

Working together to protect and conserve our drinking water.

Annual Report

For Fiscal Year 2018-19

September 2019

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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.

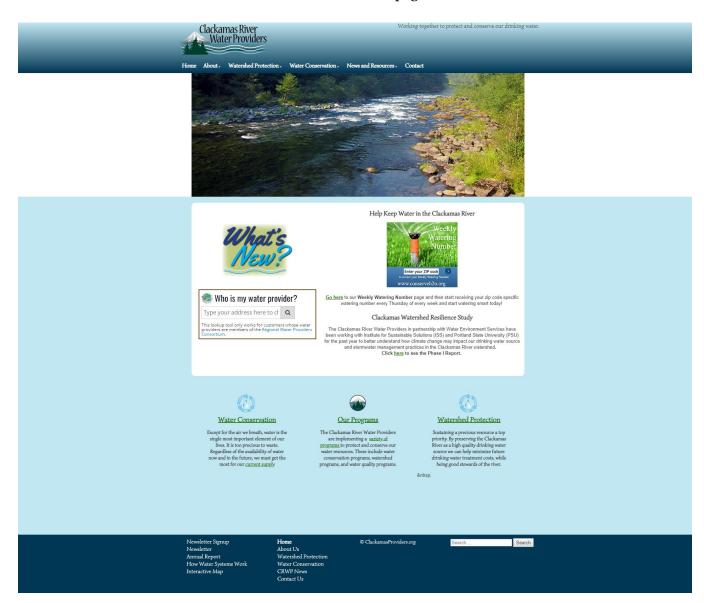
Through these efforts we have been working together for more than ten years to jointly fund projects and studies that would be too expensive to do individually, to foster closer relationships with each other as intra-basin water suppliers, and to speak in one voice when working with other stakeholders 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.

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 2018-19 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 Oregon City gauge 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 ABR Inc. to develop a long-term

macroinvertebrate monitoring plan for the lower Clackamas River and its tributaries (Cole 2013). 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 2018 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 subwatershed. A copy of this final report can be found by going to https://www.clackamasproviders.org/wp-content/uploads/2019/02/18-126 CRWP Macros FINAL Rpt 2-28-19.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.

Education and Research Assistance

Portland State University Watershed Resiliency Project

During 2018-19 the CRWP worked with Portland State University faculty and graduate students and the Institute of Sustainable Solutions (ISS) on a Phase 2 of Clackamas River

Watershed Resiliency Project. The research conducted in Phase 2 of the Project was aimed at developing and evaluating climate change impact models for the watershed, and simulating and assessing future conditions in Clackamas hydro-climate system for temperature and precipitation/snowpack, hydrology and water quality, wildfires. A workshop was held during the spring of 2019 to communicate the findings of research conducted in 2018-2019 by PSU faculty and graduate students, and to engage with basin stakeholder in a discussion on the following questions:

- 1. How is this research important to you and/or your organization?
- 2. What actions are already occurring to address these challenges?
- 3. What opportunities exist in current initiatives or do you think would be important to pursue in the future?
- 4. What are the priorities for addressing these future climate risks?

In addition to providing funding support for the research the CRWP also provided funding for the PSU Climate Conference where the results of the project will shared. To see the final report and supporting information go to

https://sites.google.com/a/pdx.edu/maxnp/research/Clackamas-watershed

Portland State University Intern

During the summer of and fall of 2018 the CRWP worked with an intern form Portland State University to look at agricultural water use in the Clackamas River watershed. The purpose of this work was to identify the number of agriculture water rights in the Clackamas River watershed, and to research options for buying, leasing, or otherwise working with the owners of water rights to return water to the back to the stream.

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's Mitigation Fund Committee. This year the Blue-Green Algae Team reviewed the 2018 Annual Blue-Green Algae Report, which included results from the yearly monitoring program. Monitoring was conducted from May 14th through September 30th of 2018. Three blooms were observed at the beginning of the summer and samples were taken but no toxins were detected. No changes were recommended for 2019. In 2015 PGE's Mitigation Fund Committee approved full or partial funding for 11 restoration projects for the \$3.5 million dollars that was available in the 2015 funding cycle. The Committee met once in the spring of 2019 to receive a status update on projects funded as part of the 2015 Fund cycle. The Committee also discussed the process for the next funding cycle for \$1.5 million which began during the spring of 2019.

Nonpoint Source Evaluation and Mitigation Eco Biz Certification Support

The CRWP continues to work with the Pollution Prevention Outreach Team which is a group of pollution prevention experts in the Portland metro area that administers 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/. This year the CRWP helped provide funding to purchase EcoBiz Chinook Book Ads. *See Appendix A*.

Septic System Workshops

No septic system workshops were conducted in FY 2018-19. During the spring of 2019 the Septic System Homeowners Guide and the Operation and Maintenance brochure were reprinted, and all high-risk septic systems owners (over 1,200) were mailed information regarding the CRWP's Septic System Financial Assistance Program. *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 five \$100 septic system inspection/pump out rebates were processed and one application for the repair cost share program for a total of over \$1,500 in financial

assistance.

Down the River Clean Up Sponsorship

For the ninth 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 2018. The 16th Annual Down the River Clean Up included 330 volunteers and cleaned up 2.15 TONS (4,300 lbs.) of trash, 33% was recycled, from the Clackamas River. Since this event began 16 years ago, we've been able to remove over 28 tons of trash from the Clackamas River with the help of over 3,600 volunteers. As an event sponsor the CRWP's logo is placed on event marketing and outreach material. *See Appendix C*.

2016 State Revolving Fund Drinking Water Source Protection Grant for Hazardous Material Spill Response

In the Fall of 2016 the CRWP received a \$30,000 Drinking Water Source Protection Grant to build off of existing hazardous material spill prevention efforts and to develop a Hazardous Material Spill Prevetion program. The grant project was completed in the fall of 2018 and the CRWP has contintued 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. Click on the following link to see which business we worked with https://www.clackamasproviders.org/wp-content/uploads/2019/08/CRWP-18 19-Final-Report.pdf See Appendix D.

Stormdrain Marker Partnerships



The CRWP continued to work with Clackamas County Water Environment Services to identify opportunities to mark stormdrains in the Happy Valley area with stormdrain markers that remind residents that stormdrains in their area drain directly to the Clackamas River. Purchase of the stormdrain makers was completed during the FY 2018-19 fiscal year and installation of the makers is expected to take place during the FY 2019-20 fiscal year.

Pesticide Reduction Efforts with the Clackamas Soil and Water Conservation District

The CRWP continues to support the Windsock and Pesticide Sprayer programs and is

working with the CSWCD to support the development of a Cover Crop Assistance Program in partnership with the Tualatin and Multnomah SWCD's with the purpose of controlling erosion, improving soil health, and reducing downstream pesticide and nonpoint source pollution impacts. During the spring of 2019 the Field to Faucet brochure was reprinted was mailed out to over 4,000 agricultural landowners in the Clackamas watershed, in addition a banner was created to use at events. *See Appendix E*.

Pesticide Reduction Efforts with the Clackamas River Basin Council

For the 11th 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. 22 households participated in the program during the 2018-19 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. Five of these fact sheets along with the Pesticide Pledge brochures were updated this year. *See Appendix F* or visit the http://www.clackamasproviders.org/pesticide-reduction-efforts/ 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 totally \$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 will also be part of the OWEB's Technical Review Team reviewing all of the individual grant projects for the Clackamas Focused Investment Partnership.

<u>Disaster Preparedness and Response</u> Lower Clackamas River Spill Response Drill

The CRWP worked with NRC, a spill response contactor, Clackamas Fire District #1, Water Environment Services, DEQ and other partners to put boats and booms into the river to respond to a mock hazardous material spill. The primary purpose of this functional drill was to enhance and improve emergency response to an oil or hazardous material spill release in the Clackamas River. The drill provided the Clackamas River Water Providers and it first responder stakeholders with the opportunity better understand of the capabilities and limitations of response strategies as they are currently written, while identifying areas where we might need to make changes to protecting our drinking water infrastructure. It also gave us an opportunity to build stronger relationships with our local, state, and federal first responders.

The CRWP also worked with NRC to look at the rest of the strategies (8) that have been developed to determine if changes or additions to the strategies need to be made.



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. The Committee convened in May of 2019 primarily to debrief a diesel spill incent that had taken place in the Clackamas industrial area in April. The CRPW continues to work with spill response partners to find more effective ways of communicating and responding to hazardous material spills.

Public Outreach and Information Sharing

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

Water Treatment Plant Operators meetings

The CRWP held two Water Treatment Plant Operators meeting for Clackamas water treatment staff during FY 208-19. The purpose of these meetings was to provide a forum for our water treatment plant operators to talk about water quality challenges and new sampling and testing rules, as well as to provide everyone with a better understanding of the different types of treatment processes we have on the Clackamas River.

Annual Watershed Tour

The Annual CWRP Watershed Tour was held on Saturday, October 6th, 2018 and focused on the lower Clackamas Watershed. The purpose of this year's watershed tour was to provide our elected officials and interested citizens a different perspective of the Clackamas River by floating down the River from Carver Park to Clackamette Park. Along the way we stopped to see stormwater outfalls, two of Water Environment Service's restoration projects, lower river tributaries that flow into the Clackamas, a railroad crossing, and at all four of our lower river drinking water intake structures.

2018 Watershed Tour







Do You Know Where Your Drinking Water Comes From?

A new brochure title *Do You Know Where your Drinking Water Comes From?* was produces this year to help us better communicate with watershed stakeholder which cities and water district get their drinking water from the Clackamas River. This is being used in particular in the Hazardous Material Spill prevention program as we working with commercial and industrial customers in the Clackamas Industrial Area. *See Appendix G.*

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 H.</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 Homeland Security Task Force, Clackamas County Fuel Task Force, Clackamas County Local Emergency Planning Committee, the Clackamas Stewardship Partners, the Clackamas Partnership, Clackamas Technical Basin Committee, EcoBiz Pollution Prevention Outreach Team, the Drinking Water Source Protection Group, the Regional Water Providers Consortium Table Top Exercise Planning Committee, the SDAO Water Committee, 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 60 classroom presentations, assembly programs, and treatment plant tours were completed to approximately 5,802 of kids between July 1, 2018 and June 30, 2019 (these numbers do not include the Children's Clean Water Festival and the CCWET Celebrating Water Event).

See <u>Appendix I</u> for a list of all of these schools. See <u>Appendix J</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 North Clackamas County Water Commission plant were given to schools from the City of Happy Valley, and the Oak Lodge Water Services, the Oregon City areas.

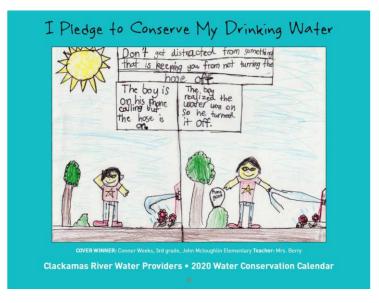
Mini Water Education Grants for Teachers

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 7 grants for 16 teachers this past year. See *Appendix K* 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. Thirteen pictures were chosen from all the entries submitted and used to create a Water Conservation Calendar. The theme for the 2020 calendar was "I Pledge to Conserve My Drinking Water". Students were encouraged to create pictures depicting what they can do to help conserve water at home and at school.

Twenty classes from twelve different elementary schools participated in the contest and roughly 600 pictures were submitted. The thirteen pictures chosen were posted on the CRWP website so the community could vote for which picture would be on the cover. 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, as well as being distributed throughout CRWP members City Halls, Libraries and offices. See $\underline{Appendix\ L}$ for a list of the schools that participated in the project.

14th Annual Clackamas County Water Education Team (CCWET) Celebrating Water Festival

CRWP staff continues to Chair the CCWET. The main focus of this group is to organize the Annual Celebrating Water Festival. The 14th Annual Festival took place March 19th, 2019 at Clackamas Community College. The festival played host to 15 classes, from six schools, with approximately 450 4th and 5th grade students from the Clackamas County area. The festival included 17 exhibits and two stage shows performed by Will Hornyak and Recycleman & the Dumpster Divers. The purpose of this annual event is to educate and engage our future leaders about their environment, clean water, and the importance of their role as individuals and community members.

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. This year's festival took place on April 30th at Portland Community College Sylvania Campus. The festival was host to fifty-two 4th grade classes from twenty different schools and eleven school districts. There were thirty-four classroom

presentations, fifteen exhibits, three stage shows, and 80 volunteers. Representing the CRWP were five 4th grade classes from Gladstone's John Wetten elementary.

Support of Clackamas County Recycle at Work Program

The CRWP continues to partner with Clackamas County to support the Resource Conservation 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 650 businesses throughout the county, 10 businesses became certified or recertified 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 Resource Conservation and Solid Waste Business Outreach Team provided businesses in our service areas with 30 - 1.5 GPM kitchen faucet aerators, 200 - 1gpm bathroom faucet aerators, and 5 pre-rinse kitchen spray nozzles.

Clackamas Community College Horticultural Department Water Efficient Demonstration Garden & IA Classes

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 2 of the Irrigation Association's certification classes to the college. The first class, a one-day Landscape design class was held April 13th. Thirty-five landscape professionals attended the 8-hour class. The 2-day Landscape maintenance class will be held in the fall of 2019.

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. A few of this year's events included: The Lavender Festival and the Clackamas

Master Gardner's Plant Sale. When the mobile garden is not being used at an event, the garden can be found at McIver Park on display at the campground main entrance.

Community Events

The CRWP staff participated in a total of 11 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. See *Appendix M* for the list of events.



Sarah Jo Chaplen and Christine Hollenbeck at the OLWS Table for the 2019 Oak Grove Trolley Trail Festival

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. No presentations were given this year. *See Appendix N*.

Newsletters & Websites

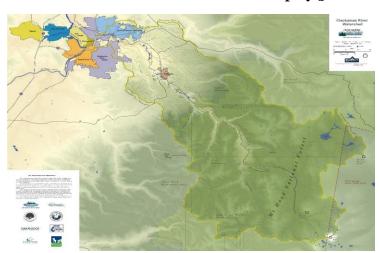
CRWP staff continues to send CRWP public education and outreach member agencies articles and information throughout the year for their newsletters and websites. Topics ranged from general water conservation, indoor conservation, to outdoor conservation tips, watershed and water resource issues, emergency 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 members and interested parties, as well as being posted on the CRWP website. See *Appendix O* 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. A more detailed description of new outreach pieces created this past 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 in its 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, each CRWP member will also receive a copy of the model for their own uses. The models are expected to be finished in the fall of 2019.



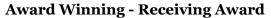
Picture of Clackamas River Watershed Display 3-D Model

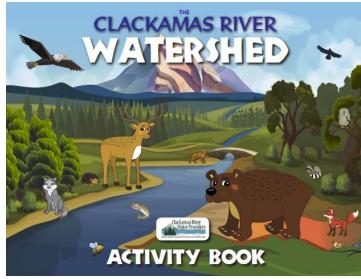
Fish on the Run, Irrigation Done. Summer Watering Campaign

This past year the CRWP developed a new summer watering campaign created to encourage CRWP member customers to reduce outdoor water use in mid-August and to discontinue outdoor water by mid-September so that we can leave more water in the river for the fall Chinook and Coho fish migrations. This effort included development of an informational rack card explaining the importance of the campaign and information on where customers can go for conservation tools and more information. A pledge card so devoted customers can pledge to adopt one or more specific actions and receive a yard sign and a magnet. In addition, four new webpages were created for the CRWP website specific to this campaign providing customers with more information, conservation articles, audio PSAs, as well as the ability to take the pledge on line. The intent is that this campaign will begin every year in mid-July and will end roughly the beginning of October. *See Appendix P* for more details and a copy of the promotional materials.

Youth Activity Booklet - Wins Award

During the 2017-18 year the CRWP created a Clackamas basin specific youth education activity booklet. The target audience for the activity booklet is 3rd - 5th graders and covers watershed education and protection, water quality, the hydrologic cycle, water conservation, and how public water systems work. In May of 2019 the CRWP received an award in the category of "Large Print Communication" from the Pacific Northwest American Water Works Association Communication Committee. Staff received the award in person during the PNWS AWWA Annual Conference in May.







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. Forty-five customers took advantage of the audits. See *Appendix Q* for more details and a copy of the brochure.

Water Conservation Rebate Program

The CRWP public outreach and education program completed its ninth year of administering the Water Conservation Rebate Program. The Rebate Program continues to be very popular with the CRWP customers. The Program offers a range of rebates to ensure that there is applicability to our vast range of customers. It consists of a up to \$100 rebate for replacing old toilets with new High Efficiency Toilets (HET), a \$75 rebate when customers purchase a new Energy Star certified residential clothes washer, a \$50 rebate for hose bib timers and/or irrigation rain switch, and up to \$60 (20 per account at \$3 each) if customers replaced their old inefficient irrigation spray nozzles with efficient water conserving models. Customers can also receive a \$200 rebate for the purchase and installation of an EPA Watersense Certified Smart Irrigation Controller. 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. A total of 171 rebates were processed this past year. See *Appendix R*.

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

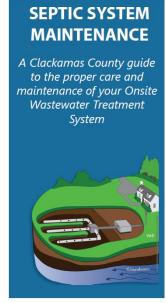
Regional Water Provider's Consortium Conservation and Communicators Network Committees, the Children's Clean Water Festival Planning Committee, Chair of the Clackamas County Water Education Team (CCWET), a member of the Clackamas Sustainability Cooperative, and a member of the PNWS-AWWA Conservation Committee, and Chair of the Northwest Oregon subsection Waterworks School organization committees. Staff is also a member of the Oregon Landscape Contractors Board and Exam Review Committee.

Appendix A - EcoBiz Chinook Book Ads

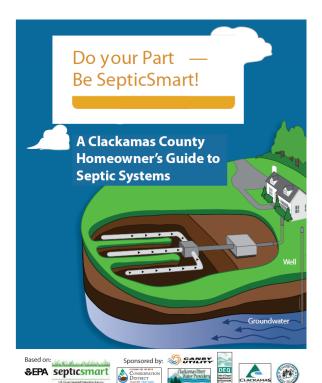


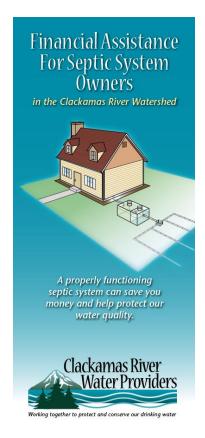


Appendix B - Septic System Outreach Material









Appendix C – Down the River Clean Up

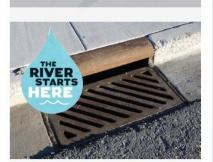


Appendix D - Updated Spill Brochure

Clackamas River Water Providers Free Technical Assistance

The Clackamas River Water Providers (CRWP) offers free technical assistance to businesses located in the Clackamas River watershed. This includes:

- · Conducting facility site visits
- Assistance with spill response plans
- · Providing free spill prevention tools
- · Providing free spill training to employees



Who is eligible?

Businesses located in the Clackamas Industrial Area and up-stream from Clackamas River Water Providers drinking water intakes.



Vorking together to protect and conserve our drinking water

Free Facility Site Visits

Site visits will involve a non-regulatory walk-through to help businesses:

- ☐ Identify secondary containment options
- Receive free spill prevention tools
- Determine environmental best practices
- Manage hazardous materials
- Identify regulatory requirements and meet compliance
- Identify and label storm drains

CRWP is a coalition of the municipal water providers that get their drinking water from the Clackamas River who are working together on source water protection issues.

Clackamas River Water Providers **Free Spill Prevention Tools**

installation of shut-off valves, and construction of berms and waste cover.











Spill containment pallets

Containment trays

What is covered? Purchase and/or installation of secondary containment equipment. Equipment may include spill kits, spill pallets, double walled tanks, repairs to floor drains,

Free Tools

- Your technical assistance provider will purchase appropriate spill tools and deliver to your business.
- Secondary containment or spill prevention devices must provide 110 % containment of the largest container, or 10 percent of the total volume stored at the location; and constructed of impervious materials or coated with a chemical resistant coating compatible with the hazardous material being stored.

Who is eligible?

Businesses must complete a technical assistance site visit. Funding is available first come, first served, until program funds are depleted.

Reimbursement

- CRWP will reimburse repair work, constructed containment projects, and updates that prevent pollution and have been completed within the last six (6) months.
- Constructed containment may include castin-place, extruded concrete berms, or premanufactured synthetic or fiberglass berms. Installation of recessed floor sumps or recessed containment trenches or receptacles.

Questions?

If you are not sure if your business is located within the watershed, or want to learn more about free technical assistance, email kims@clackamasproviders.org or call 503-723-3510.

For more information visit

www.clackamasproviders.org



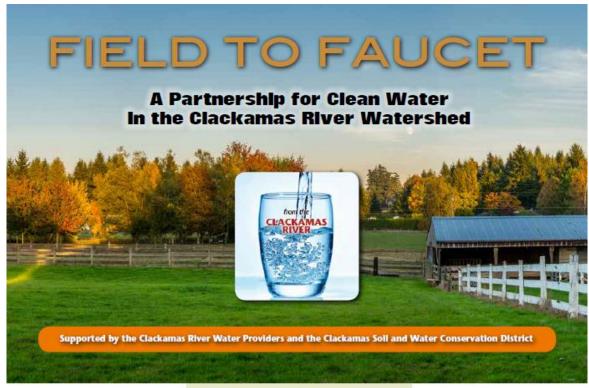
OLLUTION PREVENTION resource cente

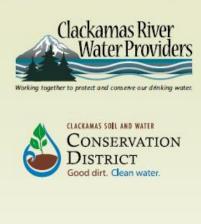


CRWP has partnered with the Pacific Northwest Pollution Prevention Resource Center (PPRC) to provide high quality, unbiased technical assistance to businesses. www.pprc.org

Appendix F - Pesticide Reduction with CSWCD

Mailer sent out to Agricultureal landowners





Learn more about the:

Partnership for Clean Water in the Clackamas River Watershed.

Appendix F - Pesticide Reduction with CSWCD

Banner for events



Appendix G - Pesticide Reduction Outreach Program with CRBC



Pesticides in Your Yard Keep your yard green and the Clackamas watershed clean: Consider less toxic options for vard maintenance. Here are some of the most effective alternatives to minimize pesticide use and keep pollutants out of our water

Prevent weeds:

Keep weeds from getting established:

- Plant native trees and shrubs that thrive in Oregon's wet winters and hot, dry summers
- Mulch trees and shrubs to lock in moisture and prevent weeds from sprouting Use weed block fabric in areas not heavily planted







Pull weeds by hand:



Combine prevention with hand removal. By minimizing the opportunity for weeds to grow, you are more likely to be able to hand pull the few weeds that take root.

Choose pesticides wisely

Read the label before you buy. Select products with lower toxicity, shorter persistence and lower potentia be carried in runoff or leach into groundwater.

- Avoid broad spectrum pesticides that can kill or harm many beneficial species Look for plant-based insecticides that use oils and
- extracts from plants to deter insects
 Use fragrant plants to repel insects





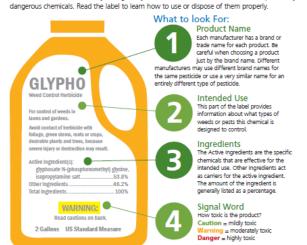
Equipment and weather:

Well maintained and calibrated application equipment are key to being able to apply pesticides efficently at are try to see a second and a second are try to see a second and a second are a sec

1869 | Clarkamas OR 97015 | 503 303 4372 | info@clarkamascher.om | www.clarks

Reading Pesticide Labels

Protect your family, our environment and our drinking water! Pesticides and herbicides that you might buy at a local hardware store or online, are potentially



Top pesticide safety tips:

- Read the entire label and follow all directions
- Only apply in locations indicated on the label

Clackamas River Water Keep all pesticides in their original containers

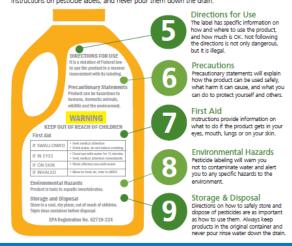


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Reading Pesticide Labels

Pesticides and fertilizers can pollute local streams and waterways.

You can prevent these chemicals from reaching streams and rivers. Always follow the instructions on pesticide labels, and never pour them down the drain.



Resources:

nty - www.clackamas.us/recycling Clackamas Soil and Water Conservation District (SWCD) - www.conservationdistrict.org Environmental Protection Agency - www.epa.gow/per Metro - www.oregonmetro.gow/tools-living

Oregon Department of Agriculture -www.oregon.gow/ODA/PEST/pages/disposal.aspx Oregon State University County Extension Office -http://extension.oregonstate.edu

Be Pesticide Wise

Homeowners and gardeners often use pesticides and fertilizers on lawns and garden beds. These chemicals can pollute local streams and waterways.

Help prevent pollution:

- Choose to use the least toxic product possible
- Buy only what you need
- Keep fertilizers and pesticides in their original containers
- Read and follow instructions for use
- Handle products carefully:

- To avoid dangerous reactions, never mix products
 Securely seal all containers
 Use a leak-proof container, not a plastic bag, to secure a leaking product container





Dispose of extra chemicals:

- Use up stored products before purchasing more Give unused products to other responsible gardeners
- Unwanted or banned chemicals can be taken to Metro's hazardous waste facilities at:

Metro South Transfer Station – 2001 Washington Street, Oregon City

Dispose of empty containers and bags:

- and bags:

 Triple-rinse plastic, glass or foil lined containers. Use the finse water as regular strength pesticide, following label instructions

 Wrap empty containers in newspaper and dispose of in garbage

 Fertilizer packaging without "weed" or "weed killer" on product can be disposed of in garbage without rinsing and wrapping

Recycling Resources:

Metro Recycling – 503.234.3000 www.oregonmetro.gov/tools-living/garbage-and-recycl Outside the Metro tri-county area – 1.800.732.9253

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

programming through



nages: O Stock Photo, 123rf. The Noun Project and Vec

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

Be Pesticide Wise

What's hazardous at home?

Common products used in our homes and yards can harm people, pets, fish, wildlife and the health of our waterways. They contain potentially dangerous chemicals that when used or disposed of improperly, can pose significant hazards to human health and the environment. Common hazardous products include

















Check the label

These products will contain "sig words" on their labels such as:

- Caution = low toxicity Warning = moderate toxicity
- . Danger high toxicity
- These products can be corrosive

flammable, toxic, poisonous, combustible, or explosive Reading labels before purchasing and using a product





Protect our drinking water: Pesticides are now found regularly in the Clackamas River water, a drinking water source for over 350,000 people in Clackamas and Washington Counties.

To keep our water safe, no hazardous materials should ever be poured or dumped down the sink, into the toilet, on the ground down a sewer or street drain

Once in the Water, many pesticides cannot be detected or rem



Resources:

Clackamas Soil and Water Conservation District (CSWCD) - www.conservationdistrict.org Environmental Protection Agency (EPA) - www.epa.go

Metro - www.oregonmetro.gov/tools-living National Pesticide Information Center at Oregon State University - http://npic.orst.edu

University - http://mpc.crst.edu/ Oregon Department of Agriculturge-vidisposal.aspx Oregon Department of Environmental Quality (DEQ) -www.deq.state.or.us/la/sw/hhw/index.htm Oregon State University County Extension Office -http://dextension.oregonstate.edu/

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

Alternatives to Pesticides

The problem with pesticides: Pesticides are poisons. They are specifically designed to harm and they can harm more than just the "pests" for which they are targeted

Pollinators and other beneficial insects and plants. Pesticides also cause a number of health effects and a range of serious illnesses and diseases in humans and pets, from respiratory problems to cancer.













Aphids & Mites

෧

Snails & Slugs

Identify the pest:

The Oregon State University Extension office in Oregon City offers free services to help backyard gardeners and green industry professionals. With a sample of what is impacting your garden, or a damaged plant, they will help you identify the issue and recommend options for treatment.

Layering and soil amendments:

Soil amendements improve soil health and encourage plant growth. Stronger plants resist pests and diseases. Clackamas Soil and Water Conservation District has instructions on how to collect a soil sample to send to a lab for testing.

If weeds are covering a patch of land, create a raised bed with "lasagna gardening." Add layers of alternating green and brown materials and keep it moist as it decomposes. You will have prepared a planting bed with no digging needed.

Food waste - Manure Food waste Manure - Cardboard

Attract beneficial insects:

Encourage beneficial insects in your yard to keep damaging pests in check. "Plant a variety of plant species attract insects, or purchase beneficial insects like ladybugs, lacewings and neimatodes at a garden center or online to target specific problems.





iver Basin Council | P.O. Box 1869 | Clackamas, OR 97015 | 503.303.4372 | info@clackamasriver.org | w

Alternatives to Pesticides

Reclaim your yard from weeds and pests with these tried and tested natural methods. Be part of the movement to keep the Clackamas River clean for wildlife, recreation and drinking water

Take charge of your yard:

It is easier to spot and stop weeds if you are in your garden often. If you notice a few weeds, pull them by hand. It is much easier to remove one Himalayan blackberry than an entire patch.

Deter mice, gophers and moles by planting daffodils. Deter mice, gophers and moles by planning damonis, manigolds and alliums. Act quickly if you see evidenc of rodent activity before they become established. Rodents can be repelled with castor oil, peppermint oil, cayenne pepper and cloves.





Repel rodents with bitter tasting spices and strongly scented oils









Plant natives

Plants native to our area have evolved to resist local pests and disease. They also do not require fertilizers or pest and ouease. Inly also on ont require retruizers or pestiodes. Native plants create a complex ecosystem that can reduce demaging infestations of pests and weeds. Local wildlife benefit from the variety of seeds and fruit produced by native plants and the shelter they provide. These features attract birds and beneficial insects that help keep pests in check.

Use boiling water:

Pour boiling water on weeds that are clustered togeth in smaller spaces, such as spacers in sidewalks and driveways. Be careful not to burn yourself or damage designable allows.





Create a barrier:

A stiff paper coiler buried an inch deep in the soil around plants will protect them from burrowing insects and grubs. Fine mesh netting over taller plants will keep insects out. Copper sheets placed around the borders of your planting area discourage snalls and slugs. Copper wire or tape on tree trunks will keep snails from climbing.

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Do you live in the Clackamas **River Basin?**

The Clackamas River provides wildlife habitat, recreational opportunities and is a source of drinking water for over 350,000 people.

With more housing developments and more people moving into the Clackamas River Basin, now is a critical time to curb the amount of chemical pesticides that can cause health hazards to both people and wildlife

Help protect our river! Pesticides like Weed n' Feed can be dangerous. Protect your he dangerous. Protect your family, pets and pollinators (like bees and birds) by minimizing or eliminating pesticide use in your home and yard.

Once in the water, many pesticides cannot

be detected or removed - Take the Pledge now!

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





Free Pesticide WISE or Pesticide FREE Yard Sign

Take the Pledge!

streams and drinking water.







Pesticide Pledge

As a resident in the Clackamas Watershed who cares about protecting water quality for people, fish, wildlife, drinking water and pets - here's your chance to take the Parting with Pesticides Pledge! Get a FREE yard sign in honor of your commitment. Let neighbors know that your yard is healthy and safe.



I will use pesticides wisely by:

- Reducing my use of pesticides-including weed and feed
- ☐ Choosing safer alternative weed and pest control products when I can
- Always reading and following label instructions
- ☐ Making sure I properly store and dispose of Spraying only in ideal conditions (not in wind or before it rains)
- ☐ Talking to my neighbors about being Pesticide Wise



I will be pesticide free by:

- ☐ Stopping the use of pesticides including weed and feed
- ☐ Using only organic/natural products for garden and lawn care
- ☐ Being tolerant of some weeds and pest damage
- Using native plants that are adapted to our climate and are pest resistant ☐ Using Integrated Pest Management (IPM) methods for pest control
- ☐ Talking to my neighbors about being Pesticide Free

Get Your Free

Yard Sign!		
Name		
I pledge to use pesticides wisely , please send me my free yard sign		
or I pledge to be pesticide free , please send me my free yard sign		

Poquirod	Information

Cut here, place in envelope with stamp	Requir Addres	red Information: s
	Proper	ty Size (Acreage or Square Footage)
invelope v	Phone	
with stamp	Email	

I understand I will receive a subscription to "Current News," the CRBC newsletter.

I pre	er to receive it:
	As an email
	In the mail

Pleas	e ma	il to:	

Clackamas River Basin Council PO Box 1869, Clackamas, OR 97015 The Clackamas River Basin Council

is a 501(c)(3) nonprofit organization.

Have questions? Please contact us at: 503-303-4372 or info@clackamasriver.org

Facebook Ad



Council

Table Banner

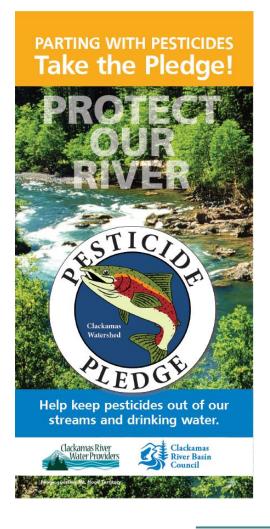
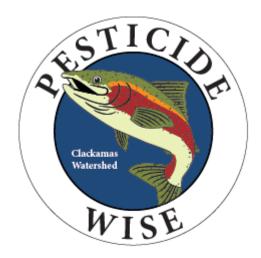


Table Runners





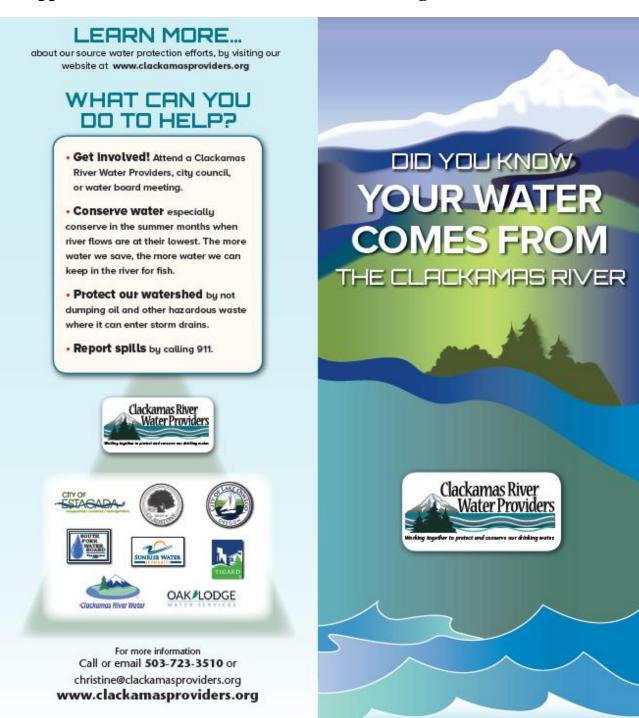








Appendix H - Do You Know Where Your Drinkign Water Comes From?





Appendix I - Source Water Protection Presentations

Presentation	Organization	
"Clackamas River Water Provider Overview"	Lake Oswego/Tigard Oversite Committee Meeting	
"Clackamas River Water Providers" Overview and accomplishments	North Clackamas County Water Commission Meeting	
"Clackamas River Water Providers" Overview and accomplishments	Clackamas River Water Board Meeting	
"Pesticide Reduction and WQ BMPs"	North Willamette Horticulture Society Conference	
"Clackamas River Water Providers, Source Water Protection, and Putting Science into Practice"	PSU Environmental Science and Management class	
"New Summer Conservation Messaging"	Oak Lodge Water Service District Board	
"Source Water Protection 101"	PNWS AWWA Conference	
"New Summer Conservation Messaging"	South Fork Water Board - Board Meeting	
	"Clackamas River Water Provider Overview" "Clackamas River Water Providers" Overview and accomplishments "Clackamas River Water Providers" Overview and accomplishments "Pesticide Reduction and WQ BMPs" "Clackamas River Water Providers, Source Water Protection, and Putting Science into Practice" "New Summer Conservation Messaging" "Source Water Protection 101" "New Summer Conservation	

Appendix I - 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
- 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
- Sojourner School
- 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

- 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 J - Youth Education Program & Presentation

A total of 60 classroom presentations and assembly programs were completed between July of 2018 and June of 2019. Below is a breakdown of where these programs and presentations were completed. This number does not include the number of children reached through the Children's Clean Water Festival and the CCWET Celebrating Water Event; these events are listed at the bottom of the page with number of children reached.

City of Gladstone

Total # presentation = 11

City of Estacada = 2

Clackamas River Water

Total # presentations = 5

Oak Lodge Water Services

Total # presentations = 7

South Fork Water Board

Oregon City = 8 West Linn = 6

Sunrise Water Authority

Total # presentations = 21

26th Annual Children's Clean Water Festival

52 classes 20 Schools

20 DC110015

10 Districts

Total # of students = #1463

34 presentations

15 exhibitors, 3 stage shows

80 Volunteers

CRWP schools in attendance this year were 5 classes from Gladstone's John Wetten Elementary.

14th Annual Clackamas County Water Education Team Celebrating Water Event

15 Classes

6 Schools

17 Teachers

1/ Teachers

90 Adult chaperones

17 Exhibits

2 Stage shows

Total # of students = #450

Appendix J - continued

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

Date	Location	Program # Students		Service Area
7/10/2018	Hammer Hill Park	Water Cycle Play	12	SF WL
7/11/2018	Willamette Park	So You Want to be a Salmon	35	SF WL
7/12/2018	Marylhurst Park	So You Want to be a Salmon	30	SF WL
7/17/2018	Gladstone 7th Day Adventist	Mad Science Where's the Water Watson?	45	Gladstone
7/20/2018	Gladstone 7th Day Adventist	Mad Science What Do You Know?	45	Gladstone
8/1/2018	CCC ELC	Will Hornyak Living Streams	10	SF OC
10/2/2018	Spring Water Elem	Mad Science "What Do You Know?"	60	SF OC
10/24/2018	Mt. Scott Elem.	Will Hornyak	260	Sunrise HV
11/14/2018	Spring Mountain Elementary	Incredible Journey	90	Sunrise HV
11/15/2018	Riverside Elementary	Source to the tap	30	olws
11/15/2018	Riverside elementary	Will Hornyak	625	olws
12/5/2018	River Mill Elementary	Will Hornyak	430	Estacada
12/17/2018	J. Wetten Elementary	Will Hornyak	200	Gladstone

1/10/2019	Scouters Mt.	Mad Science "What Do You Know?"	200	Sunrise HV
1/14/2019	Oregon Trail	Non-Point Source Model	25	Sunrise HV
1/17/2019	Oregon Trail Elem. Mad Science "Where The Water?"		200	Sunrise HV
1/18/2019	Oregon Trail Elem.	Oregon Trail Elem. Non-Point Source Model		Sunrise HV
2/20/2019	NCCWC	Treatment Plant tour	50	OLWS
3/4/2019	Cedar Oak Park Elem.	Mad Science "What Do You Know?"	50	SF WL
3/14/2019	Spring Mt. Elementary	Water Jeopardy 20		Sunrise HV
3/19/2019	Redland Elem	Mad Science Consortium show		CRW
3/21/2019	NCCWC	Plant Tour	20	Sunrise HV
3/21/2019	Cedar Oak School Mad Science "What Do You Know?"		50	SF WL
3/22/2019	Cedar Oak School Mad Science "Wat Watson"		50	SF WL
4/17/2019	NCCWC	Plant tours	60	OLWS
4/18/2019	Cascade Heights	Mad Science "What Do You Know?"	50	CRW
4/24/2019	Happy Valley Elem.	Mad Science "Where's The Water?"	270	Sunrise HV
4/26/2019	Oregon Trail Elem.	Mad Science "Where's The Water?"	100	Sunrise HV
4/30/2019	PCC Sylvania Children's Clean Wa Festival		1463	ALL
5/15/2019	Oregon City High Drinking Water and		35	SF OC

	School	Non-Point source		
5/16/2019	Oregon City High School	Plant Tour	35	SF OC
5/22/2019	Gladstone Public Works			Gladstone
5/28/2019	Oregon City High School	Non Point Source Model	35	SF OC
6/3/2019	Gaffney Lane Elem.	Recycleman	350	SF OC
6/4/2019	Redland Elementary	Source to the Tap	90	CRW
6/5/2019	Sunnyside Elementary	Will Hornyak	525	Sunrise HV
6/6/2019	View Acres Elementary	Will Hornyak	500	OLWS
6/10/2019	Spring Mt. Elementary	Will Hornyak	480	Sunrise HV
6/10/2019	Gaffney Lane Elem.	Mad Science "What Do You Know"	245	SF OC
6/11/2019	Verne Duncan Elem.	Rainstick presentation	90	Sunrise HV

Appendix K - Mini Water Education Grants

7 grants for 16 teachers were issued to the following schools this past year.

Clackamas River Water

Redland Elementary – (3) 5th Grade Teachers

Oak Lodge Water Services

Oak Grover Elementary - (1) 4th grade Teachers Oak Grover elementary - (1) 3rd grade Teacher

South Fork Water Board

Oregon City High School – (1) Honors Student Teacher Willamette Primary - West Linn – (4) 5th grade Teachers Spring Water Environmental - Oregon City - (5) 5th, 6th, and 8th grade Teachers

Sunrise Water Authority

Spring Mountain Elementary – (1) 3rd Grade Teacher

Appendix L -2019 CRWP Children's Calendar

12 schools and 20 classes participated in the 2020 CRWP Children's Calendar coloring contest. More than 600 pictures were submitted. The following is a breakdown of which CRWP members schools participated in the calendar project.

Clackamas River Water

Redland Elementary Sojourner Elementary

City of Estacada

River Mill Elementary Clackamas River Elementary

City of Gladstone

John Wetten Elementary

Oak Lodge Water Services

Oak Grove Elementary

South Fork Water Board

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

Sunrise Water Authority

Sunnyside Elementary (Happy Valley) Deep Creek Damascus K-8 (Damascus) Oregon Trail Elementary (Happy Valley) Verne Duncan Elementary

Appendix M- Community Events

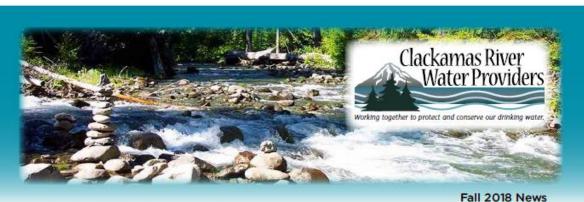
CRWP staff participated in 11 Community Events throughout CRWP service areas between July 1, 2018 and June 30, 2019.

Date	Event	Water Provider
July 4 th 2018	Happy Valley 4th July Event	Sunrise Water Authority
July 14 th 2018	RWPC HPS Garden Tour	CRWP Members
July 21st 2018	West Linn Old Time Fair	South Fork West Linn
July 28th 2018	Day in Damascus	Sunrise Water Authority
August 4 th 2018	Gladstone Community Festival	City of Gladstone
August 14th-18 th 2018	Clackamas County Fair	CRWP Members
September 9 th 2018	Clackamas River Down the River Clean UP	CRWP Members
October 6 th 2018	CRWP Watershed Tour	CRWP Members
March 23 rd 2019	Tree School	CRWP Members
April 13th	RWPC Home & Outdoor Living Show	CRWP Members
May 22 nd 2019	Gladstone Public Works Day	City of Gladstone

Appendix N – Adult Presentations

CRWP staff did not give any presentation to adult groups this year.

Appendix O - Quarterly E Newsletter



Practice Makes Perfect

Protecting Our Drinking Water from Hazardous Material Spills

The CRWP has identified hazardous materials spills as being a high risk factor that could affect drinking water. The CRWP has been working with local first responders and Clackamas County Water Environment Services to better understand these risks and to develop strategies to respond if a spill does happen.

A hazardous material spill in the Clackamas Industrial Area is of particular concern because many of the businesses in the industrial area are less than a quarter of a mile away from the Clackamas River. Hundreds of storm drains and four small tributary creeks (Rock, Sieben, Carli, and Cow Creeks) drain this area and flow into the river just upstream of our drinking water intakes.

On Thursday, September 27th Riverside Park, located in the Clackamas Industrial Area was closed as we tested some of these newly developed spill response strategies on the river. The CRWP worked with NRC, a spill response contractor, Clackamas Fire District #1, Water Environment Services, DEQ and other partners to actually put boats and booms into the river to respond to a mock hazardous material spill. (Continued on page 2)

What's Inside:

Material Spills	P1
Calendar	P1
USGS/Science	P2
Day w/o Water	Р3
Fall Quiz	P3
Fall Conservation	P4
Prepare for Winter	P5
Faces Interview	P6
Water Management	P8

2019 Calendar is now available...



The CRWP Annual Water Calendar is a collaborative project with CRWP grade schools where local students participate in a coloring contest with a water education theme. Thirteen pictures are chosen from all the entries submitted and used to create the Water Calendar.

The theme for the 2019 calendar is "The Clackamas River a Precious Drinking Water Source". Students created pictures depicting what they had learned about the Clackamas River and what they can do to both conserve and protect it. Twenty classes from twelve different elementary schools in our member service areas participated in the contest and roughly 600 pictures were submitted. The thirteen pictures chosen to be in the calendar were posted on the CRWP website so the community could vote for which picture would be on the cover.

In October 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, as well as being distributed throughout CRWP members City Halls, Libraries and offices.

To request your 2019 water calendar contact Christine at 503-723-3511 or email christine@clackamasproviders.org.

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

Appendix P - Fish on the Run, Irrigation Done Campaign

Informational Card



Whether you use a hose or have an underground watering system to water your yard and garden do your part to keep water in the Clackamas River by reducing or shutting-off outdoor watering for the fall fish runs!

Our communities use a lot of water during the summer months. Water use doubles or even triples, this is due mostly to outdoor watering. Summer is also the time of year when the Clackamas River is flowing at its lowest levels and we get the least amount of rain fall.

Starting in late August Fall Chinook and Coho Salmon begin returning to the Clackamas River migrating to their spawning grounds. The more water in the river the easier this journey is for them.

Do Your Part to Keep Water in the Clackamas River.

We value the way healthy lawns add to the beauty and livability of our communities, but we also want to make sure our citizens have the tools to make the most efficient use of the drinking water so we can leave more water in the river for fish.

HOW YOU CAN HELP

- Learn how to ramp-down irrigation watering so you can turn it off by mid- September
- Let your lawn go dormant during the summer months
- Only water outside before 8am and after 8pm
- After mid-August, each week remove one day of watering
- Take your car to a carwash that recycles and reuses the water
- Take advantage of our outdoor water Conservation Rebates
- Take the "Fish on the Run, Irrigation Done"
 Pledge to help conserve water
- Schedule a Landscape Water Audit
- Visit our website to find more water conservation/reduction information

For more information go to our website.



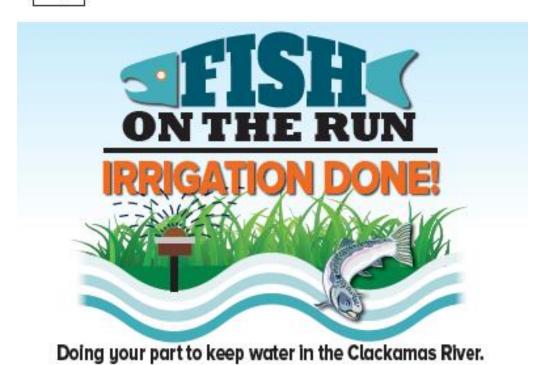
www.clackamasproviders.org 503-723-3511

Watering Pledge





g more



TAKE THE PLEDGE!

As a resident who receives their drinking water from the Clackamas River and that cares about protecting the river water for people, and wildlife here's your chance to be part of our "Fish On the Run, Imigation Done" campaign to reduce or even stop late summer outdoor watering for migrating fish.

Take part in the pledge and get a FREE yard sign letting neighbors know what you are doing to keep water in the Clackamas River for fish.

I PLEDGE TO DO MY PART:

Beginning mid-August, each week remove one day of watering from yo	Ш
rrigation schedule	

Let my lown go dormant during the summer, which saves water, reduces run-off, and requires less moving

■ Take my car to a carwash that recycles and reuses the water

Only water outside before 8am and after 8pm

■ Make sure I stop outdoor watering by mid-September

Cut here and return lower portion to receive your yard sign.





To receive your free yard sign please fill out the contact information, pledge below, and mail this back to us, or visit our website to take your pledge.

I PLEDGE TO DO MY PART:

- Beginning mid-dugust, each week remove one day of watering
- Let my lown go domont during the summer
- Take my carta a recycling coneash
- Ottly water before Born and after Spm
- Stop outdoor watering by mid-September

CONTACT INFORMATION:

Name				

Address _____

City/State/Zip_____

Phone (Optional)______

Email (Optional)

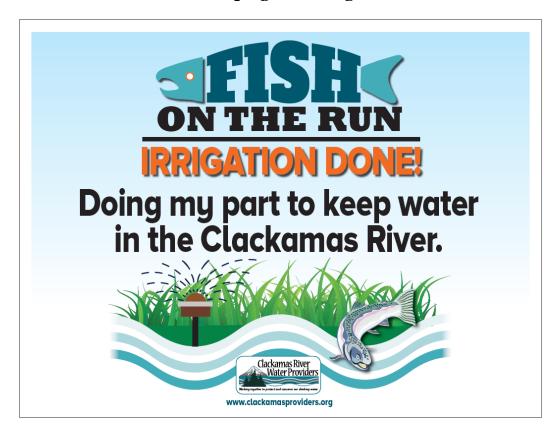
Water Provider _____



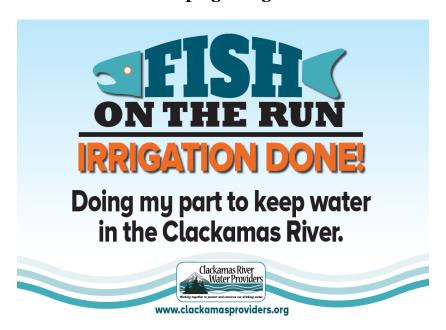


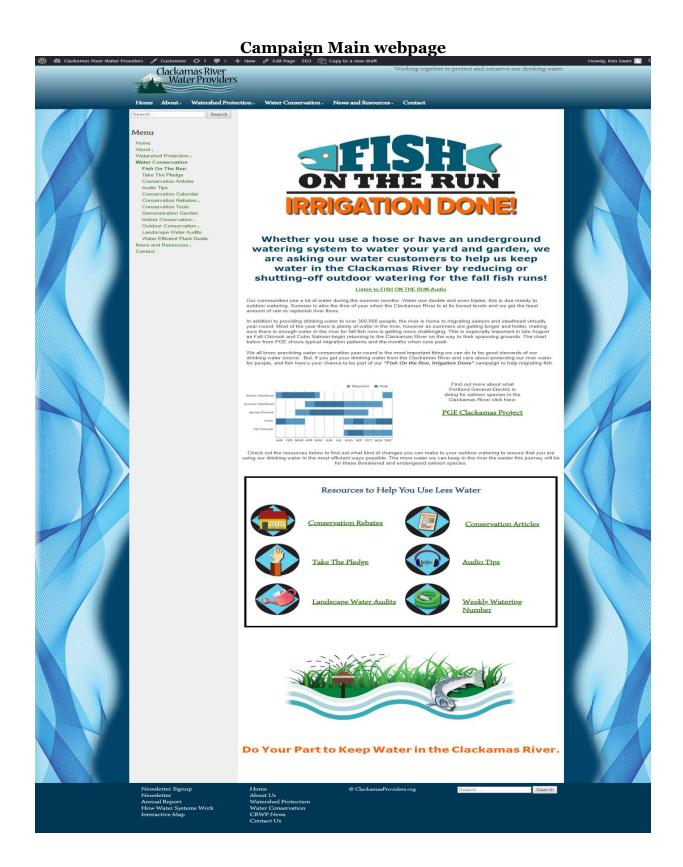
www.clackamasproviders.org 503-723-3511

Campaign Yard Sign



Campaign Magnet





Appendix Q - Water Efficient Landscape Audit Program

Since July 2018 a total of 45 CRWP member customers participated in the Water Efficient Landscape Audit Program. Below is a breakdown of where the audits were performed.

City of Gladstone

Number of audits =2

Clackamas River Water

Number of audits = 15

Oak Lodge Water Services

Number of audits = 10

South Fork Water Board

Oregon City - Number of audits = 11 West Linn - Number of audits = 4

Sunrise Water Authority

Happy Valley - Number of audits = 3

Appendix Q - 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.



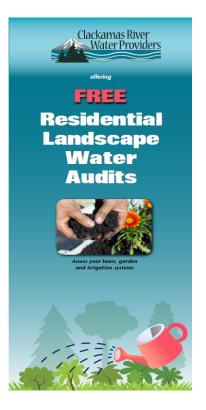
For more information about the CRWP, our watershed, and conservation programs visit our website:

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

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

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



Landscape water audits will include but are not limited to

- A walk through the yard and garden area including all
- · 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 zo



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, pror soil moisture, and reduce the use of fertilizers



Appendix R - 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."

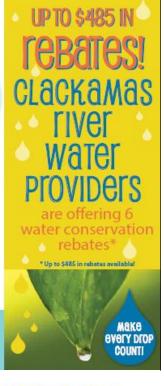


Working Together to Protect and Conserve our Drinking Water

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 toilet 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 bown numbers cannot be mixed and matched from different models.

- Receive an additional \$15 for recycling your old tollet. Visit our website at http://clackamasproviders. 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.

Appendix R - Conservation Rebate Program

A total of 171 rebates were processed this year.

City of Gladstone

Total Rebate Applications = 13 Clothes Washer = 2 Toilets = 11

Oak Lodge Water Services

Total Rebate Applications = 24 Toilets = 13 Clothes Washers = 7 Irrigation Controllers = 3 Rain Sensor = 1

Clackamas River Water

Total Rebates = 29 Toilets = 15 Clothes Washers = 7 Irrigation Controllers = 6 Hose Timer = 1

South Fork Water Board

Total Rebate Applications = 47

Oregon City = 16

Toilets = 6

Irrigation. Controllers = 7

Rain Sensor = 1

Clothes Washer = 2

West Linn = 31

Toilet rebates = 20 Clothes Washer = 5

Irrigation Controllers = 6

Sunrise Water Authority

Total Rebate Applications = 59

Damascus = 8

Toilet rebates = 4

Washing Machine = 1

Irrigation Controllers = 3

Hose Timer = 1

Happy Valley = 50

Toilet Rebates = 20

Washing Machine = 4

Irrigation Controllers = 25

Rain Sensor = 1