Clackamas River Water Providers

Working together to protect and conserve our drinking water.

FALL 2021 News

The CRWP Thanks You!

What's Inside:

For the third year in a row, the CRWP launched our annual summer watering campaign "Fish On the Run, Irrigation Done". We asked our customers to participate and help the Clackamas River by reducing or shutting-off outdoor watering by the beginning of September for the fall fish migration.

This year we had the most customer interaction with the campaign than we have ever had. Ninety-four customers submitted online pledge forms and/or requested yard signs totaling 144 yard signs going out into our communities.

The CRWP would like to thank all of you for your participation in this very important campaign and doing your part to keep water in the Clackamas River for the fall fish migration.

THANK YOU!!!!!!!

For more information contact Christine Hollenbeck at **(503)723-3511** or via email at **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

Preparing and Responding to Emergencies

As water providers we are constantly working to address problems so that you can count on an uninterrupted high quality, safe water supply 365 days a year. This past year and half has been rough with COVID 19, the Riverside Fire, the February ice storm, and more recently the Chlorine Supply Shortage. It has tested our emergency response actions and how we as water providers come together to respond to these kinds of events. Many of these events forced us to operationalize our Emergency Response Plans which also gave us the opportunities to identify gaps in our plans and areas for improvement. With these lessons learned we are making changes so that we will be even more prepared for the next emergency.

As stewards of public health and the environment, we are well versed on managing risks associated with protecting the water supply and planning for both routine and extreme incidents. Read through how we have responded to all these events of the last year.

COVID-19

COVID-19 changed the way we do business. We continue to carry out our day-to-day responsibilities of providing safe and reliable water and sanitation services to communities but had to figure out how to do this while keeping our staff and citizen safe at the same time.

Some of the things that we have been implementing include:

- Identifying essential employees to maintain continuous operations and designating emergency back-up for these employees in case they can't report to work.
- Staggering work schedules to maximize social distancing requirements.
- Working with our IT departments to allow staff who are able, to work from home.
- Encouraging personnel to stay home when they are sick.
- Providing back-up or alternate shift rotation for personnel that need to stay home for themselves or their loved ones.
- Limiting all meetings, gatherings, and travel.

COVID-19 continues to force us to make adjustments as we hope to return to normal in the near future.

Riverside Fire

In September of 2020, the Riverside Fire burned roughly 23% of the Clackamas watershed, the source of our drinking water. During the fire some of our systems experienced very high water demands so Clackamas water providers worked together to move water between the different water systems to ensure all water demands could be met. We also worked closely with Clackamas County to get water conservation messaging out to customers so we could ensure we had enough water to support firefighting efforts. Other systems worked closely with our local fire district to ensure they had access to resilient fire hydrants that could handle extreme use without damaging our water systems. Post fire we purchased new fDom (Fluorescent Dissolved Organic Matter) sensors for the Carter Bridge and Estacada water quality stations so that we will know if we are seeing more Total Activated Carbon caused by the fire in our source water.

We also conducted post fire water quality sampling to better understand the potential post fire water quality impacts, this also included looking at better ways to share water quality data between our water treatment plants. In addition, we continue to work with USGS and other partners to understand how the post fire impact will effect our source water over time so that we have the ability to enhance our water treatment plants or adjust their water treatment process accordingly if needed.

Ice Storm

In February of 2021, a winter storm wreaked havoc in Clackamas and Washington Counties resulting in widespread power and telecommunication outages that impacted many of our water treatment plants and water distribution systems. Without power our water providers are not able to treat or move drinking water into our communities. Many of our water systems have small backup generators that were used at pump stations and a few have larger generators located at their treatment plants. These generators were able to keep water treated and moving through

(Continued on page 3)

Preparing continued

our distribution systems. The challenge then became how to get fuel deliveries to keep the generators going on roads that were difficult to navigate due to the snow and ice, down trees and power lines, and the huge demand for fuel.

Communications during this storm were also a challenge. With many power lines down most phone and internet services were down, so the primary mode of communication was via cell phones or radios. This also impacted water SCADA (Supervisory Control and Data Acquisition) systems. These systems monitor and control field devices at remote sites in our water distribution systems, such as reservoirs. This required water system staff to take manual readings every few hours so they would know how much water was being pumped into their systems and how full their tanks and reservoirs were.

Some of the key lessons learned from this event were: 1) to look at alternative and backup power sources or alternative power supplies, 2) have better generator fueling plans or contracts with multiple fuel providers, 3) look at alternative ways to access important documents if there is no internet connection, 4) explore different communication methods.

The Clackamas River water providers rose to these challenges by finding ways to communicate with each other and moving water between the array of interties we have between our water systems. Many of our providers also asked their customers to conserve water until water system repairs could be made. Although many of our citizens were without lights and heat for a number of days their water service was never interrupted.

Oregon City, 2021

Chlorine Supply Shortage

In June of 2021, we were notified that there was a critical chlorine supply issue that impacted water and wastewater utilities in Oregon and Washington. The supply issue was caused by an equipment failure at a major chlorine manufacturing facility in southern Washington. Chlorine is used in our drinking water treatment process to disinfect our drinking water, and ensure water is safe to drink and use.

Clackamas water providers worked directly with other Oregon water utilities, the Oregon Governor's Office, Oregon Emergency Management, Oregon Health Authority, Department of Environmental Quality, the Oregon Water/ Wastewater Agency Response Network, and federal authorities to get the chlorine supply we need. This included inventorying needs across the state, preparing to share chlorine supply through mutual aid agreements if necessary, and by asking our customers to voluntarily conserve water by reducing indoor and outdoor water use to reduce the amount of the chlorine we needed to use to make our drinking water.

We are now beginning to look at how we might be able to purchase and store larger quantities of chemicals used in the drinking water treatment process so that they can be shared more easily between water systems, and so that we have more supply on hand so we aren't as impacted by supply when issues happen.

Through all of these events we continued to make sure that your water was still flowing thanks the dedicated water treatment plant and water distribution staff that work for our CRWP member organizations.

It's Time to Turn Off Your Outdoor Irrigation Systems

FALL IS HERE! This past summer was one of our longest, warmest and driest summers we have had in a while. But summer is now over, our days are shorter, nights are longer, and it is much cooler. Plants are doing into their dormant stage which means they do not need any supplemental water. For those of you who let your lawns go dormant during the summer and did not water (thank you), you are seeing your lawns beginning to turn green again.

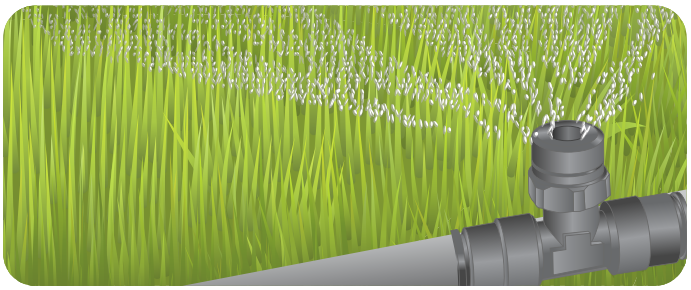
If you haven't already done so all of this means it is time to turn off your outdoor irrigation systems and drain them for the winter to prevent freezing.

Putting Your Irrigation System to Bed for the Winter
Water left in the pipes of your irrigation system can freeze over winter, causing damage to the entire system. You owe it to yourself to make an annual habit of winterizing your irrigation system. That means removing the remaining water from the pipes so there's nothing to expand when temperatures dip down below freezing.

There are three basic methods for draining water from your irrigation system. Which method you should use will depend on the type of irrigation system you have.

Manual Valve Systems
Some irrigation systems are equipped with manual drainage that allows you to empty excess water from the system by simply opening a valve. If you have such a system, shut off the supply of water to the system, look for the manual valves at the ends and low points of the piping. Open all of the valves and drain the water from the system, including the backflow assembly.

Automatic Valve Systems
Other irrigation systems are equipped with valves that will



automatically drain water out of the pipes if pressure falls below a certain number of pounds per square inch (PSI). These can be activated by turning off the water supply and briefly running one of the sprinkler heads to relieve the water pressure in the system. You may still need to drain the water between the shut off valve and the backflow assembly. If the sprinkler heads are equipped with check valves, you will need to empty those separately.

Irrigation System Blow-Out
The final method of winterizing your irrigation system is to force compressed air through the system to discharge excess water through the sprinkler heads. This method is potentially hazardous, both to the wrong types of irrigation systems and to anyone who attempts to do this without taking the proper safety precautions. If you've never worked with compressed air or have blown out an irrigation system, we highly recommend you hire a licensed landscape professional for assistance.

Winterizing your irrigation system is a critical part of annual irrigation system maintenance. It can save you from having to pay for the repair of costly leaks and water line breaks in the spring. Visit our **website** for more information about how to protect your home water systems from freezing and more outdoor water conservation tips.

Fall Quiz:

Answers - *Can be found on page 8*

1. The 'Fish on the Run' campaign offers free yard signs to show that folks are doing their part.

A. True
B. False

2. What is Backflow?

A. Salt water from the Pacific Ocean
B. Water running from the District into your home
C. A backward flow of water back into the public water supply
D. Connection to the sewer system

3. '*We Love Clean Rivers, Inc.*' coordinates with who to help clean-up waterways?

A. Kayakers/Rafters
B. Anglers
C. Scuba divers
D. All of the above

4. The 2020 Riverside Fire burned roughly how much of our Watershed?

A. 90%
B. 23%
C. 5%
D. 75%

Annual Watershed Tour 2021

The Riverside Fire and COVID-19 have caused us to cancel our Annual Watershed Tour for a second year in a row. The national forest above Estacada is still closed to the public and the Delta variant continues to make it challenging to plan for in person meetings and events. We are hopeful that 2022 will let us get back into our watershed so we can share with you this amazing place your drinking water comes from.

Until then, here are some interesting facts about our watershed:

- The 2020 Riverside Fire burned 23% of our watershed.
- The watershed crosses two counties and includes federal, state and private land.
- 72% is publicly owned, 25% is privately owned, and 3% is tribally owned.
- The Clackamas River is host to many productive farms and nurseries.

PGE operates three hydroelectric dams on the Clackamas River mainstem: Faraday Dam (just east of Estacada), River Mill Dam (west of Estacada) and North Fork Dam (upstream from Faraday). These dams have adult fish passage facilities, Faraday and River Mill also have juvenile fish bypass facilities. The Oak Grove Fork of the Clackamas River has two dams, one at Lake Harriet (23 miles east of Estacada) and one at Timothy Lake.

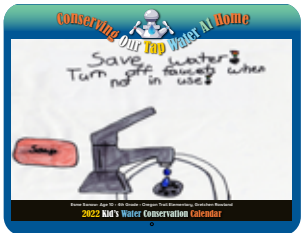
In 1988 Congress incorporated approximately 50 miles of the Clackamas River into the Federal Wild and Scenic River System. Four sections of the River are also designated as State Scenic Waterways. The purpose of these designations is to manage designated segments by protecting their outstandingly remarkable values and maintaining and enhancing the natural integrity of river-related values.

Faraday Dam

In addition the Clackamas watershed supports naturally spawning anadromous fish including steelhead, chinook and coho salmon, as well as lamprey eel and sea-run cutthroat trout. It also provides important habitat for many wildlife species, both game and nongame, and offers a wealth of recreational activities such as fishing, hiking, camping, white water rafting, kayaking, and hunting.

Want to learn more? Check out our Interactive Watershed Map at [https://www.clackamasproviders.org/interactive-map/.](https://www.clackamasproviders.org/interactive-map/)

2022 Water Conservation Calendars Now Available



Each year the Clackamas River Water Providers invite teachers and their students to participate in our annual water conservation calendar coloring contest.

The theme for the 2022 Calendar is "Conserving Our Tap Water at Home". Because of the pandemic and students being taught from home, submitting pictures for the calendar posed some challenges. However, we still had 19 classes from 10 different schools participated in the contest. Thirteen pictures were chosen and posted on the CRWP website for one week (May 3rd – May 14th) 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 2022 calendar.

During the month of October each school that participated in the contest receives a box of calendars to give away to students and families.

In addition the 2022 calendars are available to the public upon request by contacting our office at **503-723-3511** or by emailing **christine@clackamasproviders.org**.

The CRWP annual calendar contest continues to be one of our most successful projects because of the enthusiastic participation of our teachers, students, and community members. Thank you to everyone for your support.

How Our Water Systems Work

The Cross Connection & Backflow Programs

Every Public Water system in the State of Oregon is required by State law to have a Cross Connection Control and Backflow Prevention Program. This program is designed to protect the public drinking water from contamination and/or pollution.

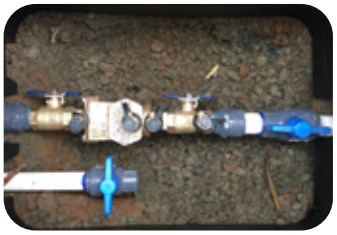
What is a "Cross Connection"? A cross connection is the unintended or intentional direct connection between the public drinking water supply and any other substance which can pollute or contaminate the public drinking water.

What is "Backflow"? Backflow is the unintended backward movement of water from your house back into the public water supply caused by hydraulic conditions such as loss of water system pressure or an increase in pressure after the point of delivery (water meter).

Some of the most common residential cross connections:

- Underground lawn irrigation systems.
- The outside garden hose being left in a swimming pool or hot tub while filling.
- Utility sinks with hoses that hang down below the rim of the sink.
- Liquid fertilizer containers which directly attach to the hose.
- Window washing cleaners which attach directly to the hose.

Public drinking water providers protect the drinking water system from these kinds of incidents by adopting and managing a cross connection and backflow program. *Some of the components of a cross connection and backflow program are:*



- An inspection program to potential and existing
- A backflow assembly instillation program
- An annual backflow testing program
- A public outreach and education program

Once the water provider has identified where cross connections exist in the water system through the inspection portion of the cross connection and backflow program, backflow assemblies are required to be installed at the water meter (point of delivery). These backflow assemblies prevent drinking water, which has been delivered to the customer from flowing back into the public water system. Backlfow assemblies are required to be tested annually by a state certified backflow assembly tester to insure proper operation.

The success of a cross connection and backflow program in part relies on the direct cooperation and understanding of the water provider's customers.

To find out more information about Cross Connection and Backflow programs:

1) Contact your water provider about your local cross connection and backflow program.

2) Visit the State of Oregon's Cross Connection Control and Backflow Program at: **http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/CrossConnection/Pages/index.aspx**

Fall Water Conservation Tips

- The days are shorter and cooler and we are getting some rain to keep things moist. Plants are going into dormancy and water needs have dropped dramatically, it's time to winterize and shut off the irrigation system.
- Mulch garden beds to feed the soil and prevent weeds from growing next year.
- Aerate your lawn and add a top dressing of compost mix to feed the soil promoting deep root growth and creating a more water efficient lawn next year.
- Fall is the perfect time to plant trees and shrubs. The soil is warm, and there is plenty of natural moisture.
- Wash your car at a commercial car wash that recycles its water.
- Thaw frozen food in your refrigerator, not in the sink with running water.
- Run the dishwasher only when it is full.
- Contact the CRWP for a free **Indoor Home Water Audit Kit** and find ways you can save water indoors this winter.

Faces of Drinking Water

by Christine Hollenbeck

For this Fall 2021 issue of our quarterly E newsletter, we interviewed Kyle Arnhart, Senior Water Utility Technician for City of Tigard Public Works – Water Division.

CRWP: How long have you been working for the City of Tigard Public Works?
Kyle: I've been at Tigard for 14 years and the last 12 years were within the water division.

CRWP: How did you acquire your position with the City of Tigard Public Works?
Kyle: I originally got hired to work in the Street Division at Tigard and after two years, I transferred over to the Water Division.

CRWP: What are the duties of the Senior Water Utility Technician for the City of Tigard?
Kyle: I perform the most complex duties required to ensure that the City's water distribution system, facilities, and reservoirs are functioning in the most effective and efficient manner. Such as maintaining and troubleshooting CLA-VAL which includes six main pressure zones and eight sub-zones. Also, operating and maintaining our three wells so they're ready at a moment's notice. These wells are used in emergency situations such as ice storms, power outages, treatment plant issues, etc.

CRWP: What is your back ground prior to water?
Kyle: *Fun Fact*: Tigard is my first, full-time "real" job. I got hired when I was 21. Prior to that, I was a seasonal employee for Clackamas County Transportation, Costco, UPS and enrolled at Clackamas Community College for Business Management.

CRWP: What is your favorite/least favorite part of your job?
Kyle: My least favorite part of the job is the drive home. I live in Oregon City and the majority of time the traffic is not the best. My favorite?!? That's hard! Right now, I would say it is having the ability to be a part of a team that's going to build a new water reservoir that will hold at least 3 million gallons (MG) of drinking water for our community. The new tank should be online by 2024.

CRWP: Do you plan to retire from City of Tigard Public Works?
Kyle: I have many years left until I can think about retirement, but I do know I'll retire from the water profession.

CRWP: : What accomplishments are you most proud of in your public drinking water career?
Kyle: Passing my level three distribution test and finishing my AA Degree within the last year.

CRWP: What advice would you give to someone starting out in the drinking water industry (What do you wish you knew your 1st week on the job)?
Kyle: Always have a spare set of clothes, including boots, and socks! Our job can get wet and dirty quickly! Besides that, start making connections with different water providers and become involved with the American Water Works Association (AWWA), and/or become involved with the AWWA YP (Young Professional) group.

CRWP: How has the industry changed since you started?
Kyle: I think water meter technology has changed the most. Climate change has also affected the water profession the last handful of years and I think we're all making the necessary adjustments.

CRWP: What do you think is most important about your job?

Kyle Arnhart
Senior Water Utility Technician
City of Tigard Public Works

Kyle: Providing safe reliable drinking water to our customers within Tigard and providing great Customer Service.

CRWP: What would you like the public to know about their drinking water and what your role is in delivering their water?
Kyle: From the Clackamas River to the City of Tigard, the water is consistently monitored and tested and is safe to drink. I personally monitor and maintain many chlorine analyzers throughout our system to ensure the quality of water is meeting the state of Oregon and EPA standards.

CRWP: What can the public do to help make your job easier?
Kyle: Use water wisely. I enjoy a green, lush lawn at home. I recommend the public watch and adjust their sprinklers heads once a month to make sure it's hitting the lawn, flowers, and shrubs. It's not beneficial to water the sidewalk or concrete.

CRWP: What's the most significant project you've been involved with in your career?
Kyle: Six years ago, Tigard formed a Partnership with Lake Oswego to build a new drinking water

(Continued on page 9)

Partner Spotlight
We Love Clean Rivers

We Love Clean Rivers, Inc. is a 501(c)(3) non-profit organization with a mission to facilitate community-based river stewardship projects. They are dedicated to cleaning high use rivers such as the Clackamas River by mobilizing the river recreation community in partnership with local environmental, recreation and educational organizations. By coordinating with kayakers, rafters, anglers, scuba divers and tubers they are able to clean-up waterways. Through their efforts they are also able to broaden the engagement with river restoration activities by increasing the recreation community's understanding of threats to watershed health and providing unique opportunities for the river recreation community to give back.

For almost twenty years, *We Love Clean Rivers, Inc.* has been instrumental in coordinating the *Annual Down the River Clean-up* on the Clackamas River, and more recently has been implementing the Clackamas River Ambassador program.

Annual Down the River Clean-Up - This annual trash sweep at the end of summer covers a 20+ mile stretch of the Clackamas River from Estacada to the confluence with the Willamette River in Oregon City and is one of the largest and longest-running on-water cleanup event of its kind in Oregon. Each year about 300 volunteers rally together in rafts, kayaks, and SCUBA gear to scour the stream bed and banks for trash, collecting an average of 2 tons – over half of which is recycled. Since 2003, over 40 tons of garbage — well over the approximate weight of one gray whale — has been removed from the Clackamas River by more than 4,500 volunteers.

Clackamas River Ambassadors – The goals of the River Ambassador Program include improving visitor experiences, communicating river conditions and

obstacles, reducing river congestion, encouraging river stewardship and safety, and connecting visitors to the abundance of services in the Clackamas River region. Throughout the summer, trained River Ambassador volunteers are stationed Saturdays and Sundays at popular river access sites in Barton, Carver, and Milo McIver State Park. Volunteers welcome Clackamas River visitors by answering questions, serving as the friendly face of the recreation and local community.

The CRWP has been providing funding to *We Love Clean Rivers, Inc.* to support these efforts for the past 15 years to help remind our river recreation community how they can be good stewards of the river while playing in our drinking water source. More recently the CRWP just received a State Drinking Water Protection Grant to expand our partnership with *We Love Clean Rivers, Inc.* This work will start later this fall. ,

Fall Quiz:

Answers

Question 1 - Answer is A
Question 2 - Answer is C
Question 3 - Answer is D
Question 4 - Answer is B

Faces Continued

treatment plant. Before that was completed, we had to move two waterlines 24- and 34-inch. Overall, the project was a success and took two months to complete.

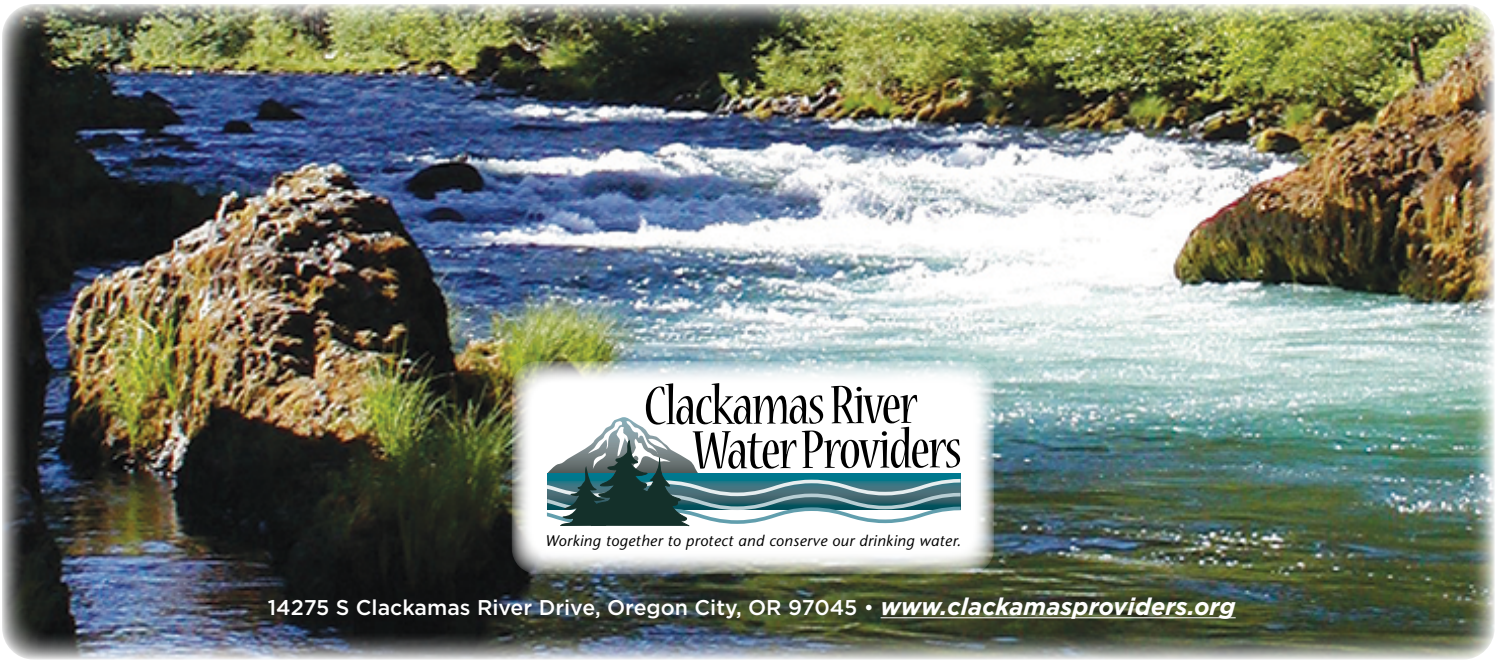
CRWP: What's the one thing you can't live without at work?
Kyle: Our Distribution/Treatment Team and the Internet. Without those two, nobody gets coffee.

CRWP: What would you say H20 is to you?
Kyle: Water is life and my career. It's an essential part of our community and I think our work is under appreciated but I wouldn't trade this profession for anything!

CRWP: What do you do for fun when you're not working?
Kyle: College football season! I'm a Ducks fan but besides that, I enjoy yard work, running, and spending time on my wave runner or paddle board.

Thank you, Kyle, for this interview. I know you are a very busy man these days, not only because of your position with the City of Tigard, but also the Treasurer position you hold with our local Pacific Northwest Oregon Subsection of the American Water Works Association.

It's a wonderful thing to share information about our CRWP member staff with our customers so they can see we are normal folks just like them, the only difference is we dedicate our lives to providing clean safe drinking water and protecting public health (their health) every day.



Our Members:

Clackamas River Water — www.crwater.com

CITY OF ESTACADA — unexpected / untamed / unforgettable — www.cityofestacada.org

THE CITY OF GLADSTONE — www.ci.gladstone.or.us

CITY OF LAKE OSWEGO, OREGON — www.ci.oswego.or.us

OAK LODGE WATER SERVICES — www.oaklodgewaterservices.org

SOUTH FORK WATER BOARD "Pure water since 1915" — www.sfwb.org

SUNRISE WATER AUTHORITY — www.sunrisewater.com

TIGARD — www.tigard-or.gov

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