



## Summer 2019 News

# Fish on the Run, Irrigation Done!

## **FISH** **ON THE RUN** **IRRIGATION DONE!**

We all know practicing water conservation year-round is the most important thing we can do to be good stewards of our drinking water source.

This summer the Clackamas River Water Providers (CRWP) is asking their water customers to take another step to help keep water in the Clackamas River by

reducing or shutting-off outdoor watering in time for the fall fish runs.

In addition to providing drinking water to over 300,000 people the river is home to migrating salmon and steelhead virtually year-round. Most of the year there is plenty of water in the river, however summer is the time of year when the Clackamas River is flowing at its lowest levels and we get the least amount of rain fall. This is especially important in late August as Fall Chinook and Coho Salmon begin returning to the Clackamas River on the way to their spawning grounds. As our summers are getting longer and hotter, making sure there is enough water in the river for the fall fish runs is getting more challenging.

*(Continued on page 2)*

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# **FISH ON THE RUN IRRIGATION DONE!**

## Doing my part to keep water in the Clackamas River.



*Yard Sign you will receive when you  
take the 'Pledge'.*

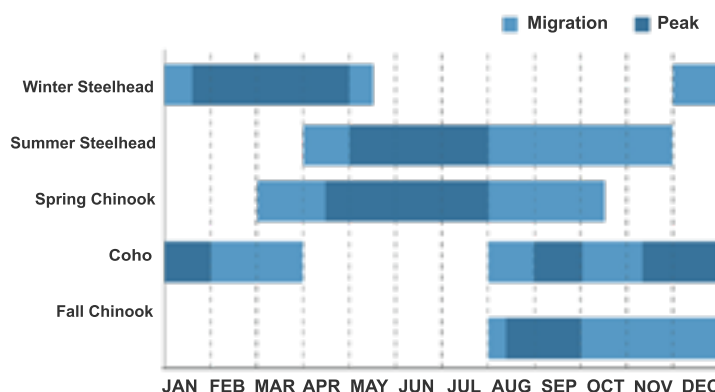
So, if you live in Clackamas or Washington County and get your drinking water from the Clackamas River, whether you use a hose or have an underground watering system to water your yard and garden, and care about protecting our river water for people, and wildlife here's your chance to be part of our "Fish On the Run, Irrigation Done" campaign to help migrating fish.

Starting in August, please go to  
**www.clackamasproviders.org** to find out what kind of

changes you can make to your outdoor watering to ensure that you are using our drinking water in the most efficient ways possible.

Take the pledge and receive a free yard sign letting neighbors know that you are doing your part to keep water in the Clackamas River for fish. 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**



*Graph Showing the annual fish  
migrations in the Clackamas River.*

## Summer Quiz:

Answers - Can be found on page 8

**1. How many hydro-electric plants does PGE operate on the Clackamas River?**

- A. One
- B. Five
- C. Seven
- D. Four

**2. When plants go dormant, they restrict energy to the leaves which causes them to turn brown.**

- A. True
- B. False

**3. It's good to water your lawn how many inches each week?**

- A. Five inches
- B. Twelve inches
- C. One inch
- D. None of the above

**4. Lawns require less maintenance and water than other plants.**

- A. True
- B. False

# Brown Grass, Green grass or somewhere in the middle

While there are many different opinions about turf grass, the one consistent theme is that it uses a lot of water. We tend to over water our lawns and the type of turf grass commonly used in our area are cool season grasses which naturally go dormant during the hot summer months.

When plants go dormant, they restrict energy to the leaves which causes them to turn brown. Any extra energy is stored in the root system, to be 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 to better manage your lawn areas and see if taking on a different strategy can help you conserve water leaving it in the river for fish.



## **Brown Grass:**

- 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 a 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:**

- 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.
- 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:**

- Has a cooling effect that can be beneficial. Green grass can cool the ambient temperature as much as 10°; making outdoor gathering areas more pleasant.
- Handles high traffic and play better. It is also much softer than brown grass. Green grass is probably a better choice for areas that are regularly used for sports, play, or social gatherings.



## **Green Grass:**

- Needs water, amendments (fertilizers/herbicides), and labor to maintain.
- Green lawns that are over watered typically have shallow roots (2"-3") and is easily stressed.



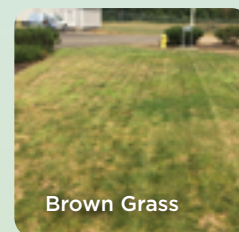
## **Somewhere in the middle (managed stress):**

- 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 roots.
- Greens-up in about 1 week if needed.

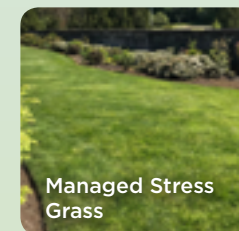


## **Somewhere in the middle (managed stress):**

- 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.



Brown Grass



Managed Stress Grass

The best strategy for managing your lawn 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. This summer think about doing something different with your lawn areas and be more water efficient.

Visit our website at [www.clackamasproviders.org](http://www.clackamasproviders.org) for more tools and information about managing your outdoor water use.

*Adapted from an article written by Kevin McCaleb, City of Lake Oswego*



# Outdoor Water Conservation

As the summer months approach, we think about water. Lots of water... like, swimming in pools, washing our cars, and watering our lawns and gardens. But, did you ever stop to think that



summer is a time when our water source, the Clackamas River is most strained and resources are limited?

As much as we all love summer, it's important that we conserve our water resources by using water wisely. About 32% of a household's total yearly water bill goes to watering

during the summer months. A large part of this may simply be the result of over-watering, something that can be controlled. With a few tips, you can learn how to change your outdoor water use and leave more water in the river for fish.

## CONSIDER THESE OUTDOOR WATER-SAVING TIPS:

- **Water Wisely:** Watering thoroughly, but infrequently, will produce a deep-rooted lawn that is more water-efficient and drought tolerant. A good rule of thumb is to water "one inch of water a week" to maintain a healthy lawn during the summer months. **Water-Wise Tips:** Over-watering causes 75% of turf problems. Check out our article on page 8 to determine how long it takes your watering system to water 1 inch of water.
- **Mowing:** Keep your lawn 1" to 3" long. Grass this length shades the roots, requires less water and mowing, and allows the root system to become deeper and more efficient in water storage. **Water-Wise Tip:** Set mower blades one notch higher than normal since longer grass means less evaporation.
- **Ground Cover:** Lawn requires more water and maintenance than other plants. Evaluate your lawn and see where grass is practical and functional. Keep lawn areas small. Where foot traffic is infrequent or where slopes are steep, consider ground covers or water efficient plants. **Water-Wise Fact:** Native and low water use plants look beautiful and save water. Plant less lawn and more plants that are water efficient and suited to our climate.

• **Mulches:** Covering your soil with compost or mulch will help maintain soil moisture, minimize evaporation by keeping the soil cool, and help prevent weeds from growing. **Water-Wise Tip:** Avoid using inorganic mulches such as rocks and gravel as these will actually re-radiate the sun's heat and can increase the amount of water that surrounding plants need.

## • Sidewalks and Driveways:

Remember to sweep your driveway and walkways of debris, don't use the garden hose. Put "shut-off" nozzles on all your hoses. **Water-wise Tip:** Let children play with the garden hose while watering the lawn.

• **Swimming Pools:** If you have a pool, regularly check for leaks and use a cover to slow evaporation. **Water-wise Fact:** A pool cover will maintain your pools beauty, keep your pool cleaner, and reduce the need to add chemicals.

• **Irrigation:** Consider using drip irrigation or soaker hoses for gardens and shrubs. These systems apply water directly to the plant roots, thereby reducing waste from evaporation or run-off. **Water-wise Tip:** To be more water efficient adjust your watering on cool, overcast, or rainy days.

• **Large Landscapes:** Use an EPA Certified Smart Irrigation Controller. These controllers use local weather conditions to monitor the amount of water lost to evaporation by the sun, and the amount of water transpired by the plants. The controller then sets the watering time to deliver only the amount of water that has been used. Smart Controller systems use up to 50 percent less water than standard irrigation systems. **Water-wise Tip:** For rebate information on EPA Water Smart Controllers and other outdoor water conservation items, go to our web site at: [www.clackamasproviders.org](http://www.clackamasproviders.org).

• **Automobiles:** To save water take your car to a commercial carwash that recycles and reuses the water. **Water-wise Tip:** If washing your car at home park the car on the lawn, use a bucket of soapy water and use a "shut-off" nozzles on your hose.



# Clackamas River Source Water Assessment Update

In 1996, the Safe Drinking Water Act was amended to required all states to establish and implement a Source Water Assessment Program (SWAP) – in Oregon this was done by the Department of Environmental Quality (DEQ).

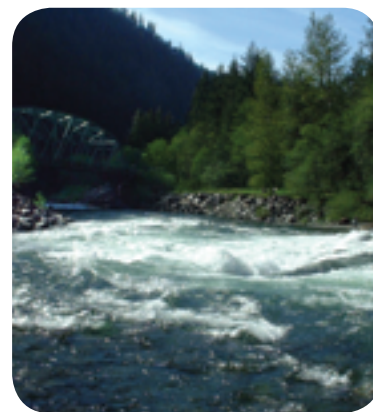
These Source Water Assessments were to defined the land area contributing water to each public water system, to identify the major and potential sources of contamination that could affect the drinking water supply, and to determine how susceptible the public water supply is to this potential contamination.

This also included looking at areas of concern within surface watersheds of ground water recharge areas that were geologically or hydrologically sensitive and therefore susceptible to contamination events or known sites of contamination that could potentially affect the source water.

The purpose of these Assessments was to provide information so that the public water system staff/operators, consumers, and community citizens could begin developing strategies to protect their source of drinking water.

In 2016 DEQ and the Oregon Health Authority (OHA) began updating the original source water assessment in Oregon and just recently they completed the new source water assessment for the public water systems that get their water supply from the Clackamas River.

This updated assessment addresses the drinking water source area for the Estacada, Clackamas River Water, North Clackamas County Water Commission, South Fork Water Board, Lake Oswego Municipal Water, City of Tigard, and Sunrise Water Authority as well as their wholesale customers.



This document updates the original Source Water Assessment work completed in 2005 by the state and water providers to identify natural and human-caused risks to your source water. This updated assessment is intended to provide additional information and resources to assist the CRWP in implementing local drinking water protection efforts.

The updated report for the Clackamas River Public Water Systems USWA, can be found on DEQ's web page at [www.deq.state.or.us/wq/dwp/swrpts.asp](http://www.deq.state.or.us/wq/dwp/swrpts.asp). To find out more about what the CRWP is doing to protect our drinking water source, check our Drinking Water Protection Plan at: [www.clackamasproviders.org/drinking-water-protection](http://www.clackamasproviders.org/drinking-water-protection)

## Basin Partners - Portland General Electric and the Clackamas River

For more than 125 years, PGE has been powering Oregonians at work and at home. PGE's history is entwined with the region's history, and nowhere is that truer than along the Clackamas River. Dating back to the early 1900s, PGE has maintained four hydroelectric plants on the Clackamas River: Oak Grove, North Fork, Faraday, and River Mill.

The Clackamas Project provides enough energy to power up to 78,000 homes in the Portland Metro area. In addition to providing sustainable energy, PGE's Clackamas hydroelectric facilities create reservoirs which provide recreational opportunities for the public.

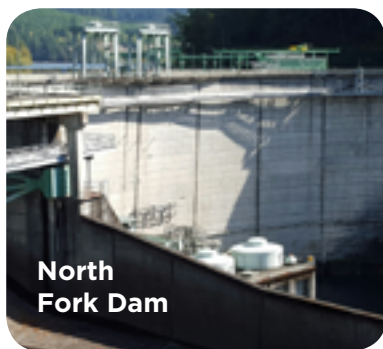
**River Mill** has been generating power since 1911 and is an Ambursen dam, which is an innovative concrete slab and buttress dam, which is on the National Register of Historic Places. It generates enough power for more than 10,000 homes.



(Continued on page 6)

# Basin Partners *continued*

**Faraday** was the first dam on the Clackamas, and began operation in 1907 as the Cazadero Dam. It was rebuilt after damage from a 1964 flood. For more than a century, this dam has been diverting water to Faraday Lake and through the powerhouse, generating enough electricity to power more than 17,000 homes. As part of PGE's continued investment in upgrades to the Clackamas hydro system, the Faraday Powerhouse is being removed and replaced to address long-term operational safety and improve generation efficiency, assuring a stable power supply for decades to come.



**The North Fork Dam** has been in operation since 1958, and generates enough electricity to power nearly 20,000 homes. PGE also uses the dam to control flow downriver to Faraday and River Mill.

**The Oak Grove** powerhouse, has been in operation since 1924, and is PGE's most efficient hydro facility. A sharp drop in elevation means water flows into the powerhouse at a very fast speed, generating enough electricity to power more than 24,000 homes.

In 1956, **Timothy Lake** was created to provide additional water storage for the Clackamas River Project. In the summer months, the lake is maintained at full pool to provide recreation opportunities. During the rest of the year, the lake is managed to capture rain and snow melt for peak operation of PGE's Oak Grove plant.

Timothy Lake has kokanee, eastern brook, rainbow and cutthroat trout. The Oregon Department of Fish and Wildlife stocks the lake with rainbows throughout the summer. The lake is also host to a number of PGE—managed campgrounds and day use areas.

## How PGE is working with the CRWP

The Clackamas River Water Providers (CRWP) were party to the Federal Energy Regulatory Commission (FERC) relicensing process for PGE's Clackamas River Project as early as 2006. PGE received its New License for the Clackamas River Project in 2010. Therefore, CRWP has a long history of working with PGE. The CRWP serves on PGE's Blue Green

Algae Team and the Mitigation Fund Committee, which were established as part of the license. The water providers also have a Stored Water Agreement with PGE to release water stored in Timothy Lake certain times of the year.

## The Blue Green Algae Team

The purpose of PGE's Blue Green Algae monitoring program is to track the occurrences and investigate causes of blue-green algae blooms in Timothy Lake and North Fork Reservoir to ensure that blue-green algae do not contribute to exceedances of ODEQ's pH, dissolved oxygen, or nuisance phytoplankton growth criteria. In addition, this program attempts to protect human health and the environment on public safety issues relating to the formation of algal blooms, their toxins, and taste and odor problems.

Since 2006, the CRWP has been working with PGE to monitor for blue green algal blooms in the Clackamas River. Through these efforts PGE conducts weekly monitoring for blooms at North Fork Reservoir from May to October each year. If a blue green algae bloom is identified by PGE, samples are taken and tested for toxins and results are communicated with the water providers. In more recent years the water providers have been working with PGE to enhance their sampling program. The Blue Green Algae Team meets annually to discuss the previous year's blue-green monitoring and review results presented in the annual report produced by PGE.

## Mitigation Fund Committee

As a requirement of its license, PGE established the Clackamas River Hydroelectric Project Mitigation and Enhancement Fund (Clackamas Fund). The Clackamas Fund has several funding cycles over the duration of the license. The purpose of the Clackamas Fund is to provide funding for habitat mitigation and enhancement projects intended to mitigate for Project-related impacts on native anadromous and non-anadromous fish populations not otherwise addressed by specific resource protection measures identified in the license. The Mitigation Fund Committee meets annually to review the status of funded projects.

## Stored Water Agreement

As part of the Clackamas River License, PGE and the CRWP developed a Stored Water Agreement to provide for the release of water by PGE from Timothy Lake upon request of CRWP at certain times of year for municipal water use. This agreement is in effect for the life of the license.

Visit our website for more information about our other intra-basin partnerships and ways the CRWP is helping to protect our drinking water source the Clackamas River.



# Faces of Drinking Water

by Christine Hollenbeck

Our CRWP member interview this quarterly newsletter is with Sarah Jo Chaplen the General Manager of Oak Lodge Water Services (OLWS). Oak Lodge provides drinking water, wastewater, and watershed protection services to the unincorporated communities of Oak Grove, Jennings Lodge, and portions of Milwaukie and Gladstone. OLWS was officially formed as of January 1st, 2017.

Prior to January 2017, Oak Lodge Water provided drinking water and Oak Lodge Sanitary provided sanitary sewer and watershed protection services. In May 2016, voters in the district passed a measure to consolidate the two service districts into a single service district.

Now one legal entity, the two districts have nearly completed the process of consolidation. The Board of Directors governing OLWS is comprised of five residents of the district. The Directors and the Management Team are hard at work combining policies and overseeing the merging of processes and systems.

**CRWP: Is there a big accomplishment you have been involved in that you would like to share?**

**Sarah Jo:** When I became the General Manager of OLWS the newly consolidated service district had not even completed the first full year. Being a part of this consolidation and bringing the two separate agencies with very different cultures, all of the staff, and assets together has been an accomplishment in progress.

I have thoroughly enjoyed working with our board who are members of the community, elected by the community to help govern the service district and who each bring the thoughts, concerns, and ideas of the community to the board

room. Our 6 member management team is made-up of 3 managers who were here when the service district was two separate agencies, and 3 managers who were hired since the consolidation began.

The perspective each individual offers to the effort of a smooth consolidation is invaluable. We are working very hard to do what is best for our community and for the District. Consolidating two different agencies is no small feat and having the process happen in a way that is as seamless as possible for our customers is one of our main goals. All of the folks at OLWS have been working so hard to make this happen, and this work continues.

**CRWP: What is your favorite, or least favorite part of your job?**

**Sarah Jo:** I truly enjoy providing District services. I like having face to face and one on one conversations with our customers. It's a real pleasure to work with the members of this community and have the opportunity to assist them in solving any issues they might have, involving them in the process of the consolidation, and educating them about the service we are providing. This charming area has a history of strong community. We have many customers who come right to our front office to pay their bills and talk with our staff. That kind of personal touch is important to us. Our customers have made an investment in OLWS and we pride ourselves in being able to provide them with good customer service. I feel like I am a part of this community and am so thankful for the opportunity to be able to serve them.

It's wonderful to have students from the Clackamas Community College Water Environmental Technology program intern at OLWS and we have a good relationship with the local schools educating students about the process of managing and providing drinking water,

An Interview with  
**Sarah Jo Chaplen**  
GM, Oak Lodge Water District



wastewater, and storm water services to a community. I hope someday these students will consider a career working for local government, specifically in one of the water services.

OLWS has a strong public education program that provides our community with the information to help them understand what it takes to deliver safe/clean drinking water, treat and clean their waste water, manage all of that infrastructure, successfully manage storm and surface water, and maintain a clean/healthy watershed environment. We hope our customers value their water and can see what an important role it plays in their everyday lives.

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

**Sarah Jo:** Prior to my position as General Manager here at OLWS I worked for the cities of Canby, Hillsboro, and Woodburn, and I worked for the State of Oregon both at the Department of Administrative Services and the Oregon Commission for the Blind.

(Continued on page 8)

# Watering 1 Inch Per Week

When temperatures reach 85 degrees a good rule-of-thumb for watering turf is to water no more than 1 inch of water per week. Generally, this amount of water is plenty to penetrate the soil 6 inches below the surface, establishing stronger roots to help the lawn weather the dry season.

If the landscape has clay soil, it's best to keep it moist year round. Clay, when dry absorbs water poorly, producing muddy run-off and preventing water from reaching plant roots. If the soil dries out completely more water will be needed to keep plants healthy.

**Determining your soil type** - Whether your soil is clay, sand, loam or a combination, its important to know your soil type before determining how much water is needed. The rate at which soil absorbs water is called the "infiltration rate". The chart below shows what to expect for each type of soil.

Soil Type	Bare Soil infiltration	Grass Covered infiltration
Clay	0.1" to 0.5" per hour	0.05" to 0.25" per hour
Loam	0.4" to 0.8" per hour	0.25" to 0.5" per hour
Sand	0.7" to 1.0" per hour	0.4" to 0.7" per hour

Use the infiltration rate, along with the amount of water your irrigation system puts down in a given amount of time (the precipitation rate), to help determine how much time to spend watering each week.

As a general rule, set your irrigation system for short periods of time, over several hours. This will allow water to penetrate more deeply into the soil instead of running off, and will promote deeper roots on plants, grasses, shrubs, and trees.

## How to measure 1 inch of water

- Set out 5 empty tuna or pet food cans (all the same size) at various spots, halfway between the sprinklers and the parts of the lawn that get the least amount of water from the sprinkler;
- Turn on the sprinklers for exactly 15 minutes;
- Measure the depth of the water in each can, then add up the

Average water depth (inches) in tuna can after 15 minutes	Total watering time in minutes per week for one inch of water
1/8	120
3/16	80
1/4	60
5/16	46
3/8	40
1/2	30
5/8	24
3/4	20
1 1/4	15
	12

numbers and divide by 5. This gives the average water depth of all the cans;

- Find the average water depth from the tuna cans in the chart above. The box on right tells how much watering time it takes to get 1 inch of water to the turf during the summer months.

**Watering at the best time** - Heat and wind cause water to evaporate more quickly. By watering early in the morning, when the air is cool and calm, evaporation is kept to a minimum. Watering in the evening is the next best time.

**Getting rid of puddles and run-off** - If water puddles or runs off to another part of the landscape, the soil may have a high clay content. To get the most out of watering, divide the total watering time by half, and add a break in between. For example, if the chart recommends watering for 40 minutes per week, water for 20 minutes, break for 2 hours, then water for the remaining 20 minutes. Consider installing a controller for an automatic irrigation system that can be programmed for multiple start times or install a hose bib timer at the outdoor faucet to make this an easier job.

If there are still problems getting water to penetrate the soil, the lawn may need to be aerated or thatched. Yard and garden centers in many areas carry the right tools for this job, as do many equipment rental companies. Learning how to apply the right amount of water will not only save water but will save you money!

## Summer Quiz:

### Answers

Question 1 - Answer is D  
Question 2 - Answer is A

Question 3 - Answer is C  
Question 4 - Answer is B



## How Water Systems Work

# Clackamas River Water Providers, Who Are We?

The Clackamas River Water Providers is a coalition of the municipal water providers that get their drinking water from the Clackamas River and are working together on water resource issues. Our members provide drinking water to over 300,000 people in Clackamas and Washington Counties supplying water to the Cities of Estacada, Gladstone, Lake Oswego, Oregon City, Tigard, and West Linn, as well as Clackamas River Water and Oak Lodge Water Services which provide water service to unincorporated areas of Clackamas County, and Sunrise Water Authority which serves the Happy Valley and Damascus areas.

The purpose of our organization is to fund and coordinate efforts regarding source water protection, public outreach and education around watershed issues, drinking water, and water conservation. This is so we can preserve the Clackamas River as a high quality drinking water source, minimizing future drinking water treatment costs, while being good stewards of the river.

By working together we are able to jointly fund projects and studies that benefit all our members but which would be too expensive to do individually. It allows us 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 Clackamas basin such as PGE. Working together allows 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.

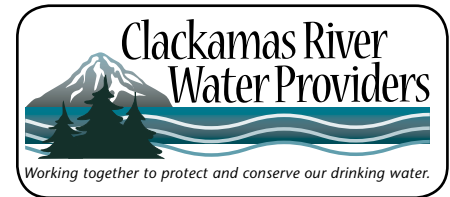
A safe reliable water supply is critical to the success of our communities. It creates jobs, attracts industry and investment, and provides for the health and welfare of our citizens from disease prevention to fire suppression.

As our communities continues to grow, so does the demand for high quality water. Conserving and protecting the Clackamas River plays a key role in making the best use of this precious resource we share.

### What You Can Do To Help?

- Get involved! Attend a Clackamas River Water Providers, city council or water board meeting.
- Conserve water, especially in the summer months when river flows are at their lowest. The more water we save, the more water we can keep in the river for fish.
- Protect our watershed by not dumping oil and other hazardous waste where it can enter storm drains.
- Report spills by calling 911.

To learn more about our CRWP members, our source water protection efforts, or what you can do to protect our drinking water source, visit our website at [www.clackamasproviders.org](http://www.clackamasproviders.org).



## Faces continued

### CRWP: What would you say H2O is to you?

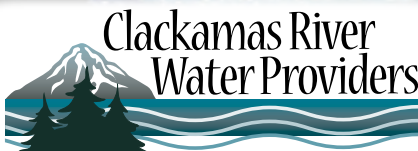
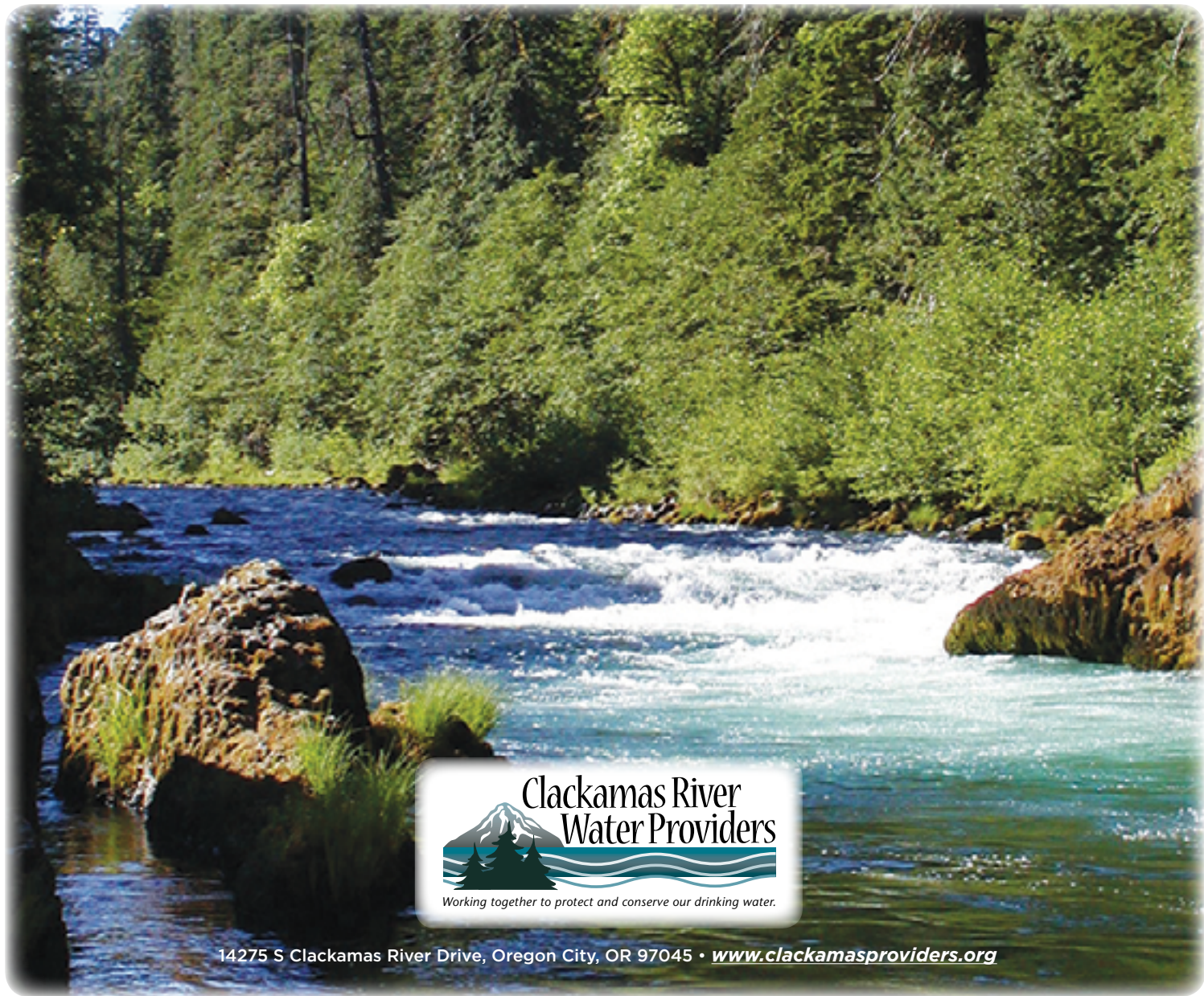
**Sarah Jo:** My father was a teacher and when I was a girl of about 7 years old, we lived in Kuwait for a little while. Our drinking water came from the ocean and had to go through the desalinization process to make it safe to drink. When the water came out of the faucet it still had a lot of fine sand in it so we also had to have a filter on the faucet to catch all of the sand. I remember clearly, we always had a few jugs of water in the fridge, this was because sometimes we would go to the faucet to get water and there wasn't any. There just wasn't any water. It could be for a few hours or even a day. So, we were always prepared for not having any water. Kuwait is very dry and arid. There wouldn't be any rain for a long time. But when it did rain there was too much to handle, it would just pour!

My family came from England and it is a lot like it is here, green lush, beautiful grass and lots of different trees. We never worried about not having water in England. It was always there when we wanted it, it was clean and tastes wonderful. Perfect water, to make the perfect cup of tea.

### CRWP: What do you like to do for fun when you are not working?

**Sarah Jo:** I enjoy going to farmer's markets, talking to the folks who grow the lovely fruits and vegetables and cooking for my friends and family.

Thank you so very much Sarah Jo for the delightful interview. You are an inspiring and interesting individual and the CRWP is so very happy to have you and OLWS apart of our group.



Working together to protect and conserve our drinking water.

14275 S Clackamas River Drive, Oregon City, OR 97045 • [www.clackamasproviders.org](http://www.clackamasproviders.org)

### Our Members:



[www.crwater.com](http://www.crwater.com)



[www.cityofestacada.org](http://www.cityofestacada.org)



[www.ci.gladstone.or.us](http://www.ci.gladstone.or.us)



[www.ci.oswego.or.us](http://www.ci.oswego.or.us)



[www.oaklodgewaterservices.org](http://www.oaklodgewaterservices.org)



[www.sfwb.org](http://www.sfwb.org)



[www.sunrisewater.com](http://www.sunrisewater.com)



[www.tigard-or.gov](http://www.tigard-or.gov)

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