this program is to continue outreach to neighborhood associations, CPO's, local garden groups, or other civic groups interested in learning about our drinking water. This year staff gave 6 adult presentations/interviews. *See Appendix L* for a detailed list.

Newsletters & Websites

CRWP staff continues to send CRWP public education and outreach member agencies articles and information throughout the year for their newsletters and websites. Topics ranged from general water conservation, indoor conservation, to outdoor conservation tips, watershed and water resource issues, emergency preparedness as well as resources that are available through the CRWP such as the rebate and landscape water audit programs. In addition, the CRWP has a quarterly E-newsletter that it distributes to CRWP customers, members and interested parties, as well as being posted on the CRWP website. *See Appendix M* for an example of our quarterly E newsletter.

Conservation Outreach Materials

The CRWP continues to develop outreach materials and use a number of promotional items with the CRWP logo and contact information on them such as shower timers, pencils, paper bags, indoor water audit kits and brochures. These were passed out to citizens at events, member offices and city halls, through the school programs, and mailed to customers upon request. This year the Teacher Flyer, CRWP Activity Book, and Rebate brochures were reprinted. Due to COVID all items materials are available upon request and/or are posted on the CRWP website where they can be downloaded. A more detailed description of new outreach pieces created this year are below.

Clackamas River Watershed Display Model

In late 2018 the CRWP was awarded a \$15,000 SRF Drinking Water Source Protection grant to create a 3-D topographical display map of the Clackamas River Watershed and the areas which receive the Clackamas River water as a drinking water source. The purpose of the grant was to create a portable, interactive, and place-based model that the CRWP can use for public outreach and education efforts around where our drinking water comes from, and the importance of protecting our drinking water source. In addition to using the grant funding to design and produce a watershed display model for public outreach, in late 2019 the following CRWP member offices and treatment plants received a framed and mounted copy of the model for display: City of Estacada, City of Gladstone, City of Oregon City, City of Tigard, City of West Linn, Clackamas River Water, Lake Oswego Tigard Partnership, North Clackamas County Water Commission, Oak Lodge Water Services, South Fork Water Board, and Sunrise Water Authority.

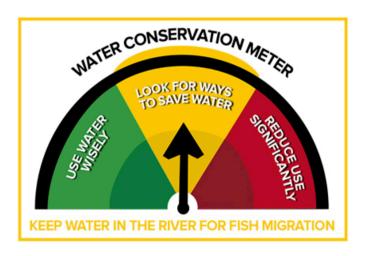
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Picture of Clackamas River Watershed Display 3-D Model

Fish on the Run, Irrigation Done. Summer Watering Campaign

This was the second year of the CRWP summer *Fish on the Run. Irrigation Done!* watering campaign created to encourage CRWP member customers to reduce outdoor water use starting in mid-August and to discontinue outdoor water use by mid-September so that we can leave more water in the river for the fall Chinook and Coho fish migrations. The campaign included webpages created for the CRWP website specific to this campaign that provide customers with more information, conservation articles, audio PSAs, as well as the ability to take the Fish on the Run pledge online. Seven customers filled out the pledge and received yard signs. Signs were also delivered to CRWP member organization to post in their city parks.

In an effort to enhance the campaign the CRPW added a new River Level/Conservation Meter component. The new meter is a visual meter either RED, YELLOW, or GREEN is evaluated weekly throughout the late summer and notifies us the severity of the river conditions and how much we should be conserving. Customers are encouraged to visit our website and the Fish on Run webpage for specific conservation information, tips, and actions when the meter is at stage Orange or Red.



In addition to the webpage and outreach materials the CRWP worked with Pamplin Media Group to place a press release, digital ads and print ads in the following CRWP member area newspapers: Clackamas, Estacada, Lake Oswego, Oregon City, Tigard, and West Linn.

The intent is that this campaign will run from August to October each year. $\underline{See\ Appendix}\ N$ for more details.

NEW Flume Smart Water Monitoring Device Pilot Program

During the 2019-20 fiscal year the Clackamas River Water Providers began working with FLUME to offer a pilot \$100 rebate to eligible CRWP customers if they purchase a new Flume Smart Water Monitor device. Flume is a first-of-its-kind, easily installed household device that puts the power of water monitoring into the hands of homeowners. The Flume device detects small leaks before they cost money and cause damage, allows customers to receive push notifications on suspicious water activities, set water usage goals and water budgets, and gain real-time information on household water consumption. To provide customers with more information on the new Flume pilot rebate program the CRWP developed a brochure and a new webpage. *See Appendix O* for more details and a copy of the Flume brochure and webpage.

Technical and Financial Assistance Programs

Water Efficient Landscape Audit Program

In May of 2017 the CRWP kicked of a Residential Landscape Water Audit program for CRWP members who support the Outreach and Public Education program. The CRWP contracted with a landscape and irrigation professional to perform the audits. The Audits consist of a complete onsite overview of the customer's landscape starting with the location of the customer's meter, checking for leaks, an inspection of the customer's irrigation system, and a full walk through of the customer's yard, garden, and lawn areas.

The customers are invited to use this time with the Auditor to answer any questions and address any landscape and watering concerns they might have. When the onsite audit is complete the customer receives a full written report with water efficient recommendations. The program is marketed through the distribution of a brochure at CRWP member's offices, at summer events, as well as through the CRWP website. Twenty-six customers took advantage of the audits this year. *See Appendix P* for more details and a copy of the brochure.

Water Conservation Rebate Program

The CRWP public outreach and education program completed its tenth year of administering the Water Conservation Rebate Program. This year the program processed more rebates in three months than in a normal year and ran out of money in October of 2019. A total of 218 rebate applications were processed with a total 242 rebates this past year. The Program offers a range of rebates for toilets, clothes washers, smart irrigation controllers, hose bib timers and/or irrigation rain switch, and irrigation spray nozzles. The program is marketed through the distribution of a brochure at CRWP member's offices, and at local Home Depots and Lowes, and to the public at summer events as well as through the CRWP website. *See Appendix Q* for details.

Other Public Education and Outreach Activities

Conservation Related Committees

CRWP staff continues to attend meetings and represent the CRWP interests on a number of different public outreach and conservation related committees. These include the Regional Water Provider's Consortium Conservation and Communicators Network Committees, the Children's Clean Water Festival Planning Committee, Chair of the Clackamas County Water Education Team (CCWET), a member of the Clackamas Sustainability Cooperative, and a member of the PNWS-AWWA Conservation Committee, and Chair of the Northwest Oregon subsection Waterworks School organization committee.

Appendix A - EcoBiz Chinook Book Ads





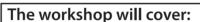
Appendix B - Septic System Workshop

FREE Septic System Workshop

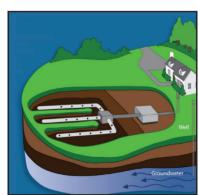
Learn how to Check it, Fix it, Maintain it!

Thursday, November 14, 2019 6:00 - 8:00 pm **Boring-Damascus Grange**

27861 SE Grange Street in Boring, Oregon



- how septic systems work
- operation and maintenance
- signs of failure, codes, and permits
- financial and technical assistance
- also includes free well water nitrate screening



Save the Date!

Class size is limited, so registration is required.

To register: contact Tami at Clackamas Soil and Water Conservation District (503) 210-6000 or tguttridge@conservationdistrict.org

Sponsored by: Clackamas River Water Providers, Clackamas Soil and Water Conservation District, Clackamas County, and Oregon Department of Environmental Quality

Appendix C - Down the River Clean Up



Appendix D - Pesticide Reduction with CSWCD Pesticide Collection Event

FREE Agriculture Pesticide Collection Event Saturday, October 26, 2019 in Clackamas Oregon by appointment only

- **Free** disposal of old restricted pesticides or other unusable pesticides
- Anonymous collection event
- Triple-rinsed or pressure-washed plastic pesticide containers collected FREE - no registration needed for empty containers
- Must pre-register for appointment to drop off pesticide

Pre-register: Contact Charles Lamb of Clean Harbor Environmental Services at 971-202-3825 or lamb.charlesT@cleanharbors.com by October 17.

After October 17 call Clean Harbors to see if room is available!

Registration forms and more information available at www.clackamasproviders.org or www.conservationdistrict.org

Limited funding! So register early!

Sponsored <u>by:</u> Clackamas River Water Providers, Clackamas Soil and Water Conservation District, Oregon Department of Environmental Quality, and Oregon Department of Agriculture

Appendix D -Stop the Drift webpage



PESTICIDE DRIFT REDUCTION PRACTICES

Low levels of pesticides continue to be detected in the Clackamas River and its tributaries. This is due to the uses of these chemicals in the urban, right of ways, and agricultural areas. Pesticide drift is one of the contributing factors to these detections. Pesticide drift is the movement of pesticide dust or droplets through the air to any site other than the area intended to be treated. Learn how you can better manage pesticide drift while improving your bottom line and reducing pesticides in our streams and rivers.

These activities will provide benefits to your bottom line and reduce the potential for airborne chemical drift. It is a win-win-win situation for you, wildlife, and the 300,000+ people who get their drinking water from the Clackamas River.

HEDGEROWS

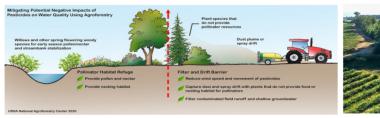


Illustration by: Gary Bentrup, USDA National Agroforestry Center

In addition to acting as low maintenance fencing once established, hedgerows can also be designed to filter pesticide drift. Attaining the correct porosity for proper filtration is key to a successful installation.

WINDSOCKS

Wind speed is an important weather factor influencing the movement of pesticides through drift. Use tools such as windsocks to monitor wind speed while you are applying pesticides. This practice will ensure that wind does not blow pesticides out of the treatment area, wasting chemicals, money, and time. Calibrated windsocks indicate wind speed from 2 to 12 miles per hour and can help agricultural producers make good decisions in the field to avoid losing chemicals to drift from wind. It is recommended to spray at wind speeds between 2-9 miles per hour. Never spray when wind speed is greater than 9 miles per hour.



Learn More:

https://conservationdistrict.org/2014/windsocks-help-reduce-pesticide-drift.html?highlight=windsocks

 $\underline{\text{https://www.clackamasproviders.org/wp-content/uploads/2014/05/Windsock-handout.pdf}}$



(EFFICIENT) SPRAYERS

Improving the efficiency of your sprayer provides benefits to your operation AND reduces the chance of pesticides leaving your fields. Better application of the chemical makes it more effective in correcting the problem, saving time, money, and labor. There are many ways to improve the efficiency of your sprayer. For instance, choosing the correct nozzle for the type of application can avoid over or under application of chemicals. While nozzles seem like a very small part of your sprayer they are very important and worth the time and money it takes for proper selection and replacement.

Calibration is also vitally important to make sure your sprayer is applying chemicals as effectively and efficiently as possible. Please also remember to time your applications when rain is not predicted for the next 24 hours.

One last option is the opportunity to retrofit your current air blast sprayer to be an intelligent sprayer. After many years of research and field testing, the intelligent sprayer technology is available. Research confirms up to 87% less airborne drift and 40-87% reduction in spray loss beyond tree canopies.

Appendix E - Pesticide Reduction Outreach Program with CRBC Pesticide flyers updated









Pesticides can contaminate the environment including

air, ground and surface water. Many natural enemies of pests are killed by pesticides, and pests can become resistant to pesticides, increasing control costs, crop losses or other pest damage. Integrated Pest Management reduces hazards by reducing overall pesticide use.

noil | P.O. Box 1869 | Clackamas, OR 97015 | 503.303.4372 | info@clackamasriver.org | www.clacka

Pesticide Application

Some pesticides are highly regulated in Oregon. If you are applying pesticides, be aware of

Do I need an applicators license?

- Do I need an applicator's license?

 When licensing is needed:

 When applying pesticides, other than Restricted Use
 Pesticides (RUPs), to properly owned by you or your
 employer

 Applications of general use pesticides by public
 employees with non-powered equipment, except
 on school properties

 Advising others on general use pesticides

 Applying pesticides as a part of landscape
 maintenance under specific conditions

 When licensing is needed:

 Buying, applying, or supervising the use of

 Restricted Use Pesticides (BVP) (Restricted Use
 Pesticides are not available to the general public)

 Advising others on the use of RUPs

 Applying pesticides as a part of landscape
 maintenance under specific conditions

 Applying pesticides as a part of landscape
 maintenance under specific conditions
- employees with non-powered equipment, on school properties Advising others on general use pesticides Applying pesticides as a part of landscape maintenance under specific conditions

WARNING

What are Restricted Use Pesticides?

Certain pesticides have been identified to have the potential to cause adverse effects to the environment and injury to applicat or bystanders. The "Restricted Use" classification restricts a product to use by a certified applicator or someone under the certified applicator's direct supervision.

Protect yourself and the environment:

Applicators should be trained before they apply any chemicals and use personal protective equipment while making applications with Restricted Use Pesticides, as specified on the label; even during warm Labels provide key information on product use

Always read the labels before using pesticides.
Make sure you know how, when and where to use a particular product. Labels point out risks, how to prevent problems and requirements for use. Following the instructions is required by state and federal law... The **Directions for Use** include specific information on how much pesticide should be mixed and applied, and where it may be used.



Signal Word Directions for Use Precautions First Aid Safety & Storage

as River Basin Council | P.O. Box 1869 | Clackamas, OR 97015 | 503.303.4372 | info@c

Integrated Pest Management

Pesticides carried by stormwater runoff, wind and irrigation can contaminate streams and drinking water. Reduce pesticide use by practicing Integrated Pest Managemer

Prevent pests:

Prevent Descs.

Plant native tree and shubs that are adapted to the local climate and are more resistant to pests and disease. Improve soil before planting to give young plants a healthy start. Plant a variety of plants to ensure blooming from spring to fall to attract beneficial insects. Much plants or plant speading native groundcovers to reduce weeds. Water only as needed.









Mechanical Controls:

Some weeds and pests can be controlled by using tools for weeding, hoeing and raking. In addition, pests can be managed through mowing, or by aerating or tilling the soil. Use methods that minimize soil disturbance and erosion.

Biological Controls:

Biopesticides are naturally occurring chemicals, microber or plant-produced chemicals that flight pests. Many are regulated by the EPA, so be sure to follow label instructions. Predatory insects like lady bugs or preying namises will control populations. Phenomone traps can be used to help monitor and control insect infestations.





Resources:

Clackamas River Water Providers

www.ciackamasproviders.org
Clackamas Soil and Water Conservation District

National Pesticide Information Center www.npic.orst.edu EPA Agriculture Management for Water Quality Module https://cfpub.epa.gov/watertrain/pdf/modules/Agriculture.pdf

US Department of Agriculture
Clackamas River Basin Council | P.O. Box 1869 | Clackamas, OR 97015 | 503.303.4372 | info@clackamasriver.org | www.clack

www.nrcs.usda.gov
Oregon Department of Agriculture
www.oregon.gow/ODA/programs/Pesticides
Clackamas Basin Pesticide Stewardship Partnership
www.conservationdistrict.or/programs/

Parting with Pesticides is a joint program funded by Clackamas River Water Providers with outreach and

programming through Clackamas River Basin Council.



Pesticide Application

Pesticides carried by stormwater runoff, wind and irrigation can contaminate the Clackamas River and it's tributaries, a drinking water source for 360,000 people.

What's in the river?

A 2013 study of Clackamas streams published in the journal Environmental Monitoring and Assessment, detected 33 pesticides, including insecticides, fungicides and herbicides. Nearly all streams tested

Aquatic ecosystems contaminated by insecticides threaten the health of aquatic insects and fish an contained at least one pesticide at levels exceeding benchmarks set to protect fish and invertebrates. Two can be difficult or impossible to remove.

How pesticides get into our water:

- Pesticides may enter waterways through when they are applied near surface wate

- when they are applied near surtace water.

 2. Pesticides applied just before or during rair storms can wash into waterways.

 3. Pesticides can drift when sprayed in warm or windy conditions, and can contaminate adjacent land and streams.
- Groundwater can be contaminated when pesticides are carried through soil by rain or irrigation water.



How you can help:

and properly calibrated?

Read the instructions — when possible, use pesticides that are approved for the specific pest, plant or area, rather than broad spectrum pesticides. Mix only the amount needed for your job.

Check the weather — rain can wash pesticides away before they have a chance to act. Wind or warm temperatures can cause sprayed pesticides to drift onto non-target plants.

Research new or existing products — when possible, select a product that has a lower toxicity products with oureach and programming through and programming through runoff, and lower potential to leach into groundwater.

Clackamas River Water Providers with oureach and programming through and programming through Clackamas River Basin Council.

Practice proper disposal — Follow label guideline or triple-rinsed empty containers prior to recycling. Do not dispose of lettover products by pouring ther down a sink, flushing down the toilet, or dumping down a storm drain.

Lackamas River Water Providers with outreach and programming through



nas River Basin Council | P.O. Box 1869 | Clackamas, OR 97015 | 503.303.4372 | info@cla

Tree Grower Tips

Oregon is the largest Christmas tree producer in the nation, and much of the Christmas tree industry is concentrated along the Clackamas River watershed, a drinking water source for over 360,000 Oregonians and a wild salmon stronghold.

Pesticide Use on Tree Farms:

Many tree growers apply herbicides, like Roundup, to control weeds. They apply insecticides, such as Lorsban, to kill damage causing aphids. Growers also use fungicides to control diseases. The Oregon Department of Environmental Quality has found man toxic pesticides at levels exceeding EPA benchmarks in the Clackamas watershed. At least two of these – chlorpyrifos and chlorothalonil – are used by growers.





Pesticides can cause health risks:



Fir and Spruce Trees Fine-texture loams and clay loam

Prevention and Monitoring:

To minimize use of pesticides, plant tree species well-suited for your specific site conditions, especially soil suited for your specific site conditions, especially soil type and drainage. Contact Oregon State University's Natural Resource Conservation Service Field Office or Clackamas Soil and Water Conservation District to find out what soil type you have and which trees might be most appropriate. Once planted, check your trees often for pests and disease. Catching an infestation early enables you to contain the problem quickly, keeping damage to a minimum.

Hedgerows and Buffers:

One of the best ways to keep pesticides out of waterways is to leave a vegetative buffer strip along the stream. Buffers help protect waterways from drifting pesticide spray and trap sediments, pesticides and pollutants carried by runoff. Buffers also minimize stream bank erosion by holding soil in place. For technical assistance with erosion control or prevention, contact the Clackamas Soil and Water Conservation District.



Tree Grower Tips

Pesticides carried by stormwater runoff, wind and irrigation can contaminate streams and the Clackamas River, threatening the health of aquatic life and the safety of drinking water.

Learn about pesticide best practices:

Agricultural producers such as Christmas tree growers are facing possible regulation if pesticide levels in streams are not reduced. Work with Clackamas River Basin Council, Clackamas Soil and Wate Conservation District and Oregon State University to create a plan for the Clackamas Watershed to voluntarily reduce or eliminate pesticides of concern; leaving growers free from excessive regulation and reporting requirements.





Integrated Pest Management:

Programs and information are available for growers who want to minimize environmental impacts by practicing integrated pest management. The Clackamas Basin Pesticide Stewardship Partnership offers many

resources.
IPM is not a single pest control method but a series of pest management evaluations, decisions and controls.
IPM plans describe potential pests and define the critical threshold for the pest to be dassified as a problem. Early detection can control pests before damage is severe.

Resources:

Clackamas River Basin Council www.clackamasriver.org/resident-re Clackamas River Water Providers www.clackamasproviders.org Clackamas Soil and Water Conservation District Metro/Grow Smart, Grow Safe www.growsmartgrowsafe.org OSU Extension Christmas Tree Program North Willamette Research and Extension Center www.extension.oregonstate.edu/nwrec/christmas-trees offers the Pacific Northwest Weed Management Handt

Parting with Pesticides is a joint program funded by Clackamas River Water Providers with outreach and

Clackan programming through
Clackanas River Basin Council.

Oregon Department of Agriculture www.oregon.gow/ODA/programs/Pesticides Clackamas Basin Pesticide Stewardship Partnership www.conservationdistrict.org/programs

Clackamas River Basin Council | P.O. Box 1869 | Clackamas, OR 97015 | 503.303.4372 | info@clackamasriver.org | www.clackar

Nursery Grower Tips

Clackamas is among the top three nursery growing counties in Oregon. Many nurseries are located within the Clackamas River Watershed, a drinking water source for over 360,000 Oregonians and a spawning and rearing area for threatened and endangered salmon species.

Integrated Pest Management (IPM):

Programs and information are available for nursery growers who want to minimize environmental impacts by practicing integrated pest management. Oregon State University offers many resources.

State University oriest many resources. IPM is not a single pest control method but a series of pest management evaluations, decisions and controls. IPM plans describe potential pests and define the critical threshold for the pest to be classified as a problem. Early detection of pest problems often results in pest control before damage is severe.



Pest scouting and diagnosis:







Build a history of pest emergen

Scouting for and identifying insects, weeds and diseases is critical in preventing or managing infestations in nurseries. Insects may pose a threat only during certain stages of their development. Weather and growing degree days can provide information on when pests might harm plants. Permanent records of scouting and monitoring will allow growers to begin building patterns of pest behavior at the nursery that could be used to prevent or reduce pest populations in the future.

Hedgerows and buffers:

Heagerows and butters:
One of the best ways to keep pesticides out of waterways is to leave a vegetative buffer strip along the stream. Buffers protect waterways from drifting pesticide spray and trap sediments, pesticides and pollutants carriers also minimize stream bank erosion by holding soil in place. For technical assistance with erosion control or prevention, contact the Clackamas Soil and Water Conservation District at www.conservationdistrict.org.



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Nursery Grower Tips

Pesticides carried by stormwater runoff, wind and irrigation can contaminate streams and the Clackamas River, threatening the health of aquatic life and the safety of drinking water

Water management best practices:

- Plan facilities to separate and disinfect irrigation or wash water so that the water can be reused.
- Construct greenhouse foundations and floors to permit recovery of leached irrigation water.
- Water management best practices:

 Nursey operations offer great potential for water conservation and pesticide management. Best practices include:

 Locate storage facilities for fertilizer, or pesticides away from any watercourse.

 Plan facilities to separate and disnfect irrigation or





Be part of the solution:

Agricultural producers, such as nursery growers, face possible regulation. Work with Clackamas River Basin Council, Clackamas Soil and Water Conservation District and Oregon State University to create a plan for the Clackamas Watershed to volunarily reduce or eliminate pesticide concerns. This partnership, including local growers, is developing solutions focused on local issues. By implementing these solutions growers can reduce or avoid regulation and reporting requirements.

Resources:

Agricultural Plastic Waste Recycling www.agriplasinc.com Clackamas River Basin Council www.clackamasriver.org/resident-Clackamas River Water Providers www.clackamasproviders.org Clackamas Soil and Water Conservation District www.conservationdistrict.org

Clackamas County Master Gardeners www.clackamascountymastergardeners. National Pesticide Information Cente www.npic.orst.edu

OSU Extension www.extension.oregonstate.edu/clackamas

Oregon Department of Agriculture www.oregon.gow/ODA/programs/Pesticides Clackamas Basin Pesticide Stewardship Partnership www.corsevationdistrict.org/programs/pesticide-stewar

is a joint program funded by Clackamas River Water Providers with outreach and programming through Clackamas River Basin Council.



s River Basin Council | P.O. Box 1869 | Clackamas, OR 97015 | 503.303.4372 | info@clackamasriver.org | www.c

Appendix F – Source Water Protection Presentations

| Date | Presentation | Organization |
|---------------|--|---|
| August 2019 | Spill Response – Protecting our Drinking Water | CFD#1 Operations Group |
| October 2019 | Water Providers Working with Emergency Management Agencies to Protect Drinking Water | Oregon Emergency Management Association Annual Conference |
| October 2019 | Resilient Water Resource Governance in the Pacific NW; Clackamas Watershed Resilience Project | NW Climate Conference |
| October 2019 | Clackamas Watershed Resilience Project | PSU School of Environment Speaker Series |
| November 2019 | CRWP overview and update | City of Estacada City Council |
| December 2019 | CRWP overview and update | Oak Lodge Water Service Board Meeting |
| April 2020 | Pesticides and Drinking Water | Pesticide Strategic Planning Advisory Council |

Appendix G - CRWP Schools

There are 52 schools from 4 different school districts in the Clackamas River Water Providers combined service area that were offered CRWP youth education programs. Below is a list of these schools.

City of Estacada Schools

- Clackamas River Elementary
- River Mill Elementary
- Estacada Jr. High School
- Estacada High School

City of Gladstone Schools

- John Wetten Elementary
- Kraxberger Middle School
- Gladstone High school

Clackamas River Water Schools

- Beaver Creek Elementary
- Bilquist Elementary
- Redland Elementary
- Lot Whitcomb Elementary
- Linwood Elementary
- Sojourner School
- Cascade Heights Public Charter School
- Alder Creek Middle School
- Ogden Middle School
- La Salle High School
- Sabin Schellenberg Professional Technical Center

Oak Lodge Water Services Schools

- Candy Lane Elementary
- Jennings Lodge Elementary
- Oak Grove Elementary
- Riverside Elementary
- View Acres Elementary
- Rex Putnam High School

South Fork - Oregon City Schools

- Gaffney Lane Elementary
- Holcomb Elementary

- John McLoughlin Elementary
- Gardiner Middle School
- Oregon City High School
- Spring Water Environmental Sciences School
- Alliance Charter Academy

South Fork - West Linn Schools

- Bolton Primary
- Cedaroak Park Primary
- Sunset Primary
- Trillium Creek Primary
- Willamette Primary
- Rosemount Ridge Middle School
- West Linn High School
- 3 River Charter School

Sunrise Water Authority Schools

- Beatrice Morrow Cannady
- Elementary
- Deep Creek Damascus K-8
- Happy Valley Elementary
- Mt. Scott Elementary
- Oregon Trail Elementary
- Spring Mountain Elementary
- Sunnyside Elementary
- Verne Duncan Elementary
- Lewis and Clark Montessori Public Charter School
- Scouters Mountain Middle School
- Rock Creek Middle School
- Happy Valley Middle School
- Damascus Middle School
- Clackamas High School

Appendix H - Youth Education Program & Presentation

A total of 60 classroom presentations and assembly programs were completed between July of 2019 and March of 2020. Below is a breakdown of where these programs and presentations were completed.

Clackamas River Water

Total # presentations = 6

Oak Lodge Water Services

Total # presentations = 6

South Fork Water Board

Oregon City = 3 West Linn = 26

Sunrise Water Authority

Total # presentations = 5

The table below does not reflect the number of total presentations.

| Date | School | Program | # Students | Service Area |
|-----------|---------------------------|----------------------------------|------------|--------------|
| 7/11/2019 | West Linn Summer Camps | So You Want to Be a Salmon | 38 | SF WL |
| 7/11/2019 | West Linn Summer Camps | Water Cycle Play | 18 | SF WL |
| 7/19/2019 | Lot Whitcombe Elem. | Mad Science - Where's the Water? | 300 | CRW |
| 8/7/2019 | West Linn Summer Camps | Mad Science - What do you know? | 50 | SF WL |
| 8/16/2019 | West Linn Summer Camps | Mad Science - Where's the Water? | 50 | SF WL |
| 11/1/2019 | Redland Elem | Mad Science - What do you know? | 200 | CRW |
| 11/5/2019 | Sojourner School | Mad Science -Where's the Water? | 150 | CRW |

| 11/13/2019 | J Mcloughlin | Mad Science - What do you Know? | 95 | SF OC |
|------------|---|------------------------------------|-----|------------|
| 11/14/2019 | Spring Mt. Elem | Incredible Journey | 90 | Sunrise HV |
| 11/25/2019 | Trillium Primary (Camp Fire) | Mad Science - Where's the Water? | 60 | SF WL |
| 11/26/2019 | Trillium Primary (Camp Fire) | Mad science - What do you know? | 60 | SF WL |
| 12/3/2019 | Bilquist Elem | So You Want to Be a Salmon? | 90 | CRW |
| 12/12/2019 | Bolton Primary | Mad Science - Where's the Water? | 50 | SF WL |
| 12/13/2019 | Bolton Primary | So You Want to Be a Salmon? | 90 | SF WL |
| 12/23/2019 | Bolton Primary | Mad Science - Where's the Water? | 50 | SF WL |
| 1/17/2020 | Bolton Primary | Mad science - What do you know? | 75 | SF WL |
| 1/23/2020 | Spring Water | Will Hornyak | 250 | SF OC |
| 1/24/2020 | Bolton Primary | Treatment Plant Tour | 32 | SF WL |
| 1/27/2020 | Oregon Trail after school program | Nonpoint Source | 15 | Sunrise HV |
| 1/28/2020 | Oregon Trail after school program | Nonpoint Source | 15 | Sunrise HV |
| 1/28/2020 | Oak Grove Elem | Source to Tap | 26 | OLWS |
| 1/29/2020 | Oak Grove Elem | Will Hornyak | 500 | OLWS |
| 1/31/2020 | Bolton Primary | Treatment Plant Tour | 32 | SF WL |
| 2/7/2020 | Bolton Primary | Treatment Plant Tour | 32 | SF WL |

| 2/10/2020 | Bolton Primary | Tap Water Tour | 75 | SF WL |
|-----------|-----------------------|----------------------|------|-------|
| 2/11/2020 | Bolton Primary | Tap Water Tour | 75 | SF WL |
| 2/12/2020 | Bolton Primary | Tap Water Tour | 75 | SF WL |
| 2/13/2020 | Bolton Primary | Treatment Plant Tour | 75 | SF WL |
| 2/21/2020 | Bolton Primary | Will Hornyak | 350 | SF WL |
| 3/3/2020 | View Acres | Will Hornyak | 350 | OLWS |
| | | | | |
| | | Total | 3368 | |

Appendix I - Mini Water Education Grants

9 grants for 33 teachers were issued to the following schools this past year.

Oak Lodge Water Services

Oak Grove Elementary

- (2) Kindergarten Teachers
- (1) 5th grade Teacher

View Acres Elementary

• (3) First grade Teachers

South Fork Water Board

Springwater Environmental Science School (Oregon City)

• (5) 3rd and 5th grade Teachers

Bolton Primary (West Linn)

• (19) Kindergarten – 5th grade Teachers

Willamette Primary (West Linn)

• (3) 5th grade Teachers

Appendix J -2021 CRWP Children's Calendar

10 schools and 19 classes participated in the 2020 CRWP Children's Calendar coloring contest. More than 200 pictures were submitted. The following is a breakdown of which CRWP members schools participated in the calendar project.

City of Estacada

Clackamas River Elementary

City of Gladstone

John Wetten Elementary

Oak Lodge Water Services

Candy Lane Elementary
Jennings Lodge Elementary

South Fork Water Board

Gaffney Lane Elementary (Oregon City)
John Mcloughlin Elementary (Oregon City)
Trillium Creek Elementary (West Linn)

Sunrise Water Authority

Mount Scott Elementary Oregon Trail Elementary (Happy Valley) Sunnyside Elementary (Happy Valley)

Appendix K- Community Events

CRWP staff participated in 7 Community Events throughout CRWP service areas between July 1, 2019 and March of 2020.

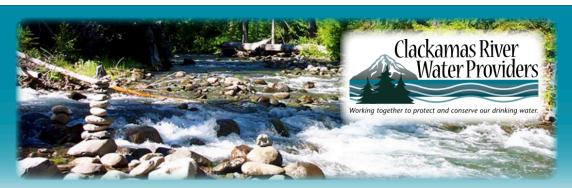
| Date | Event | Water Provider |
|-----------------------|------------------------------------|--|
| July 4, 2019 | Happy Valley 4th July Event | Sunrise Water Authority |
| July 21, 2019 | West Linn Old Time Fair | South Fork West Linn |
| August 13-17, 2019 | Clackamas County Fair | CRWP Members |
| August 24, 2019 | Oak Lodge Trolly Trail Event | Oak Lodge Water Services |
| September 14, 2019 | Stafford Family Festival | South Fork/West Linn |
| October 5, 2019 | CRWP Watershed Tour | CRWP Members |
| February 22, 2020 | RWPC Home & Outdoor Living Show | Regional Water Providers Consortium |

Appendix L – Adult Presentations

This year staff gave 6 adult presentations/interviews between July 1, 2019 and March of 2020.

| Date | Event | Water Provider |
|----------------------|--------------------------------------|--|
| July 10, 2019 | AM Northwest Live | Regional Water Providers Consortium |
| July 31, 2019 | KXL Radio Interview | Regional Water Providers Consortium |
| November 12, 2019 | Barclay Neighborhood Ass. | South Fork Water Board Oregon City |
| December 4, 2019 | Oregon Landscape Contractors Expo | Regional Water Providers Consortium |
| January 9, 2020 | Gaffney Lane Neighborhood Ass. | South Fork Water Board Oregon City |
| February 1, 2020 | Beavercreek Lions Club | Clackamas River Water |

Appendix M – Quarterly E Newsletter



WINTER 2020 News

Do You Know Where Your Main Water Shut-Off Is?

Despite all the best precautions this winter water pipes may still freeze. The faster you can shut off the water, the less damage you will accrue.

Knowing where your main shut off valve is can prevent costly water damage. If you can't access the shut off valve at the water meter, you'll need to find the main shut off valve for your house.

The valve is most likely where the water line enters the house. This could be in the basement, the crawl space, or



in the garage. It will look like a regular spigot valve or a single handled ball valve. If you have a broken pipe and need to stop the water while you wait for a plumber to arrive, turning this valve off shuts off all of the water to your home.

Make sure everyone in the house knows where the main shut off valve is located. For a quick response, identify the valve by tying a piece of colored yarn or a string to it and post your plumbers contact information in plain sight.

For more indoor/outdoor water conservation information and free conservation tools

www.clackamasproviders.org.

and devices call the Clackamas River Water Providers at **503-732-3511** or visit our website at:

What's Inside:

| Water Shut-Off | P1 |
|----------------------|----|
| Rebate Program | P1 |
| Water Systems | P2 |
| Winter Quiz | P2 |
| Pesticide Reduction | Р3 |
| Watershed Resiliency | Р3 |
| 'Faces' Interview | P4 |
| Water Audit Kit | P5 |
| Winter Water Tips | P6 |
| Partner Spotlight | P7 |

CRWP Rebate Program is Temporarily Out of Funds!

Due to an enthusiast response (we processed more rebates in three months than we usually do in a whole year) our rebate program is temporarily out of funds for the remainder of this fiscal year. The rebate program will resume when we have funds available July 1st of 2020.

The Clackamas River Water Providers encourages water conservation to promote wise water use because everyone depends on water. We all must use water efficiently or there may not be enough for drinking, irrigation, commercial uses, fish, and emergencies such as fire-fighting. The CRWP is

committed to providing our customers with the tools to do whatever they can for more efficient water use.

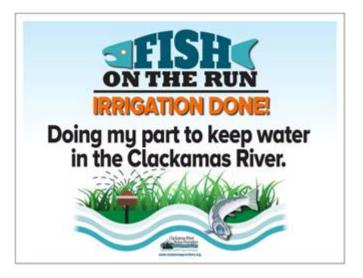
We offer six water use rebates up to \$385 in value. These rebates are available each fiscal year (July 1st – June 30th) on a first-come, first-served basis until the program funds have depleted.

Click <u>here</u> for CRWP members participating in our rebate program, rebate information, and eligibility requirements, or to find out other ways to save water.

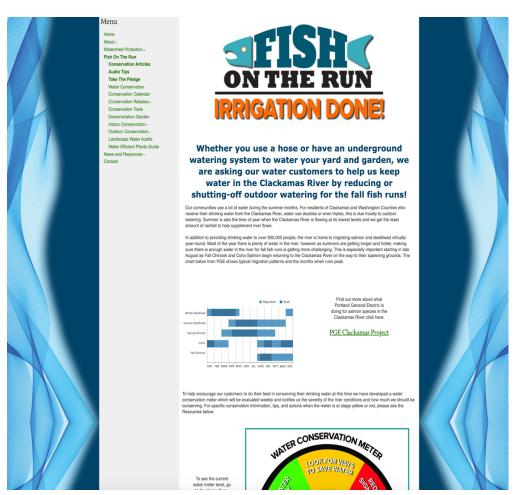
CHRISTINE HOLLENBECK, Public Education and Conservation Program Coordinator, (503) 723-3511 • christine@clackamasproviders.org
KIM SWAN, Water Resource Manager, (503) 723-3510 • kims@clackamasproviders.org

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Appendix N - Fish on the Run, Irrigation Done Campaign



Campaign Main webpage



Appendix O - NEW Flume Pilot Program

The Clackamas River Water Providers is a

Check it out!

The Clackamas River Water Providers is working with FLUME to pilot a rebate of \$100 to eligible CRWP customers if they purchase a new FLUME Smart Water Monitor device.

FLUME, a first-of-its-kind, easily installed household device that puts the power of water monitoring into the hands of homeowners.

- Detect small leaks before they cost money and
- Gain real-time information on your household water consumption.
- Set water usage goals and budgets for your household.
- Receive push notifications on suspicious water activities while you're away.

The FLUME Smart Water Monitor tracks your water use 24/7, alerting you to excessive water use and leaks. Take control of your property's water use and protect your home.



coalition of the municipal water providers that get their drinking water from the Clackamas River who are working together on water resource issues. The purpose of the organization is to fund

and coordinate efforts regarding source water protection, public outreach and education around watershed issues, drinking water, and water conservation. By preserving the Clackamas River as a high-quality drinking water source we are able to minimize future drinking water treatme costs, while being good stewards of the river.

For more information regarding individual CRWP members and their water service areas go to www.clackamasproviders.org and at the top of the page click on "About Us."



14275 S. Clackamas River Drive Oregon City, OR 97045

For more information: www.clackamasproviders.org E-mail: christine@clackamasproviders.org Phone: (503) 723-3511

Put water conservation in your own hands.

Use the FLUME Smart Home Water Monitor System and and receive a \$100 Rebate.



Protect Your Home Save Money. Gain Peace of Mind.

Smart technology sends cations straight to your pl





Keep track of everything right from your phone.

FLUME provides complete coverage by catching leaks inside of your home as well as in your lawn or garden. If FLUME senses a leak or unusually high water use, you'll be notified immediately via text, email or push notification anywhere you are

Control Your Water Use

FLUME gives you real-time access to your water usage. You can determine which activities (or kids!) are using the most water with instant data and take action to avoid excess use.

Manage Your Water Bill

Never be surprised by a high water bill again. FLUME lets you set daily, weekly or monthly budgets and notifies you as you approach your limit. You can also measure your use against like homes in the FLUME Family. Conserve water and save moneu

For more information about this device or where to buy one go to Amazon.com or to https://www.flumetech.com/



Rebate applicant must meet the following requirements:

You must receive water from one of the following Water Provider members:

- City of Estacada
- City of Gladstone
- Clackamas River Water Oak Lodge Water Services
- South Fork Water Board (Oregon City and West Linn)
- Sunrise Water Authority (Happy Valley and Damascus)
- 1) You must be a single-family residential customer or a small business (50 employees or less) which owns its own site and your account must be active and in good standing.
- **2)** The rebate application must be received within 3 months of the product purchase.
- 3) One Flume rebate, per account.
- 4) A copy or original of the dated sales receipt (or invoice) must be included with the rebate form. The brand/model purchased must match the item exactlu.
- 5) Rebate item must be installed at the property associated with your water account.
- 6) Rebates are available on a first-come, firstserved basis. The program will end when funds are depleted.
- **7)** Prior to approval, an on-site inspection may be required by CRWP.
- 8) In accepting this rebate you allow FLUME to share your water use data with your water provider and the CRWP in part to assist in determining potential water

To applu online go to: iders.org/

REBATE APPLICATION

Name: Installation Address: Street

City/State/Zip:_ Mailing Address (if different): Street

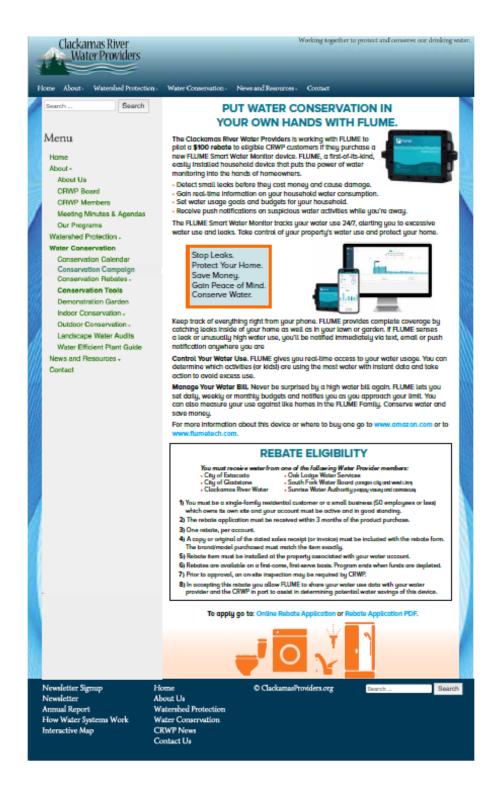
Day Phone: Email Address:

Water Account #:_

- Please Circle Your Water Provider: City of Estacada
 - City of Gladstone
- Oak Lodge Water Services South Fork Water Board (Oregon City and West Linn)
 - Sunrise Water Authority (Happy Valley and Damascus)

☐ I certify the information I have provided is true and correct, and I have purchased the goods for use at the location indicated. I grain permission to Clockmans River Whater Providers, with notification, to enter upon the property to imapect the instillation of refeating position to institute program requirements are met. I understand reducts are distributed on official positions. I and the contraction of the contraction of

Flume Website



Appendix P - Water Efficient Landscape Audit Program

Since July 2019 a total of 26 CRWP member customers participated in the Water Efficient Landscape Audit Program. Below is a breakdown of where the audits were performed.

Clackamas River Water

Number of audits = 17

Oak Lodge Water Services

Number of audits = 7

South Fork Water Board

Oregon City - Number of audits = 1

Sunrise Water Authority

Happy Valley - Number of audits = 1

Audit Brochure



The CRWP is now offering FREE
Residential Landscape Water
Audits to the following member's
service area: City of Estacada, City of
Gladstone, Oak Lodge Water Services,
and South Fork Water Board (Oregon
City and West Linn), and Sunrise Water
Authority (Happy Valley and Damascus).



Water use in our communities more than doubles during the summer months due to outdoor watering.

The Clackamas River Water
Providers is a coalition of the
municipal water providers that
get their drinking water from the
Clackamas River who are working
together on water resource issues.
The purpose of the organization is to
fund and coordinate efforts regarding
source water protection and public
outreach and education around
watershed issues, drinking water, and
water conservation. By preserving
the Clackamas River as a high quality
drinking water source we are able
to minimize future drinking water
treatment costs, while being good
stewards of the river.

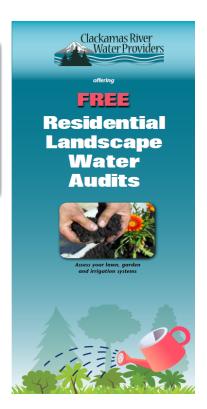


For more information about the CRWP, our watershed, and conservation programs visit our website:

www.clackamasproviders.org

Or contact us at:

Clackamas River Water Providers
14275 S Clackamas River Drive
Oregon City, Oregon 97045
christine@clackamasproviders.org
(503) 723-3511



A Landscape Water Audit...

Is an assessment of your lawn, garden areas, irrigation system and more.

Our landscape auditor will assess your lawn and garden areas, irrigation system and more. Upon completion of the audit you will be provided written recommendations to help you manage your outdoor water use for a more water efficient landscape and irrigation system.

RESIDENTIAL AUDITS

will begin in May and be performed during the spring and summer months only (during the watering season).

The audits will be approximately 1.5 hours long. Please be available to walk through the audit process with the Audit Specialist.

Interested customers can contact the CRWP at 503-723-3511 or email christine@clackamasproviders.org to schedule an audit.

Audits are booked on a first come first serve basis. Audits will be performed at each site one time only.

AUDIT

Landscape water audits will include but are not limited to:

- A walk through the yard and garden area including all lawn areas.
- Making note of soil types, plant material, naturally available water, and sun exposure.
- Locating the water meter, noting any existing leaks from the meter throughout the irrigation system.
- Making note of existing backflow protection; type, size, make and model number.
- Locating the irrigation system controller, making note
 of the make/model as well as the current schedule.
 Each zone will be ran separately, recording gallons per
 minute used for each zone.



When the audit is complete, all recommendations will be recorded. This includes irrigation controller schedule adjustments, irrigation head adjustments/replacements, maintenance of existing plant material, and the addition of soil amendments to reduce weeds, promote soil moisture, and reduce the use of fertilizers.



Appendix Q - Conservation Rebate Program

A total of 218 rebate applications were processed this year with a total of 242 rebates.

City of Gladstone

Total Rebate Applications = 8 Total Rebates = 8 Irrigation Controllers = 3 Clothes Washer = 4 Toilets = 1

Oak Lodge Water Services

Total Rebate Applications = 31
Total Rebates = 37
Toilets = 13
Clothes Washers = 13
Irrigation Controllers = 7 Hose Timer = 1
Spray Nozzles = 3

Clackamas River Water

Total Rebate Applications = 44
Total Rebates = 47
Toilets = 19
Clothes Washers = 13
Irrigation Controllers = 12
Spray Nozzles = 2
Hose Timer = 1

City of Estacada

Total Rebate Applications = 3 Total Rebates = 4 Toilets = 1 Clothes Washer = 3

South Fork Water Board

Total Rebate Applications = 78

Total Rebates = 87

Oregon City = 28

Toilet rebates = 6

Irrigation. Controllers = 11

Spray Nozzles = 2

Clothes Washer = 9

West Linn = 59

Toilet rebates = 10 Clothes

Washer = 12

Irrigation Controllers = 31

Rain Sensor = 3

Spray Nozzles = 2

Hose Timer = 1

Sunrise Water Authority

Total Rebate Applications = 56

Total Rebates = 59

Damascus = 8

Toilet rebates = 2

Clothes Washer = 1 Irrigation

Controllers = 4

Hose Timer =1

Happy Valley = 51

Toilet Rebates = 18

Clothes Washer = 13

Irrigation Controllers = 20

Rebate Brochure



The Clackamas River
Water Providers
(CRWP) are a coalition
of the municipal water
providers on the
Clackamas River that are
working together on water
resource Issues. The purpose of
the organization is to collectively
fund and coordinate efforts
regarding water resource
planning and management,
water conservation and the
development of the Clackamas
River on a sustainable basis.
For more information regarding
Individual CRWP members and
their water service areas go to
www.clackamasproviders.org and
at the top of the page click on
"About Us"

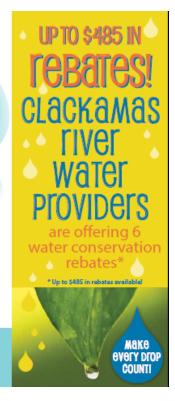


Norking Together to Protect and Conserve our Drinking Wate

14275 S. Clackamas River Drive Oregon City, OR 97045

For More Information

www.clackamasproviders.org E-mail: Christine@clackamasproviders.org Phone: (503) 723-3511



rebate eligibility requirements

Applicant must meet the following criteria

You must receive water from one of the following water provider members:

City of Estacada City of Gladstone Oak Lodge Water Services South Fork Water Board (Oregon City and West Linn) Sunrise Water Authority (Happy Valley and Damascus) Clackamas River Water

- You must be a single-family residential customer or a small business (50 employees or less) which owns its own site and your account must be active and in good standing.
- The application must be received within 3 months of purchase.
- One rebate each, per account, per fiscal year (July 1–June 30).
- A copy or original of the dated sales receipt (or invoice) that specifies the brand/model must be included with the rebate form. The brand/model purchased must match the item exactly.
- The high efficiency toillet and weatherbased controller you purchase must be EPA WaterSense* labled. For a complete list of eligible products, visit: http:// www.epa.gov/watersense/product_ search.html
- For tollet rebates, the tollet brand/ model must match the eligible model list exactly. Tank and bowl numbers cannot be mixed and matched from different models.

- Receive an additional \$15 for recycling your old follet. Visit our website at http://ciackamasproviders. org/water-conservation/ conservation-rebates/tolletrecycling-fac.html for a recycling site near you. A copy of the recycling receipt is required to be eligible.
- For a complete list of eligible washing machines, visit: www. energystar.gov/productfinder/ product/certified-clotheswasher.
- Rebate items must be installed at the property associated with your water account.
- Rebates are available on a first-come, first-served basis. The program will end when funds are depleted. The total rebate per Item will not exceed the receipt amount.
- Prior to approval, an on-site Inspection may be required by Clackamas River Water Providers.