



Fall 2019 News

How Water Systems Work

The Value of Tap Water

How often do you think about your tap water?

Probably not often. Out of sight, out of mind, service on demand, 24/7/365 days per year and it's as easy as turning on your tap. But did you know that this service is at risk? Much of today's public water systems were built more than 50 years ago and little has been done to rebuild or replace this aging infrastructure. Because we've 'kicked that can down the road' for so many years, we now face a large problem of financing and rebuilding those systems before they fail.



The money for operating and maintaining your water system largely comes from rates. Unfortunately, those rates have not included the full cost of replacing the existing infrastructure. And long gone are the days that grants or tax monies are made available to solve this growing problem. This

is why the cost of water is rising. Still, drinking water remains relatively inexpensive, delivered to you at under a penny per gallon, tap water is one of the best values in today's market.

Tap water is an intricate part of our lives.

It is hard to imagine a day without using water. You only have to go without it for a short period to be reminded of its importance. Without water our lives are not only inconveniently interrupted but our public health is also threatened. The future of water requires us to think smart, use water wisely, and recognize the limits of this valuable resource.

In addition to using water to brush teeth, flush toilets, take showers, washing and cooking food, public drinking water also provides us with the following benefits:

Protecting Public Health

The first obligation of the Clackamas River Water Providers members is to provide water that is safe for consumption. In a world where 3 million people die each year from preventable water born diseases, our water systems allow you to drink from any public tap with a high assurance of safety.

A safe water supply is critical to protecting our public's health.

Our community water supplies are tested every day. Tap water undergoes far more frequent testing than bottled water. Clackamas River Water Providers members monitor for more than 100 contaminants and must meet close to 90 regulations for water safety and quality. The water standards that we must meet are among the world's most stringent. Without our modern water systems, diseases such as cholera and dysentery would be part of everyday life.

(Continued on page 2)

What's Inside:

Value of Tap Water	P1
Fall Quiz	P2
Faces Interview	P3
Conservation Tips	P4
Prepare for Winter	P4
Irrigation Systems	P5
Partner Spotlight	P6
Watershed Tour	P7
Conservation Calendar	P8
Did You Know?	P9

Value of Tap Water *continued*

Supporting Our Economy

A safe, reliable water supply is central to the economic success of our communities. Public drinking water is critical to the day-to-day operations of business, and to the viability of new commercial enterprises or residential developments. Businesses take into consideration the availability and quality of water when determining where to locate their offices or manufacturing facilities. A scarcity of water resources can hold up developments – commercial or residential – placing a strain on our local economies.



Quality of Life

Tap water is more than a convenience; it is central to our everyday lives.

Any measure of a successful society is in some way related to the access of clean safe water.

Otherwise... How would we shower or flush our toilets? How would we rinse

our produce, clean dishes, wash clothes, water plants and landscapes, or wash our cars?

Fire Protection

Well-maintained water systems are critical in protecting our communities from the threat of fire. In our communities, water flowing to fire hydrants and home faucets comes from the same system of water mains, pumps and storage tanks. A water system that provides reliable water at a high pressure and volume can be the difference between a manageable fire and an urban inferno. Firefighters are the primary users of fire hydrants, but your public water provider is responsible for maintaining the hydrants. Hydrant maintenance is supported by the money generated through your water bills.

When you consider the critical needs addressed by water service, public drinking water will always be a tremendous value. In fact, it will be a bargain. You simply cannot put a price on a service that delivers public health, quality of life, fire protection, and economic development.

Learn more about the water infrastructure challenges and the value of water by watching these short videos or by visiting the following websites:

EPA's two and half minute video "[Water: What is it Worth to You?](#)" describes how water and wastewater systems are important but undervalued, and how the public must take action to support the upgrades that our water infrastructure needs.

EPA's Video "[Be aware, Be Prepared](#)" teaches to protect our critical water infrastructure, and the **Alliance for Water Efficiency's** three minute video "[Water: What You Pay For](#)" shows us what a typical residential water bill covers, and the costs of delivering a consistent, reliable flow of safe and affordable drinking water to your faucet.

The **Value of Water Coalition** is made up of both public and private members of the water industry, who have come together at a time when our water infrastructure is at risk. Their goal is to educate the public on the importance of clean, safe, and reliable water to and from every home and community, and to help ensure quality water services for future generations. "www.thevalueofwater.org".

The **United States of Water** has an interesting graphic to share. Please check it out online at: "[The Water Info Graphic](#)".

Go here to view or download our "[How Water Systems Work](#)" booklet on line.

Fall Quiz:

Answers - Can be found on page 8

1. How often is your tap water tested?

- A. Once per week
- B. Once per month
- C. Every day
- D. On occasion

2. In the Fall, it appears as if all activity in the garden has stopped, but there's a lot going on under the soil until it freezes.

- A. True
- B. False

3. This year's Watershed Tour focused on:

- A. Upper Clackamas
- B. New Site at Carter Falls
- C. The Fish Hatchery
- D. All of the above

4. The Clackamas River Basin Council (CRBC) mission is:

- A. To foster partnerships
- B. To improve fish habitat
- C. Improve quality of life for those using the watershed
- D. All of the above

Faces of Drinking Water *by Christine Hollenbeck*

Our CRWP member interview for this quarterly newsletter is with Matt Kaatz, Water Operations Supervisor at the City of West Linn. The City of West Linn and the City of Oregon City jointly own the South Fork Water Board drinking water treatment plant located in the Park Place area of Oregon City. While the drinking water comes from the South Fork Water Board, the City of West Linn is responsible for all of the drinking water piping, infrastructure, and storage facilities within the City.

CRWP: How long have you been with the City of West Linn?

Matt: I've been with the City for 4 years now. I took this position over after Jim Whynt moved to the City of Gladstone.

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

Matt: I've worked in public works since I was 18 years old. At 18 I was hired on with the City of Tigard as summer help and when a position came open with the streets department I applied for the position and was hired on full time. I worked 3 years in the streets department before I moved to the water department. I worked my way up in the water department and before I came to West Linn I was the Senior Water Utility Tech. at the City of Tigard.

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

Matt: During my last 2 years with the City of Tigard we stopped purchasing our drinking water from the City of Portland (Bull Run Water), and through a partnership we began purchasing our drinking water from the City of Lake Oswego (Clackamas River). There is a huge process that needs to take place in order to switch from one source of drinking water to another. I am pleased to have been involved in the 2 years of

preparation work before introducing the drinking water from Lake Oswego into the City's piping system. I also worked with consultants to create a unidirectional flushing program Tigard used to switch from Portland water to Lake Oswego water. It was a big job that lasted a long time, but it went well, almost seamlessly. I am also proud of the fact I started out in public works as an 18 year old temporary employee and have worked my way up from there to a Drinking Water Operations Supervisor.

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

Matt: Throughout my career in drinking water I have to say I most enjoy being able to help our customers out when they are in need. In particular I've always enjoyed helping our elderly customers.

CRWP: What advice would you give someone who is just starting out in the drinking water industry?

Matt: Take advantage of every training, educational, and certification opportunity that comes your way.

CRWP: How has the drinking water industry changed since you began working?

Matt: Technology, definitely the technology. We have gone from getting detailed information about our water systems using microfiche to GIS mapping, and automatic meter reading.

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

Matt: Providing our customers with uninterrupted, safe and clean drinking water.

CRWP: What would you like the public to know about their drinking water and what your role is in delivering that water?

Matt: Our drinking water comes from the Clackamas River and is a precious resource. We all need to help keep that

An Interview with **Matt Kaatz** West Linn Water Operations Supervisor



resource clean, and we all need to make sure we are using the water in the most efficient way, conserving it and not wasting it.

CRWP: What can the public do to help make your job a little easier?

Matt: It would be a real big help if our customers could make a habit of annually checking their meter box and making sure it is not buried and clear of plants and debris. We need to have access to the meter box for regular maintenance but in the event of an emergency and we need to shut the meter off, precious time can be wasted looking for a buried meter box.

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

Matt: Our field crew. They are the people out in our community doing all of the work, making sure the water is always flowing.

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

Matt: Our drinking water pipe system is aging and continuing to replace the aging infrastructure is a priority for us.

(Continued on page 7)

Fall Water Conservation Tips

Now that the weather is turning cooler and the days are getting shorter it's time to re-think your landscape water usage. To help you with that, here are some Fall Water Conservation Tips:

Fish on the Run Irrigation Done. If you haven't already done so it is time to shut off your irrigation system. Plants are going dormant and have low to very little water needs and we need to leave as much water in the river as we can for the fall fish migration.

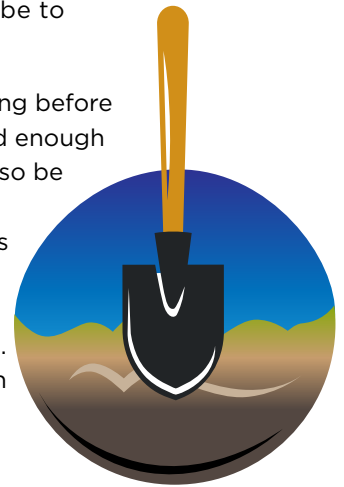
Water- Wise Landscaping. If you are planning to add new plants to your landscape this fall, consider choosing drought tolerant species that need less water. Take a look at the "[Water Efficient Plants for the Willamette Valley](#)" booklet available on our website.

Apply mulch. A layer of mulch protects plants and enriches soil, as well as reducing the amount of water your landscape needs during the fall. The mulch you applied during the summer months has likely decomposed, so fall is the time

to apply more. Some people even use fall leaves and garden debris as mulch material.

Fertilize. Taking the time to fertilize in the fall will strengthen your plants' and lawn's roots, giving them a strong base on which to thrive next spring. The healthier your plants' root systems the more resistant your plants will be to drought conditions.

Winterize. It will not be long before the temperatures turn cold enough to freeze, so you should also be thinking about winterizing your irrigation system. This includes draining all the water left in the pipes, valves and sprinkler heads. See page 5 for information on how to winterize your irrigation system.



Preparing Your Garden for Winter

Putting the garden to bed for the winter is mostly a matter of cleaning up and covering up. As fall progresses and temperatures drop, those plants that aren't killed outright by frost prepare for dormancy.

While it appears as if all activity in the garden has stopped, there's a lot going on under the soil until it freezes. Newly

transplanted trees and shrubs, perennials, and hardy bulbs are all growing roots, drawing on soil nutrients and moisture around them. Earthworms and various microbes in the soil are still processing the organic material they're finding.



Spreading a thick layer of mulch in the fall will protect plants, provide nutrients, keep the soil temperature even, and keep weeds from growing.

Be sure to clear out and prune the blackened stems and foliage of annual flowers and vegetables to prevent the possibility of their harboring disease pathogens and insect eggs over the winter.

Fall is a good time for yard maintenance and repairs. Consider making a cold frame to extend the growing season, dig and box in your raised beds, and make general repairs to help everything through the winter months.

A little work now will give extra nutritional and water conservation benefits to your garden next spring and summer.

Visit the [outdoor conservation](#) page on our website for more water conservation gardening tips.

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 when you're done watering for the year. 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 leftover water from your irrigation system. Which method you should use will depend on the type of irrigation system you have in place.

MANUAL VALVES

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 VALVES

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. 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.

BLOW-OUT

The final method is to force compressed air through the irrigation 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 it without taking the proper safety precautions. If you've never worked with compressed air or blown-out an

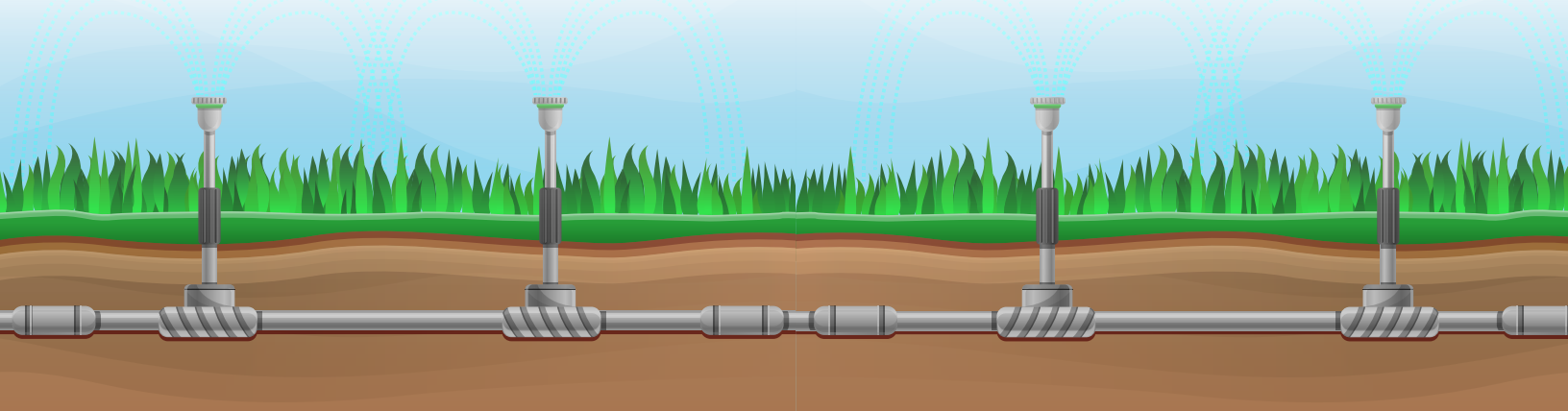
irrigation system we highly recommend you hire a licensed landscape professional. For this method you'll need:

- an air compressor rated at 80 to 100 CFM
- a coupler fitting your system
- safety glasses

Shut down the water supply and connect the air compressor to the irrigation system using the coupler. Be careful to avoid blowing compressed air directly through the backflow device. Find the sprinkler station highest and farther from the compressor and turn it on. Close the backflow valves. Then slowly open the valve on the compressor, adding more air pressure gradually so that you can cut off the air supply quickly if needed. Do not exceed 80PSI and do not stand near an active head when blowing out your irrigation system.

You should see a spray of water from the active irrigation head. Starting with the furthest and working your way closer to the compressor, activate each irrigation head in turn, shutting them off again when the spray of water ends. When you've finished all of the irrigation heads, disconnect the compressor and release any remaining air pressure from the system. Open and close the valves on the backflow device to release any pent-up air pressure there as well.

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 later in the spring. Again, if you're not sure, or don't feel comfortable winterizing your irrigation system yourself, it is highly recommended you hire a licensed landscape professional for assistance.



Partner Spotlight-Clackamas River Basin Council

Written by Pat Kaczmarek,
CRBC Communications & Program Coordinator

The Clackamas River Basin Council (CRBC) is a locally organized watershed council that is a non-governmental group of citizens which was formed in 1997 to protect and improve the Clackamas River Basin and its watersheds.



Our mission to foster partnerships for clean water and to improve fish and wildlife habitat and the quality of life for those who live, work and recreate in the watershed.

We accomplish this by:

- Undertaking watershed restoration to increase the abundance, diversity, and productivity of native resident and anadromous (salmon and steelhead) fish populations throughout the basin.
- Protecting and enhancing the quality and quantity of source water for domestic water supplies to meet an increasing population.
- Controlling non-native weeds, and restoring native vegetation to improve both aquatic and terrestrial habitats.
- Engaging communities and landowners in watershed improvement projects that protect and enhance the natural resources.

The initial focus of the council was the development of the [Clackamas River Basin Action Plan](#) published in 2005. The Basin Summary outlines the wealth of natural resources in the Clackamas Basin and describes the ecoregions in the area. It also features information on fish populations, aquatic riparian habitat, and water quality and water quantity. If you're looking for general information about the Clackamas, this is a great starting place!

The Clackamas River Basin Action Plan is a roadmap for the Council. It describes five main action areas – Council Operations and Development, Stream Enhancement, Assessments and Research, Monitoring, Education, and Outreach. The Plan also provides information about CRBC's partner organizations, challenges faced in the basin, and strategies for improving watershed health.

Putting the Plan into Action

Since the development of the Clackamas River Basin Action Plan, the Council has been actively involved in a range of projects focused on the protection and restoration of the Clackamas River Basin. Early efforts were largely driven by volunteer projects that removed invasive species and replanted riparian areas with native plants to create wildlife habitat and shade streams.

As the Council has grown and established partnerships with local government agencies and businesses, the scope of our projects have increased. Our [Shade Our Streams](#) program initiated with funding and support from Portland General Electric and the cooperation of over 125 Clackamas County landowners has completed restoration of 30 miles of riparian habitat over the past 7 years.

A partnership with regional government Metro and the Oregon Department of Fish & Wildlife has reconnected alcoves and provided off-channel habitat for spawning steelhead at the 68 acre Clear Creek North Restoration Project. Some of our current projects include restoration sites at the Bonnie Lure Oregon State Recreation Area and Milo McIver State Park, where funding from an OWEB (Oregon Watershed Enhancement Board) Focused Investment Partnership Grant will support large in-stream restoration projects that will create spawning, rearing and migration habitat for populations of federally listed species of Chinook, coho and steelhead.

Volunteer work parties also continue to be an important part of the work that Clackamas River Basin is involved in. Work parties offer residents an opportunity to learn about and engage in hands-on environmental restoration projects. These activities are often located in residential areas, where participants can gain an appreciation for the unique needs of fish and wildlife in their watershed.

(Continued on page 9)

Watershed Tour 2019

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's tour focused on the upper Clackamas watershed and included talks by the USFS, PGE and ODFW. We stopped at the Fish Creek Camp Ground and Carter Falls to talk with the Forest Service about Wild and Scenic River designations, the impacts of dispersed camping on the forest, and development of a new recreation site at Carter Falls. We stopped in Milo McIver State Park to learn about a PGE side channel restoration project and how they are adding gravel back into the river system, and ODFW gave us a tour of the Clackamas Fish Hatchery and talked about some of the upgrades that are happening at the hatchery.

These tours are a great way to see where our drinking water comes from and how we are working with our basin stakeholders. If you would like to receive an invitation for next year's tour (we will be back in the lower part of the watershed next year) please contact Kim Swan at kims@clackamasproviders.org.



Faces-Interview *continued*

CRWP: What is the biggest challenge facing your organization?

Matt: Adequate funding so we can make the repairs, replacements, and upgrades the infrastructure needs in order to continue safely and efficiently serving water to our customers.

CRWP: What would you say water is to you?

Matt: Life!

CRWP: What do you see as your agency's greatest accomplishments in the time you've been there?

Matt: The City of West Linn recently built a new 4 million

Gallon water reservoir that replaced a 100 year old 2.5 million gallon reservoir. This tank won the Project of the Year award from the American Public Works Association in the category of Small City/Rural Communities.

CRWP: What do you do for fun when you are not at work?

Matt: Spending time with my family and friends. Being on the river wake and surf boarding.

The CRWP would like to thank Matt for granting us this interview. It's a pleasure working with an individual like Matt who is committed to, and has a passion for our drinking water industry.

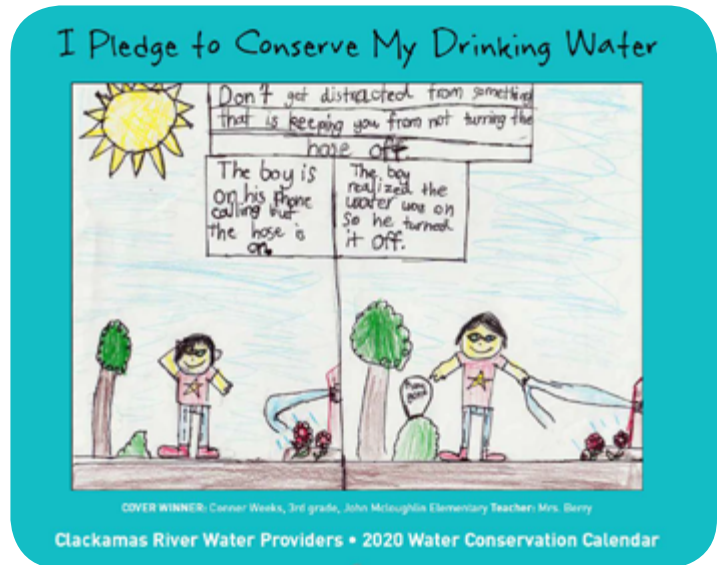
2020 CRWP Annual Water Conservation Calendar

For the past 11 years the Clackamas River Water Providers have invited teachers and students to participate in our annual water calendar coloring contest. Students demonstrate their knowledge of water by creating pictures that reflect the calendar theme.

The theme for the 2020 calendar is *"I Pledge to Conserve My Drinking Water"*. Students from 21 classes from 12 different schools within our service areas participated in the project this year, creating pictures showing what they can do to help conserve water at home and at school.

All of the pictures submitted were so good it was very difficult picking just 13 pictures to be in the calendar. The pictures were artistic and very informational showing many different ways students can conserve their drinking water. The 13 pictures chosen were displayed on the CRWP website so family, friends, and our community members could vote for which picture would be on the cover of the calendar.

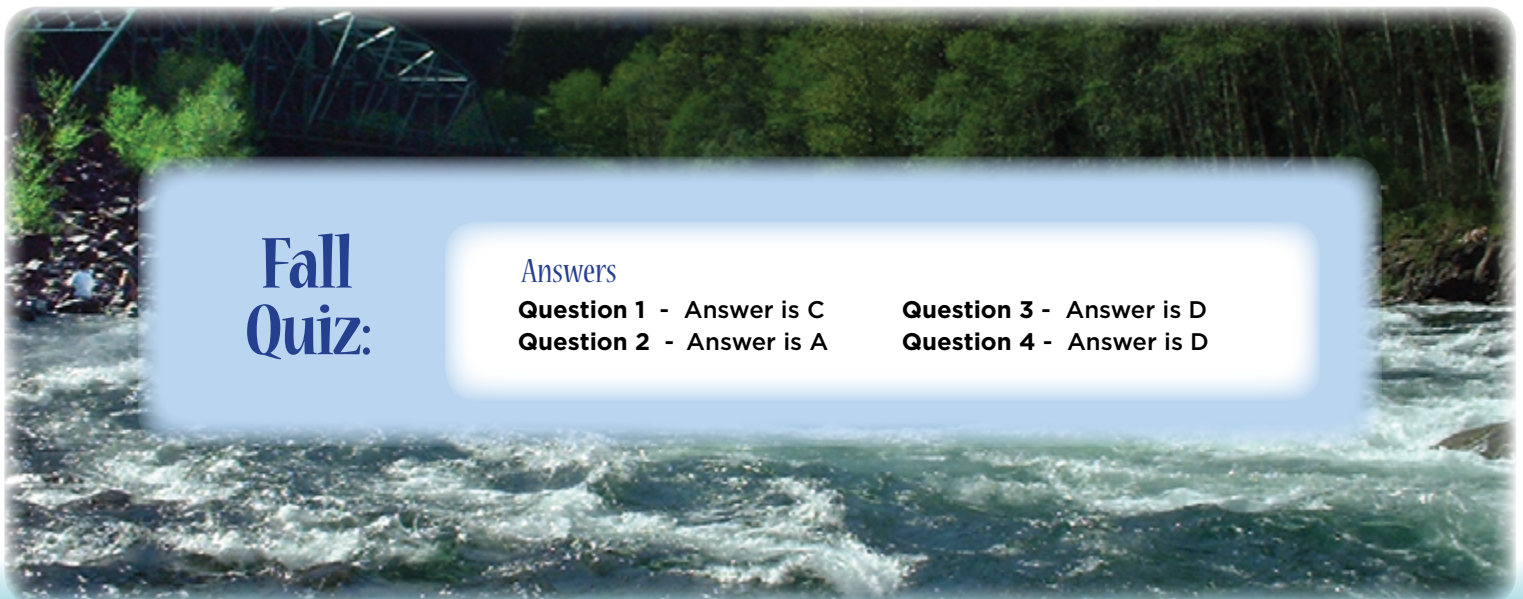
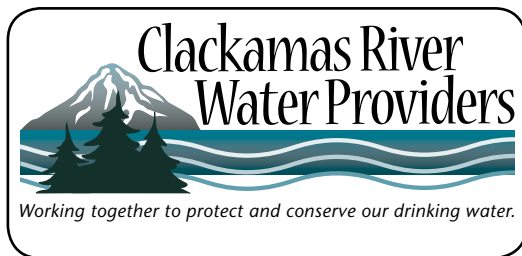
During the month of October each school that had at least one class participate in the contest will receive a



box (125) of calendars to give out to family and friends or to use as fundraisers. Additional calendars are available to teachers, families, and the general public upon request, as well as being distributed throughout CRWP member's city halls, libraries, and front offices.

The Clackamas River Water Providers are committed to protecting and conserving the water in the Clackamas River not just for our communities who drink the water but for fish and the environment.

To request your 2020 Water Conservation Calendar contact Christine at **503-723-3511** or email christine@clackamasproviders.org.



Fall Quiz:

Answers

Question 1 - Answer is C
Question 2 - Answer is A

Question 3 - Answer is D
Question 4 - Answer is D

Partner Spotlight *continued*

Find your way to get involved in protecting and restoring the Clackamas River Basin. Visit the CRBC website at www.clackamasriver.org.

How CRBC is working with the CRWP

Clackamas River Basin Council has been partnering with the Clackamas River Water Providers for over a decade on projects to protect and improve water quality. These efforts have focused on voluntary pesticide reduction through two efforts. One, is through the implementation of a [Parting With Pesticide Pledge Program](#). This program is designed to educate property

owners within the Clackamas River Watershed about the wise use of pesticides and to empower them to use alternatives to pesticides. Pledge participants then have the opportunity to display a basin-specific yard sign that acts as a reminder of the steps they are taking to promote and enhance watershed health. To date 52 households have signed on to the Pledge Program.



Second, is the distribution of 9 educational pesticide reduction fact sheets. These fact sheets are distributed by CRBC at landowner site visits, at community tabling events, as well as at 'Shade Our Streams' graduated landowner site visits. Visit clackamasproviders.org/

Did You Know?

- Public Water Providers meet some of the world's most stringent water quality standards.
- From foods and beverages to toothpastes and perfumes, water is the primary ingredient in hundreds of thousands of everyday products.
- Drinking water remains relatively inexpensive, delivered to you at under a penny per gallon.
- Most of the nearly 300,000 people that get their drinking water from the Clackamas River do not live in the watershed.
- It is not possible to tell if water is safe to drink by visual examination.
- Without water treatment, preventable waterborne disease such as cholera and dysentery would be part of everyday life.
- Tap water undergoes far more frequent testing than bottle water.
- The standards set under the Safe Drinking Water Act are some of the most stringent in the world.
- A typical water tower can hold 50 times the amount of water as found in a normal in-ground swimming pool (around 25,000 gallons x 50).
- It is a federal offence to tamper with a public water tank, tower, or reservoir.
- During a fire, a raised water reservoir guarantees that there will be enough pressure to keep water flowing through the fire hydrants.
- In the US, there are almost one million miles of distribution systems representing the vast majority of physical infrastructure needed to get safe water from the source to consumer's tap.
- Most of our water distribution systems are old and are in need of repair and replacement.
- Whether inside or outside your home, a leak can waste hundreds of gallons of water per year.
- Some leaks are easy to see or hear. Others are small. However, big or small, any leak costs you money and should be repaired as soon as possible.
- In our water service areas dry barrel fire hydrants are used which makes it nearly impossible for a car to run over a fire hydrant and cause it to gush water like they do in the movies.



**Clackamas River
Water Providers**



Working together to protect and conserve our drinking water.

14275 S Clackamas River Drive, Oregon City, OR 97045 • www.clackamasproviders.org

Our Members:



www.cwater.com

**CITY OF
ESTACADA**
unexpected / untamed / unforgettable

www.cityofestacada.org



www.ci.gladstone.or.us



www.ci.oswego.or.us

OAK LODGE
WATER SERVICES

www.oaklodgewaterservices.org



www.sfwb.org



www.sunrisewater.com



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

