Clackamas River Water Providers

Working together to protect and conserve our drinking water.

Winter 2019 News

Indoor Water Conservation

You might think of water conservation as a concern most relevant during the summer when we are watering lawns, filling swimming pools, washing cars and irrigating gardens. While it's true our water usage spikes during the warmer months, everyday activities like flushing toilets, shaving, and washing clothes, dishes and even your hands account for a lot of the water an average household uses throughout the year.

Here are some ways you can use water indoors more efficiently during the colder winter months.

What's Inside:

KITCHEN

- When washing dishes by hand, don't let the water run.
- Run your dishwasher only when it's full.
- Keep a pitcher of water in the refrigerator instead of running the tap for cold drinks.
- Use the garbage disposal sparingly. Instead throw fruit and vegetable scraps into your compost.

BATHROOM

- Keep a bucket in the shower to catch cold water before it warms up. Use this water to flush toilets or water plants.
- Turn off the water while you shave or brush your teeth.
- Time your shower to keep it under 5 minutes.
- Test your toilet for leeks.
- Contact the CRWP for Toilet rebate information.

LAUNDRY ROOM

- When shopping for a new clothes washing machine consider Energy Star certified appliances and receive a CRWP rebate of $75.
- When doing laundry, match the water level to the size of the load.
- Insulate hot water pipes so you don't have to run as much water to get hot water to the faucet.

Visit our website at **www.clackamasproviders.org** for more water saving tips, to request a free indoor water audit kit, or for more information on our water conservation rebates.

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Clackamas Watershed Resilience Study

The Clackamas River Water Providers and Water Environment Services have been working with Institute for Sustainable Solutions (ISS) and Portland State University (PSU) for the past year to better understand how resilient our watershed is in the face of climate change and what this might mean for our drinking water source and stormwater management practices in the Basin.

Like other areas of the Pacific Northwest, the Clackamas River watershed is vulnerable to changes in climate which could impact water supplies and the natural and human systems that depend on them. Increases in winter flow and decreases in summer flow are particularly likely to have negative impacts on our water resources, urban stormwater quality, and water needed for our communities and ecosystems.

The project team for Phase 1 of this project included representatives from CRWP, WES, faculty and graduate students from PSU, and a project manager from the ISS. PSU researchers focused on the following areas: precipitation patterns, extreme events, snow vs rain, turbidity, flow and flooding, and wildfire risks. The project team met monthly to discuss research questions, share research updates and findings, and the implications of their results.

The Goal of the Phase 1 work was to provide a holistic understanding of recent and historical trends in climate, hydrology, and management of the watershed and how this can help water and land managers understand the current state of the watershed so that they prepare for and respond to changing human and natural conditions. To see a copy of the Phase 1 Report go to **www.clackamasproviders.org**

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

Applied Climate Science

This research will develop future meteorological projections for temperature and precipitation specific to the Clackamas River watershed for two purposes:

1. To understand predicted changes in 21st century climate related to winter temperature, freezing levels, and precipitation trends, and summer heat waves.

2. To answer questions about how predicted changes in 21st century climate, combined with increased development, may influence flow and sediment loading in the Clackamas River watershed.

Climate Adaptation Planning

This research will use existing knowledge from this project to develop applied climate science-informed management developed through engagement with a broad spectrum of stakeholders. Workshops will be used to identify what actions best build on the assets within the watershed to address the vulnerabilities and risks faced by the watershed. Outcomes from these workshops will help facilitate the development, communication, and implementation of science-based strategies for adapting to the impacts of climate change and other stressors.

Collaborations such as this with PSU bring together researchers and practitioners to work across institutions, building effective interdisciplinary community-university partnerships that produce outcomes that will help us take on the challenges presented by climate change and understand the resiliency of our watershed.

WINTER WATER TIPS

Here are some precautionary measures you can take now to help avoid the expense and inconvenience of frozen water pipes.

1. Disconnect and drain outdoor hoses. Protect outside pipes and faucets. In some homes, the outside faucet has a separate shut-off in the basement or crawl space. If you do have a separate valve for outside faucets, shut it off. Then go outside, disconnect the garden hose and turn on the faucets to drain water from the line. If you don't have a separate valve to turn off the outside faucets then wrap the outside faucets or hose bibs. Also remember to disconnect garden hoses from the faucets. Otherwise, a single hard overnight freeze can burst either the faucet or the pipe to which it is connected.

2. Insulate pipes or faucets in unheated areas. If you have pipe lines in an unheated garage or cold crawl space under the house, wrap the water pipes before temperatures plummet. Hardware or building supply stores will have good pipe wrapping materials available.

3. Find the master shut-off. It may be near the water heater or the washing machine. More likely it's where the water line comes into your house from the street. If a pipe bursts anywhere in the house – kitchen, bath, basement, or crawl space – this valve turns it off. So find it now and paint it a bright color or hang a tag on it. Be sure everyone in the family knows where it is and what it does.

4. Seal off access doors, vents and cracks. Repair broken basement windows. Winter winds whistling through overlooked openings can quickly freeze exposed water pipes. But don't plug air vents your furnace or water heater needs for good combustion.

5. Open the cupboard doors beneath your home's sinks. This will allow warm air to circulate around the pipes.

6. Allow water to trickle from faucets with pipes underneath your home or near outside walls that may be exposed to extreme weather conditions. Over a 24 hour period this will cost less than 15 cents per faucet – much less than the cost to repair broken pipes!

7. Have your plumber's telephone number handy. During an extended cold spell, your pipes might freeze despite the best precautions.

Winter Quiz:

Answers - *Can be found on page 6*

1. In what month does CRWP have its Annual Watershed Tour?

A. In July
B. In October
C. In December
D. In January

2. When is water conservation is important??

A. November through February
B. June through August
C. March through May
D. All year

3. It is best to insulate your backflow assembly in the wintertime.

A. True
B. False, it will not freeze.

4. The Resilience Study looked at which of the following in Phase I?

A. Precipitation
B. Flooding
C. Wildfire Risks
D. All of the above

Youth Education Programs

The Clackamas River Water Providers have a number of free water education activities and programs available to schools and teachers within the CRWP service areas.

These programs include treatment plant tours, classroom presentations, assembly programs performed by local artist, videos and water curriculum that can be checked out, water education grants, and other water related resources.

All of these programs are offered at no cost to the schools, and some of the presentations include water conservation curriculum packets and promotional items, such as water bottles, shower timers, and brochures for students to share with their families.

For more detailed information about our youth education program visit the teacher resource page on our website or call Christine at **503-723-3511.**

Annual Watershed Tour

Each year at the beginning of October the Clackamas River Water Providers host a tour of the Clackamas Watershed for elected officials from CRWP member agencies, interested citizens, and the citizens in CPO's and Neighborhood Associations in the CRWP service area. The purpose of these tours is to connect our citizens and policy makers with a direct experience in the watershed, and to introduce them to some of the organizations that the CRWP is working with to protect our drinking water source.

This year on a chilly day in October we took over 40 people down the Clackamas River on 8 large rafts. The intent was to provide our citizens with a different perspective of the Clackamas River by floating down the river from Carver Park to Clackamette Park. Along the way we saw stormwater outfalls, two of Water Environment Service's restoration projects (Rock Creek and Carli Creek), lower river tributaries that flow into the Clackamas, a railroad crossing, and at all four of our lower river drinking water intake structures.

It was an amazing day on the river and was a great way to see where our drinking water comes from. If you would like to receive an invitation for next year's tour (we will be back in the upper part of the watershed next year) please contact Kim Swan at ***kims@clackamasproviders.org.***

Faces of Drinking Water

by Christine Hollenbeck

An Interview with
Kari Duncan, Lake Oswego Tigard Water Partnership

The Clackamas River Water Provider members are a coalition of many different cities and public water providers who depend on the Clackamas River as their water source. The ability to treat, store, and deliver safe clean drinking water to their customers takes many different professionals with a variety of background and skills. Most recently we visited with Kari Duncan Water Supply and Treatment Manager for the Lake Oswego Tigard Water Partnership to learn a little bit more about her and her career in public drinking water.

CRWP: How long have you worked for the Lake Oswego Tigard Water Partnership?
Kari: I started working for the City of Lake Oswego in 2005. In 2008 Lake Oswego and Tigard formed a Water Partnership and I have been working with both Cities through the Partnership ever since.

CRWP: What is you background prior to working in Water?
Kari: I received my Bachelors Degree in Biology and Environmental Science from Willamette University. While at Willamette I ran an outdoor youth education program and my intention was to use my degree to become a high school science teacher. After graduating from Willamette however, I decided to apply for a position with The Eugene Water and Electric Board (EWEB) and was hired there as a water quality analyst and treatment plant operator. I soon realized that the Water Profession was an ideal career for me. I was at EWEB for 5 years, during which I also attended the University of Oregon and earned a Master's degree in Public Administration (MPA). When my husband was considered for a job promotion to the Portland area with the Army Corps of Engineers, I started to look for job opportunities in the Portland Metro area. I reached out to my American Water Works Association (AWWA) connections and one of them told me about an open position for a water treatment plant manager at the City of Lake Oswego drinking water plant. I was only 28 years old when I applied and with my education, water treatment and laboratory experience, and great references from EWEB and my AWWA connections I was offered the position.

CRWP: What are your favorite/ least favorite parts of your job?
Kari: I love working with the devoted team of staff that share my goal of providing safe, clean water for the community and I love the public service aspect of this career. Managing a water supply and treatment system is an amazing combination of natural resource management, engineering, science and the trades and crafts. Bringing all of that together with a good team is a real joy. The least favorite part of my position, if you want to call it that is the weight of providing a service so essential to public health and well-being. Providing drinking water is a 24/7 job. Never being able to turn off from the job is the best and worst thing about it.

CRWP: How has the drinking water industry changed since you started?
Kari: The technology in our industry today is moving and changing at a very rapid pace and this has changed the type of skills and knowledge that we need from our workforce. Our industry is in such need of professionals that can understand and keep pace with the needs of a high tech industry, yet also understand the importance of public health protection through the safety of the drinking water. Our younger generation is so successful today because they have grown up in a world of technology, and they have a commitment to public service.

CRWP: What accomplishments are you most proud of in your career?
Kari: Being a part of the new Lake Oswego Tigard facility has been a very big accomplishment. We completely replaced and expanded our water supply infrastructure from the river intake in Gladstone, raw and finished water transmission lines and a new water treatment plant, all constructed and placed online without any interruption to the delivery of water to our customers. That was a 10 year, $250 million dollar project and has been the highlight of my career.

I am also proud of my current position with the American Water Works Association. With the support of my employer I have been able to work my way through the organization up to the position of Association Director which is a national position within the organization.

CRWP: What advice would you give to someone starting out in this field?
Kari: Make good personal connections, look for a mentor, and try to be active beyond your job description which can bring you growth and a more fulfilling career. I do have a little advice for women in particular. Have and act with confidence, know your business and be proud to show it, don't down play your knowledge and experience.

(Continued on page 6)

Faces continued

CRWP: What do you feel is most important about your job?
Kari: Protection of public health and providing reliable drinking water. Secondly as a Manager I think it's essential to create a positive environment for our employees. Making sure they have what they need to be successful at their jobs. A happy team is a successful team.

CRWP: What would you like the public to know about their drinking water?
Kari: We consistently test and monitor the water for safety all the way from the river to the tap. There is a lot that happens with people working very hard at their jobs to make sure the drinking water is safe.

I would also like people to think about the financial investment they put into their drinking water. It takes a substantial investment to create and maintain a reliable treatment facility and distribution system to deliver clean safe water to our homes and businesses.

CRWP: What can the public do to make your job easier?
Kari: Read your Annual Water Quality report and stay engaged with your community.

CRWP: What is one thing you can't live without at work?
Kari: Our team of people....and coffee.

CRWP: What would you say water is to you?
Kari: Water is everything to me. It's my career, my livelihood and an essential part of a thriving, healthy community. It's very complex.

CRWP: What are the top priorities for your agency over the next few years?
Kari: With the Lake Oswego Tigard Water Partnership we have more than doubled the customer base we serve and we are now working with two water systems and city governments. A top priority for us is to continue working together and making sure communications are transparent and our communities receive excellent service and are represented.

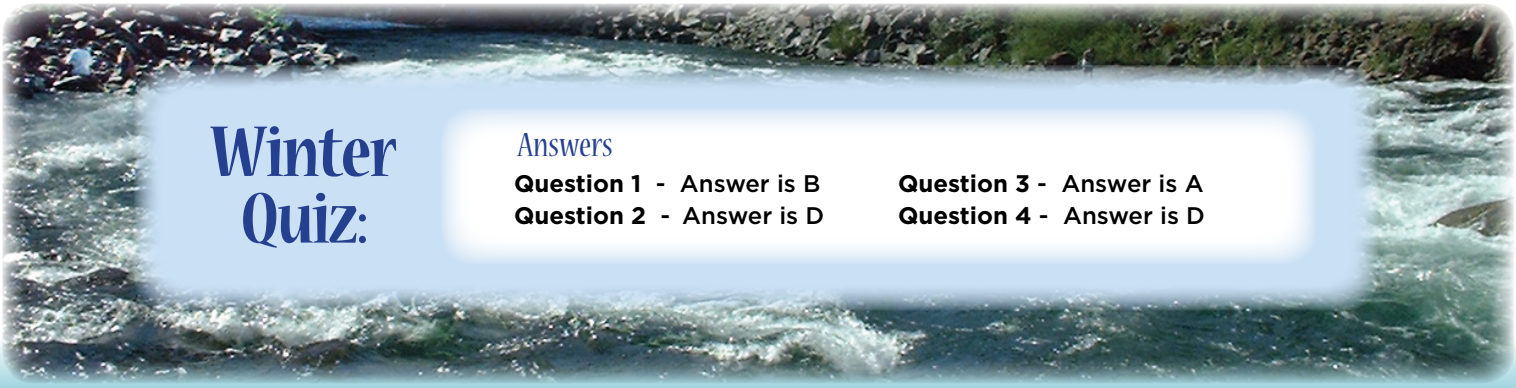
CRWP: What is the biggest challenge facing your organization in the next couple of years?
Kari: For some time now, our industry has been planning for a wave of retirements as the baby boomers leave the work force. We have experienced a lot of change due to this turnover and are busy training new staff while at the same time perfecting the operation and maintenance of the new water supply facilities.

CRWP: In your opinion what is your agency's greatest accomplishments?
Kari: The Lake Oswego Tigard Water Partnership project coming in on budget and creating a very resilient and robust facility. We accomplished a lot in the face of so much.

CRWP: Many utilities are struggling with the need to increase water rates. How are you approaching this? What are or were the keys to success?
Kari: The City's of Lake Oswego and Tigard had to increase the water rates starting in 2009 in order to fund the LO-Tigard Partnership project. What made this possible was a very deliberate rate study and structured plan, and a lot of public education and communication which showed our communities why an investment in the water system was needed and how the rate increases would accomplish these goals.

CRWP: If you could change one thing about state or federal regulatory programs what would that be?
Kari: Public water systems are regulated by the Oregon Health Authority Drinking Water Services. They have experienced a substantial reduction in staff over the past several years and this has placed a great burden on the remaining staff to do more with fewer people and resources. Greater resources that can go into research, education and ultimately support of the water systems that they regulate would be a welcome change.

CRWP: What is something people might be surprised to know about your agency?
Kari: There is a perception that Lake Oswego has an abundance of staff because it is an affluent community. The City is very careful to keep staff levels equal to or less than what they are in other comparable cities.

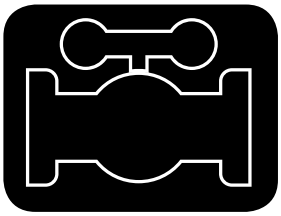


Winter Quiz:

Answers

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

How Our 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 pays for ongoing operations, maintenance and administration of the water system.

The usage or consumption charge pays for Capital Improvement Projects for water distribution and water treatment improvements. Through the water bills customers pay, your water provider is able to provide clean, safe drinking water in a legally sound, cost effective and efficient way which practices good stewardship of our financial, natural resources, and environment.

L to R: *Elaine Murray, Heather Standing, Kelly Stacy, Tara Collins*

DOES 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 a regular maintenance program for outside irrigation systems. Over time even the smallest leaks can add up. If you need help with your utility bill please contact your water provider's customer service department.

Faces continued

CRWP: What do you do for fun when you're not working?
Kari: My first priority, before career, is to my family. My husband of 17 years and I have two children who are 7 and 10 years old. We enjoy skiing, hiking, and kayaking as a family. We live on a 6 acre hobby farm with a big vegetable garden and orchard and we enjoy cooking, canning and home brewing using ingredients we harvest from our land.

The staff here at the Clackamas River Water Providers would like to thank Kari for taking time out of her very busy schedule for this interview. We have worked with her since the conception of the CRWP, and it has been a real pleasure having her strong and steady voice at our table.

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.oaklodgewater.org

SOUTH FORK WATER BOARD
"Pure water since 1915"
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SUNRISE WATER AUTHORITY
www.sunrisewater.com

TIGARD
www.tigard-or.gov

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