

SUMMER 2022 News

2022 Summer Water Supply Update

Unlike the last couple of years, this spring and early summer have been unseasonable, cool, and wet. Currently the future conditions for Clackamas County show that the county will not be experiencing drought conditions this summer. Having said that, the rain has stopped, temperatures have been going up more and more, and we all have begun watering outdoors.

How Do You Know How Much to Water?

Install a WaterSense Certified Weather-Based Irrigation Controller. The CRWP provides up to \$100 rebate for our member customers who purchase and install an EPA Certified Weather-Based Irrigation Controller. [WaterSense labeled](#) irrigation controllers reduce water waste outdoors while keeping landscapes healthy by using local weather data and landscape conditions to tailor watering schedules and determine when and how much to water.

Sign Up for the Weekly Watering # Take the guesswork out of watering with the [Weekly Watering Number](#). Our partners the [Regional Water Providers Consortium](#) have contracted with a weather forecasting service to provide a free zip code specific Weekly Watering Number each Thursday (April - September). This number is based on historical data (evapotranspiration, rainfall, and other data points) from the previous week and is used to determine how much to water lawns and gardens during the current week. It's free and includes smart watering tips to help you save water all summer. [Sign up today](#) to receive your number via text or email.

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Schedule a FREE Landscape Water Audit. The CRWP offers free Residential Landscape Water Audits. Our landscape auditor will assess your lawn and garden areas, irrigation system and more. Upon completion of the audit, you will be provided written recommendations to help you manage your outdoor water use for a more water efficient landscape and irrigation system. Visit our [website](#) for more information about our FREE landscape water audits and sign-up today.

The CRWP has all sorts of tools and resources to help you save water at home. Visit the [Conservation pages](#) on our website to learn more about indoor and outdoor water conservation.

To stay on top of local climate conditions in Clackamas County and get alerts when condition change, go to <https://www.drought.gov/location/Clackamas,%20Oregon> and click on "Sign Up for Alerts".

Climate Resiliency

One of the goals of the Clackamas River Water Providers is to better understand local impacts of climate change on water quality and quantity in the region. It is also to identify climate mitigation and adaptation strategies that will help ensure a more resilient Clackamas River watershed and drinking water source for CRWP members. Some of these efforts are highlighted below.

Clackamas Watershed Resiliency Project

In 2018 the CRWP worked with Portland State University faculty and graduate students and the Institute of Sustainable Solutions (ISS) on a multi-year project aimed to provide water resource stakeholders in the Clackamas River watershed with guidance for managing resilience in the face of climate change.

Phase I of this project was to establish a baseline of historical trends in the Clackamas River watershed relevant to climate change and identify issues pertinent to stakeholders in the context of climate change (e.g., diminished summer water supply, water quality degradation resulting from urban development, and intense rainfall, etc.).

Phase II of this project sought to continue that research with two objectives: (1) Applied Climate Science, (2) Climate Adaptation Planning. The goal of the project was



to help the CRWP understand local impacts of climate change on water quality and quantity in the region; and develop strategies to sustain a healthy, reliable water source. To see the results from this research, go to <https://sites.google.com/a/pdx.edu/maxnp/research/Clackamas-watershed>.

EPAs Climate Resilience Evaluation and Awareness Tool

In late 2021, the CRWP worked with the Environmental Protection Agency (EPA) under their Creating Resilient Water Utilities Group to use their comprehensive Climate Resilience Evaluation and Awareness Tool (CREAT), to assess risk to utility assets and operations. The asset in this case was the Clackamas River and watershed. To learn more about these efforts, see the CRWP CREAT Exercise Case Study document, [CLICK HERE](#).

There are a number of climate mapping tools available today that let you visualize climate change impacts. To see the change for yourself go to <https://www.clackamasproviders.org/watershed-resiliency/> and check out the various tools.



Partner Spotlight

Oregon Department of Fish and Wildlife (ODFW)

The Oregon Department of Fish and Wildlife's (ODFW) mission is to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations. ODFW implements this mission by working to demonstrate effective stewardship of Oregon's fish, wildlife, and their habitats while also looking to increase and diversify public use and enjoyment of Oregon's fish and wildlife resources.



To demonstrate effective stewardship of Oregon's fish, wildlife, and their habitats an overarching plan called the Oregon Conservation Strategy was developed. The Oregon Conservation Strategy combines the best available science and

conservation priorities with recommended voluntary actions and tools for all Oregonians to define their own conservation role. Staff utilize the Oregon Conservation Strategy to integrate needs for specific species and habitats into recommendations related to county land use planning.

Protecting water for fish and wildlife is an ODFW priority. Extreme heat events have increased in frequency and intensity and are expected to worsen in the coming decades, further impacting Oregon's human and natural communities. Shifts in precipitation events from snowpack runoff to rain increase flows in fall and winter and decrease flows in spring and summer. Impacts from these extreme events directly contribute to fish kills and human health concerns in the Clackamas basin. Clackamas River Water Providers, ODFW, and other partners work closely to meet goals of providing high quality drinking water while maintaining enough water in the Clackamas River for continued persistence of native fish. To attain these goals, coordination begins in the late spring prior to the flows dropping to critical levels. When flows drop to critical levels, negotiated releases of water stored in Timothy Lake increase flows for a short period of time.

Drought impacts such as elevated water temperatures and decreased flows result in impacts to fish distribution ranges and migratory processes. ODFW Staff focus on addressing priority fish passage obstructions identified in the statewide Fish Passage Priority list. In 2021, ODFW and partners removed an existing, remnant flashboard dam structure located in Eagle Fern Park to fully restore fish passage during the range of flow conditions that are suitable for both adult and juvenile

salmon and steelhead to navigate this reach of Eagle Creek. Additional project elements were also incorporated into the design to address existing site conditions, construction access constraints, and a request by Parks, to the extent feasible, retain a sandy bar located upstream along the right bank that is utilized by Park users.

The Lower Columbia River Recovery Plan for Salmon and Steelhead describes the population status and recovery plans for salmon and steelhead. The Recovery Plan provides an informed, strategic approach that is based on science, supported by stakeholders, built on existing efforts, and includes new recovery efforts. Clackamas basin partners, including ODFW, in 2019 were awarded an Implementation Focused Investment Partnership grant from Oregon Watershed Enhancement Board. Projects funded by this grant opportunity include recent habitat restoration projects in North Fork Deep Creek and a side channel reconnection of the mainstem Clackamas River in Milo McIver State Park. Additional habitat restoration projects that will benefit salmon and steelhead are scheduled for implementation in the Clackamas basin over the next several years utilizing this funding.

To increase and diversify public use and enjoyment of Oregon's fish and wildlife resources staff look for opportunities to maintain high quality experiences that have access to abundant resources for all user groups. Providing diverse, consistent fishing opportunities for the public often involves hatcheries. In the summer of 2021, a new gravity fed water intake was commissioned at Clackamas Hatchery. The old intake relied on aging electric pumps to provide water to the hatchery. The new system is more reliable and saves on energy costs. This reliable water supply allows Clackamas Hatchery to rear fish at the facility, which is the preferred best management practice, even during periods of low water. Prior to the new system fish had to be moved off station during the summer months.

To improve angler's experience, a recent ODFW study focused on angler effort and catch rates of stocked rainbow trout in Timothy Lake. The study found that larger fish were caught at higher rates. This information led to ODFW increasing the size of stocked rainbow trout in Timothy Lake.

Back in October of 2021 CRWP and PGE staff sat down with ODFW's Ben Walczak to talk about Climate Change the Clackamas River and how to tackle drought. To listen to the ODFW Beaver State Podcast Episode 71: **Water Part I – The Clackamas Watershed** (October 2021) [CLICK HERE](#).

Coming Soon!

Fish on the Run, Irrigation Done!

In addition to providing drinking water to over 300,000 people in Clackamas and Washington counties the Clackamas River is home to threatened and endangered salmon and steelhead virtually year-round. Most of the year there is plenty of water in the river, however in the later summer and early fall when the fall fish migration begins the Clackamas River is flowing at its lowest levels and we get the least amount of rain fall.

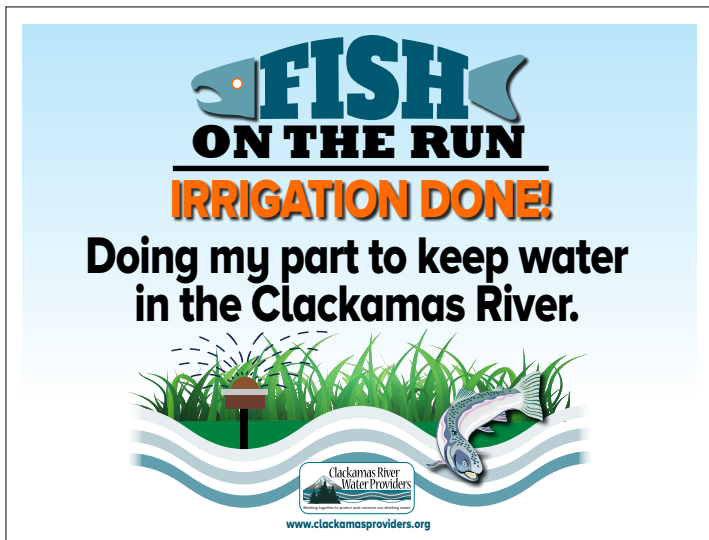
For the 4th year in a row the CRWP are asking our customers to participate in our “Fish On the Run, Irrigation Done!” annual summer watering campaign to help the River by reducing or shutting-off outdoor watering by September in time for the fall fish migration.

Coming in mid-August, keep your eyes on our [website](#) for more information to help you take part in our annual “Fish On the Run, Irrigation Done!” campaign. The more water we can conserve the easier this journey will be for these threatened and endangered salmon species.



For more information contact Christine Hollenbeck at (503)723-3511 or via email at: christine@clackamasproviders.org.

Take the *pledge* in August and receive a ‘Fish on the Run’ yard sign (left) to show your support for the Clackamas River.



Summer Quiz:

Answers - Can be found on page 7

1. ODFW failed to remove a dam structure in Eagle Fern Park to fully restore fish passage for both adult and juvenile salmon.

- A. True
- B. False

2. Overwatering your lawn can waste up to 30% through:

- A. Evaporation
- B. Runoff
- C. Overspray
- D. All of the Above

3. Is Clackamas County expected to experience drought conditions this summer?

- A. Yes
- B. No

4. Which of the following leftover pharmaceuticals are not acceptable:

- A. Inhalers
- B. Aerosol Cans
- C. EpiPens
- D. All of the Above

Proper Disposal of Leftover Pharmaceuticals

Proper Pharmaceutical Disposal – Why this is important. Research shows that currently many unwanted or expired household and prescription medications are improperly disposed of. We now know that flushing drugs down toilets or putting them into the garbage both have damaging effects on our environment and can contaminate our surface and groundwater supplies. Drinking water and wastewater treatment plants are not specifically designed to treat for these kinds of chemicals. In addition, unused or expired prescription medications are also a public safety issue, leading to accidental poisoning, overdose, and abuse. Therefore, properly disposing of unwanted pharmaceuticals and drugs will help us keep our rivers and drinking water clean and our communities safe

What you can do?

- Take only the proper amount of medicine needed or prescribed. Excess pharmaceuticals pass through the body and end up in our wastewater where they can be difficult to remove.
- Never flush unused prescription or over-the-counter medication down the toilet to dispose of them.
- Bring unused or old prescriptions to a Drug Drop Off Box location near you so that the drugs can be properly disposed of in a safe and environmentally friendly manner.

What is accepted and not accepted in the boxes? Drugs can be in their original packaging with or without the label or put into any kind of leak and/or spill-proof container or ziplock bag.

Acceptable items for deposit include:

- Prescription medications and samples
- All over-the-counter medications
- Vitamins
- Pet medications
- Medicated ointment tubes
- Liquid medication in leak-proof containers

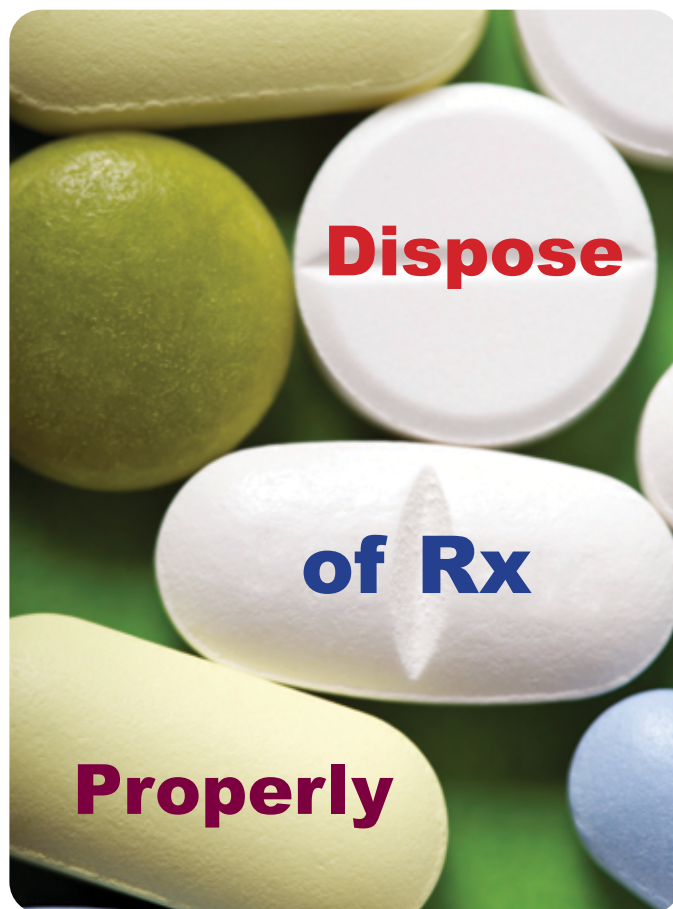


Items NOT acceptable for deposit:

- Thermometers/Sharps/Syringes
- Bloody or infectious waste
- Hydrogen peroxide
- Aerosol cans
- IV bags
- Inhalers
- EpiPens



There are a number of permanent drop boxes in Clackamas County. To find a location near you go to <https://www.clackamasproviders.org/drug-take-back-boxes/> to see a full list of locations.



How Water Systems Work

Utility Billing

Utility Billing is typically a work group within the Finance Department of a city or water provider which is responsible for the billing and maintenance of customer accounts. Along with charges for water, your utility bill may also include charges for Sewer, Stormwater or Surface Water Management (SWM) fees, as well as a Transportation Utility Fee (TUF).

Depending on your water provider you may get a bill every month or bi-monthly. Most water bills have two components, a service charge or base rate and a usage or consumption charge based on every one hundred cubic feet (CCF) of water used. One CCF is equivalent to 748 gallons.

The service charge or base rate typically pays for ongoing operations, maintenance and administration of the water system. The usage or consumption charge typically pays for Capital Improvement Projects for water distribution and water treatment improvements.

Through the water bill customer's pay, your water provider is able to provide clean, safe drinking water in a legally sound, cost effective, and efficient way. This practices good stewardship of our financial and natural resources and environment.



Wondering WHY Your Bill Seems Higher Than Expected?

Often leaks both inside and out can go undetected. Make sure pipes are properly winterized, fix all dripping faucets, check toilets for quiet leaks and have an annual maintenance program for outside irrigation systems. Over time even the smallest leaks can add up. If you need help with your utility bill, contact your water provider's customer service department. Who's your CRWP water provider? [CLICK HERE](#).

Keeping Your Lawn? Save Your Water.

When you water your lawn, you could be wasting as much as 30% of the water through evaporation, runoff, overspray, and overwatering. This can add up to bigger water bills and less efficiency. Does that mean you have to ditch your lawn? Nope. But a few simple practices can help you save water this summer!

Do I need to water my lawn? No. In our area, a well-maintained lawn can be left unwatered during the summer months without damaging the grass. The lawn won't die, it'll just go dormant (think of it as taking a long summer nap). Your green lawn will return quickly when the rainy season starts.

How much should I water my lawn? If you do plan to irrigate this summer, it's a good idea to first [measure your sprinkler's output](#). Take 15 minutes today to see how long it takes your sprinkler to water one inch, and then, make it easy on yourself and let the experts tell you how much to water. Sign up for the free [Weekly Watering Number](#).

Mow more, water less. You can also save water by mowing frequently, about once a week. Mowing a little each time can encourage robust root development. And stronger roots mean your lawn will need less water and maintenance to look great. While the ideal mowing height depends on what kind of grass you have, a good rule of thumb is to always maintain two-thirds of the original height of the lawn. Looking for more in-depth information on lawns or lawn alternatives? Check out these resources on lawns, lawn alternatives, and hardscapes:

- [Planting & Maintaining Your Lawn](#) (PDF) brochure
- [Turfgrass Water Conservation Alliance](#) website
- [Regional Water Providers Consortium](#) blog post about lawns
- [7 Steps for Creating a Waterwise Landscape](#) (PDF)
- [Waterwise Plant Guide](#) (PDF)

This article was provided by the [Regional Water Providers Consortium](#).

Water wisely
this summer with your
Weekly Watering Number!
SIGN UP AT REGIONALH2O.ORG

5 Easy Summer Water Conservation Tips

Properly managing your outdoor water use during the summer months isn't only important to do because it can help you manage your water bill, it is also the right thing to do.

1. Plant Plants adapted to the Willamette Valley.

Visit our website to view the Water Efficient Plants for the Willamette Valley plant guide. Chose plants that are adapted to your specific soil, water, and light conditions.

2. Water plants in the morning or evening.

Watering plants in the morning or evening (while it's cool), allows the water to absorb into the soil to reach the roots without losing too much water to evaporation.



3. Wash your dog on the lawn. Bath your dog outside during the summer and water the lawn at the same time.

4. Hand-water your plants. Instead of using the irrigation system or a sprinkler, water your plants by hand allowing you to water only the plants that need it.

5. Go to a car wash. Some car washes use low-flow washing systems and recycle the water which is better for the environment.

Summer Quiz:

Answers

Question 1 - Answer is B

Question 2 - Answer is D

Question 3 - Answer is B

Question 4 - Answer is D

Faces of Drinking Water *by Christine Hollenbeck*

For our Summer 2022 interview article we interviewed Bret Bienerth, the Lake Oswego/Tigard Drinking Water Treatment Plant Manager.

CRWP: How long have you been working for the Lake Oswego/Tigard Drinking Water Treatment Plant?

Bret: I have been here for 11 years now. I began working at this facility as an intern while I was attending the Clackamas Community College Water and Environmental Technology WET program.

After about a year I came on as a full-time employee. For the first 5 years I worked as a swing shift plant operator.

While I was working the swing shift, on my down time I did data entry for our Asset Management Program which taught me a lot about our plant. When the Assistant Manager Position came up, I applied for it and was granted the position.

When Kari Duncan, our Plant Manager at the time moved-on, I applied for the Plant Manager Position and here I am.

CRWP: What is your background prior to working in drinking water?

Bret: I was in the Army repairing dental equipment, and then went on to Washington State University and got a teaching degree. After college I worked for the City of Vancouver, WA in the Parks Dept. and read meters. Unfulfilled, and need to do good for my community, I took a position teaching 2nd grade in Battle Ground. I taught for 3 years, but soon realized teaching wasn't really for me, so that's when I enrolled at Clackamas Community College in the WET program. It all has gotten me to where I am today.

CRWP: What is your favorite/ least favorite part of your job?

Bret: I enjoy having a career that enables me to do something critical for the community. I don't like being the center

of attention, I prefer doing my part in the background.

My least favorite part of my current position is getting used to having a public face.

CRWP: Do you plan on retiring from the Lake O/Tigard treatment Plant?

Bret: Yes.

CRWP: What accomplishments are you most proud of in your career with the Lake O/Tigard Treatment Plant?

Bret: I would have to say I am proud of how I have worked my way up to my current position as Plant Manager. I like having a position that matters.

I enjoy taking part in the responsibility of matching the correct person with the correct position here at the plant.

CRWP: What advice would you give to someone starting out in the field (What do you wish you knew your first week working in drinking water)?

Bret: When I first began working here full time, I took on a roll that wasn't mine (the Asset Management roll). Taking on that duty has led me to where I am today. My advice to someone who is starting out new in this industry is to not be afraid to try new things, even if you feel you don't have the experience or don't know anything about it. Do it, trying new things will open doors for you.

CRWP: : How has the industry changed since you started?

Bret: Increased levels of automation, and the increase of high technology.

Currently, our plant has to have employees onsite 24/7. We are working towards night automation. This would be a great thing for our plant and having familiarity with automation is important to this industry.

Bret Bienerth Plant Manager Lake Oswego/Tigard Treatment Plant



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

Bret: At this time, and in my current position as the Plant Manager, I think the most important thing I do is being responsible for providing high quality drinking water to our communities.

CRWP: What would you like the public to know about their drinking water?

Bret: I want our customers to know their water is safe to drink and affordable. I also want our customers to understand the scale/volume of water our plant produces every day.

The capacity of this plant is 38 million gallons of water a day (MGD). During the summer we produce between 17-20 MGD, and in the winter about 7 MGD.

CRWP: What is the most significant project you've been involved with in your career?

Bret: Being an operator, and being involved during the rebuild and upgrade of this treatment plant. Also, I'm currently making operational improvements to the plant such as a back-up power source here as well as at the intake structure.

CRWP: What are the top priorities for your agency over the next few years?

Bret: Some of our top priorities are resiliency focused such as, a back-up power source, stable chemical supply chain, having a better idea of what

(Continued on page 10)

Brown Grass or Green, or Somewhere In-Between

While there are many different opinions about grass, the one consistent theme is that it uses a lot of water. There are a couple of reasons for this, one is that we tend to over water it and two is that cool season grasses, the types most commonly planted here, do not like heat and drought. Their natural tendency is to go dormant during the hot summers. When plants go dormant they restrict energy to the leaves which causes them to turn brown. Any extra energy is then stored in the root system, which is used during the growing season.

For cool season turf grass the optimal growing season is during the wet and cool part of the year. For our region that season runs from late September through May and often well into June. The following summaries on the pros and cons of turf grass may help you make a decision this year and see if taking on a different strategy is in your best interest.

Brown Grass: (upsides)

- Dormancy is not death. Dormancy will begin as soon as the daily temperatures approach a consistent 80° and the moisture in the soil begins to dry out. The grass will remain dormant until the temperature drops back down and moisture begins to reach the root system.
- You will need to water your lawn well only once or twice per month, depending upon how much summer rain we get.
- Reduces pesticide use. While the grass is dormant, some weeds may get started, these can be easily controlled by digging them up or spot treating them with an herbicide.
- Brown lawns are much less attractive to moles, and other pests.
- Dormant lawns do not need to be mowed. Once it goes to sleep, the lawn becomes low cost and low maintenance.

Brown Grass: (downsides)

- Does not do well with heavy play or foot traffic. Brown grass is hard and the crown of the plant can be damaged by continual foot traffic. If you have kids, this might not be the best option for areas that they are active in or if you have social functions.
- It is hot and does not help cool the temperatures around a home.

- Takes 3 to 5 weeks of regular watering to snap out of dormancy and begin to green up.

Green Grass: (upsides)

- Has a cooling effect that can be beneficial. In and around the walls of your home or the deck or patio, grass can cool the ambient temperature as much as 10°; making outdoor gathering areas more pleasant and helping to hold down energy costs to cool your house.
- Handles high traffic and play better. It is also much softer to land on. So for areas of your yard that are regularly used for sports, or play or social gatherings, green grass is probably a better choice.
- Acts as a filter when you wash your cars on it, helping to keep pollutants and detergents out of the storm system

Green Grass: (downsides)

- Needs a high level of water, amendments (fertilizers/ herbicides) and labor to maintain it.
- Typically shallow roots (2"-3") easily stressed.
- Attracts moles and the food they eat. Moles are carnivores and their favorite foods are earthworms, grubs and beetles all of which flourish in a moist environment. A Well-watered lawn is always good hunting grounds for moles.

Somewhere in between: (upsides) managed stress.

- Requires less water and less maintenance (mowing). It is kept just on the edge of dormancy. Takes about 30% to 40% less water to maintain and about half the mowing days.
- Promotes deeper growing roots.
- Greens up in about 1 week if needed. Usable for play areas.
- Less attractive to moles and other underground living pests.

Somewhere in between: (downsides) managed stress.

- Not uniform in appearance. Shaded areas will be greener than slopes or exposed areas.
- Will provide some, but not much in the way of cooling.

The best strategy would be a combination of all three. If you have areas that are rarely if ever used, let them go brown. Keep the areas in and around your house and gathering areas green. If you have kids, select a portion of your yard for their use and keep it green, or you might want to use managed stress for all of your yard and just add water when you need it for an event or function.

Written by Kevin McCaleb, Lake Oswego
Water Conservation Specialist



Faces continued

our source water supply situation will be like in the future, understanding climate change and how it effects our water supply.

CRWP: If you could change on thing about state or federal regulatory programs, what would that be?

Bret: The State of Oregon's Operator Certification program. I would like to see some improvements made which would make it much easier for operators to see what they have in terms of their continuing education and what they need.

I would like to see a system where Operators can log-in to their own accounts and see where they are as far as their continuing Education Units (CEUs). A platform similar to what

the state of Washington has would be nice. I'd also like to see easier Cross-Over for Operators between the states.

CRWP: What is the one thing you can't live without at work?

Bret: People, power, and water.

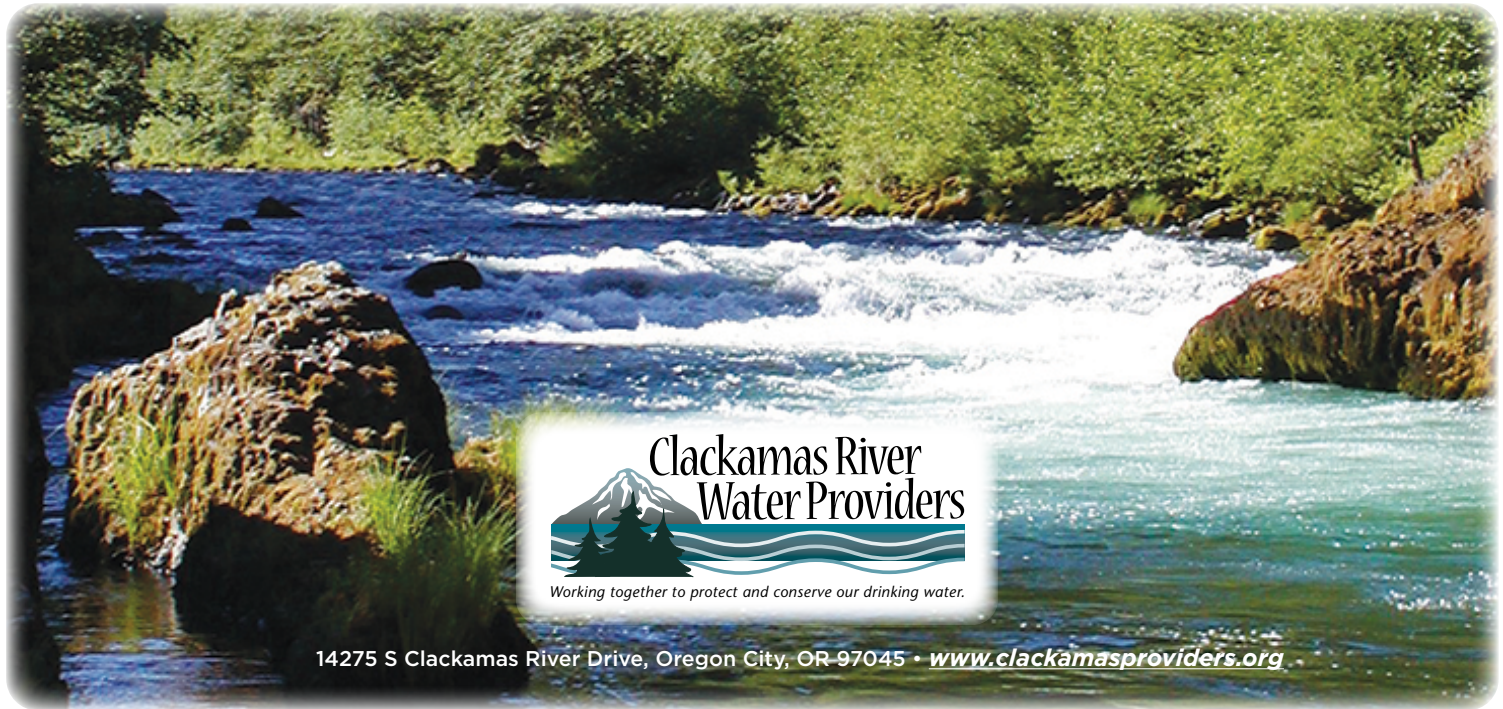
CRWP: What would you say water is to you?

Bret: It is my way of serving my community.

CRWP: What do you do for fun outside of work?

Bret: I race sport cars on a race track like at PIR.

Adding to Bret's accomplishments, he has recently been elected Vice-Chair of our CRWP Board of Directors. We all look forward to working more closely with Bret as our group moves into the future.



Our Members:



www.cwater.com



www.cityofestacada.org



www.ci.gladstone.or.us



www.ci.oswego.or.us



www.oaklodgewaterservices.org



www.sfwb.org



www.sunrisewater.com



www.tigard-or.gov

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