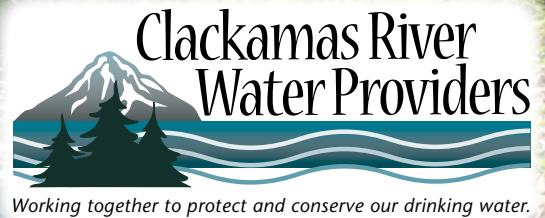




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CRWP YouTube Channel



## FALL 2023 News

# 2024 Water Calendars are Now Available!

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

The theme for the 2024 Calendar is "Saving Water is Easy!". Students from 32 classes and 15 different schools submitted pictures depicting what saving water looks like to them. Of the roughly 900 pictures submitted, thirteen pictures were chosen to be in the calendar and displayed on the CRWP website for two weeks so family, friends, and our community members could vote for which one of the 13 pictures would be on the cover.



During the month of October each school that participated in the contest receives a box of calendars to give away to students and families. In addition, the 2024 calendars are available to the public at your water providers front offices, local libraries, and upon request by contacting our office at **503-723-3511** or by emailing [christine@clackamasproviders.org](mailto:christine@clackamasproviders.org).

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

## What's Inside:

24 Calendars	P1
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## Are You a Teacher/Educator?

### CRWP Resources for Schools & Educators

The Clackamas River Water Providers have a number of free water and water conservation resources available to schools, teachers and educators within the [CRWP service area](#). This includes in-person [classroom activities and presentations](#), a full library of water videos and books for all grade levels on everything from the water cycle, properties of water, and how drinking water is made. All available for teachers to borrow. You can also take advantage of our vast collection of well-known water and environmental manuals as well as indoor home water audit kits.

### For Middle and High School Educators

The CRWP has taken part in and supported many studies in the Clackamas River basin. You and your students might find these reports useful as study material and information for reports. All of these reports and studies are available under the [Resource and Documents](#) page located on our website.



CHRISTINE HOLLENBECK, Public Education and Conservation Program Coordinator, (503) 723-3511 • [christine@clackamasproviders.org](mailto:christine@clackamasproviders.org)  
KIM SWAN, Water Resource Manager, (503) 723-3510 • [kims@clackamasproviders.org](mailto:kims@clackamasproviders.org)

# Teacher/Educator *continued*

**Other water education opportunities available from the CRWP are:**

- [An Interactive Map of the Clackamas River Watershed](#)
- [In-Person and Virtual Drinking Water Treatment Plant Tours](#)
- [Stories for a Living Stream Assembly Programs](#) with Master Storyteller, Will Hornyak

## • [\\$250 Mini Water Education Grants](#)

All of these resources and programs are offered at no cost to our [CRWP Schools](#) and teachers, and some of the presentations even include curriculum packets and promotional items, such as activity books, shower timers, and brochures for students to share with their families.

For more information and to see a full list of resources visit our [Teacher Resources webpage](#) or contact our Public Outreach and Education Coordinator at [christine@clackamasproviders.org](mailto:christine@clackamasproviders.org).

## CRWP Members - Who Are We?

**The Clackamas River Water Providers** is made-up of eight municipal water providers on the Clackamas River which serve over 300,000 people drinking water in Clackamas and Washington Counties. Participation in the organization is voluntary and is funded through membership dues. While the Clackamas River Water Providers projects and staff are jointly funded each organization retains its own individual autonomy.

### City of Estacada

The City of Estacada is located at the base of the Clackamas River Gorge and the Mt. Hood National Forest and serves a population of 5,347 people from the Clackamas River. The Estacada treatment facility treats, pumps, and stores water for domestic, commercial and firefighting purposes, both inside and outside of the city limits. The primary goal of the drinking water treatment plant is to meet or exceed water quality standards to remain in full compliance with state and federal regulations, while providing adequate quantity and pressure for firefighting.

The design capacity of the treatment plant is 2 million gallons of drinking water per day (MGD). Currently the city has four reservoirs and are working to add a 5th reservoir. For more information, visit the [City of Estacada here](#).

### City of Tigard

The City of Tigard, located in Washington County, provides water to 60,000 residents in Durham, King City, two-thirds of Tigard, and the Tigard Water District. Through the Lake Oswego/Tigard Water Partnership the City of Tigard's main source of drinking water comes from the Clackamas River, one of the highest quality sources in the state.



Water is withdrawn from the Clackamas River, pumped through a pipeline buried beneath the Willamette River, and treated at the Lake Oswego-Tigard Water Treatment Plant in West Linn. The water goes through a robust treatment process that includes filtration to remove dirt and organisms, ozone to remove substances that affect how the water tastes and smells, and disinfection to kill organisms and protect the water as it goes through the distribution system. For more information visit [City of Tigard](#) or [LO-Tigard Water](#).

### City of Lake Oswego

The Lake Oswego – Tigard Water Treatment Plant serves a combined 100,000 people in Lake Oswego and Tigard. The water source originates from the Clackamas River Basin. Once withdrawn from the Clackamas River, the water is pumped through a pipeline buried beneath the Willamette River to the City's Water Treatment Plant located in West Linn. Completed in 2017, the water treatment plant utilizes a state-of-the-art water treatment process, known as conventional filtration plus ozone. When raw (untreated) water reaches the plant from the Clackamas River, state-licensed drinking water operators take the water through a purification process that makes it safe to drink. For more information click to visit the [City of Lake Oswego's website](#).



### Clackamas River Water

Clackamas River Water (CRW) is a regional water service provider organized under Chapter 264 of the Oregon Revised Statutes (ORS) as a special district. Special Districts are autonomous government entities that are accountable to the voters in the areas they serve. CRW provides clean, safe drinking water to a population of about 50,000 directly, and up to 80,000 people are served when the populations of wholesale



*continued on page 3*

# CRWP Members *continued*

customers are included. CRW has maintained more than 45 years of exceptional water treatment plant operation, providing water to nearly 12,000 service connections, and maintaining a distribution system consisting of approximately 262 miles of pipeline, 15 reservoirs, and 11 pump stations.

CRW was created in July 1995 by the consolidation of the Clackamas Water District and the Clairmont Water District. Clackamas Water District was originally formed in 1926. It absorbed the former Stanley Water District in 1979 and merged with Barwell Park Water District in 1991. Clairmont was originally formed in 1959 and was merged with the Redland and Holcomb-Outlook Water Districts in 1983. For more information, visit CRW's website by clicking [HERE](#).

## City of Gladstone

The City of Gladstone maintains three reservoirs, two pump stations, and approximately 40 miles of water pipe within its distribution system. The city serves a population of over 12,000 people, in 4 sq miles at the confluence of the Clackamas River and the Willamette River and consumes an average of 1.2 million gallons of drinking water a day (MGD). The city also has ownership in the North Clackamas County Water Commission treatment plant which treats water from the Clackamas River. For more information visit [City of Gladstone](#).



## Oak Lodge Water Services

OLWS provides safe and reliable drinking water services to approximately 33,000 residential and commercial customers in the Oak Grove/Jennings Lodge communities, within 9 square miles. Raw water from the Clackamas River is drawn by the North Clackamas County Water Commission (NCCWC) Water Treatment Plant, where it is treated, cleaned, and transformed into high-quality drinking water. OLWS operates and maintains a complex set of infrastructure responsible for storing and distributing drinking water to its customers. For more information visit [Oak Lodge Water Services](#).



## Sunrise Water Authority (Happy Valley and Damascus area)

The Sunrise Water Authority was formed in 2000 as part of a merger between the former Mt. Scott and Damascus Water Districts. Sunrise Water Authority is governed by a seven-member elected Board and currently serves a population of approximately 53,000 through 17,500 service connections located throughout the City of Happy and surrounding areas of unincorporated Clackamas County. Sunrise's system is composed of 260 miles of pipe and 13 reservoirs with a total combined capacity of 23.6 million gallons. Water supplied to their customers is derived principally from the Clackamas River via its ownership in the North Clackamas County Water Commission and through wholesale purchases from the Clackamas River Water District, with supplemental peak demand supplies from several area wells. For more information about Sunrise Water Authority click [HERE](#).



## South Fork Water Board (Oregon City and West Linn)

South Fork Water Board is a water treatment plant that treats water from the Clackamas River and is jointly owned by the Cities of Oregon City and West Linn. In addition to selling water to [Oregon City](#) and [West Linn](#), South Fork provides water to other unincorporated parts of Clackamas County, providing water to approximately 64,000 people in the area.



South Fork's current system includes the water intake just off Clackamas River Drive, a pipeline up the hill from the river to the site of the water treatment plant, a transmission pipeline from the treatment plant to Oregon City and West Linn distribution connections, and a pump station to boost treated water to higher elevations. The treatment plant capacity is approximately 23 million gallons per day (MGD), and the peak day to date is approximately 20 MGD during the summer of 2023. For more information about South Fork Water Board visit [HERE](#).

## Fall Quiz:

*Answers - Can be found on page 7*

1. Examples of ongoing distribution system programs include:

- A. Flushing programs
- B. Leak detection
- C. Meter maintenance
- D. All of the Above

2. It's best to clear out garden stems and foliage to prevent the possibility of pathogens and insect eggs over the winter.

- A. True
- B. False

3. Hazardous spill materials that can affect water quality are:

- A. Industrial spills
- B. Railroad line spills
- C. Transportation spills
- D. All of the above

4. It is not important to spread new mulch before winter, to protect plants and soil.

- A. True
- B. False



# Source Water Protection

**Source water protection** is one of the keystones of what the CRWP does and is the foundation of any drinking water utility and is one of the primary ways to reduce the risk to a source from contamination or decline in production. Source water protection not only helps the utility identify its risk, but it is also necessary to educate regulatory agencies, permitting authorities, and the community about the impacts their actions can have on drinking water source water quality or quantity.

Source Water Protection is one of the first key steps in a multiple barrier approach to providing clean drinking water which involves several consecutive steps, including: high quality source water, source water protection, optimized water treatment, distribution system maintenance and water quality monitoring.

## **Source water protection can also:**

- Reduce the need for additional treatment to meet water quality standards.
- Help the utility be prepared and reduce the impacts and costs of an emergency when they understand the risks to source quality from contamination, or reduced quantity due to climate change.
- Help sustainability when an alternate source of water may not be available or cost-prohibitive.

In 2021 we updated our Drinking Water Protection plan which is our road map of how we implement our source water protection efforts. See the plan by going here <https://www.clackamasproviders.org/drinking-water-protection-plan/>

# Hazardous Material Spill Prevention Program

The CRWP has identified hazardous materials spills as being a high-risk factor that could affect drinking water quality in the Clackamas River watershed. Potential spills from commercial and industrial areas, railroad lines, transportation activities along I-205, HWY 26 (crosses North Fork of Deep Creek near the junction of HWY 26 and 212), HWY 211 and HWY 212/224, and road bridges crossing the Clackamas River are of particular concern.

The Clackamas Industrial Area is one area of concern because many of the businesses are less than a quarter of a mile away from the Clackamas River with a large number of stormwater drains as well as four small tributary creeks (Rock, Sieben, Carli, and Cow Creeks) that drain the Industrial Area directly to the river.

These stormwater drains and tributaries enter the river just upstream of four drinking water intakes. Therefore, when chemicals spill on a property or street, it can travel quickly to the river.

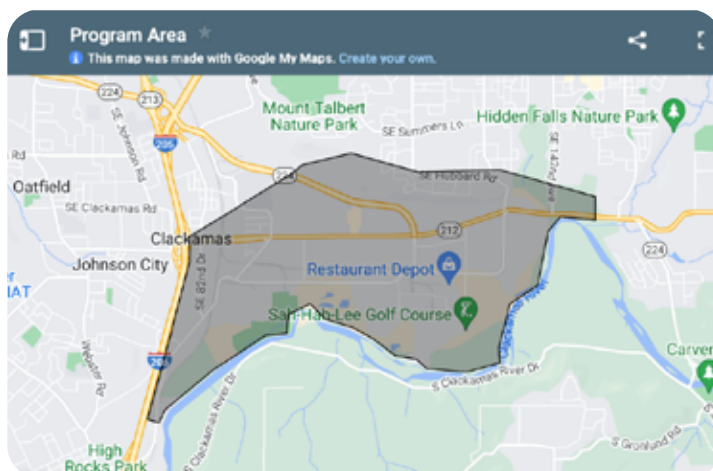
The CRWP continues to work with Pollution Prevention Resource Center (PPRC), a nonprofit organization that is one of the Northwest's leading sources of high quality, unbiased pollution prevention information, to help implement both our technical and financial assistance for spill prevention efforts to businesses located within the Clackamas Industrial area.

This includes 1) free facility site visits to help businesses identify environmental best practices, assist with spill

response plans, and identify secondary containment options, and 2) the purchase and/or installation of secondary containment equipment. Equipment may include spill pallets, double-walled tanks, repairs to floor drains, installation of shut-off valves, and construction of berms and waste cover.

The CRWP is also offering free spill kits to every facility within the Clackamas Industrial area. Facilities interested in receiving free spill prevention tools and secondary containment systems must complete a free facility site visit to identify the best options for the facility.

If you are not sure if your business is located within the watershed or in the Clackamas Industrial Area, or if you want to learn more about how to receive the free technical and financial assistance email [kims@clackamasproviders.org](mailto:kims@clackamasproviders.org)



# How Water Systems Work

## Drinking Distribution Systems Water

Our water systems have hundreds of miles of transmission, distribution and service lines, hundreds of valves and fire hydrants, reservoirs and pumping stations which move water from our treatment plants to homes, offices and industries in our service areas. These systems allow our CRWP members to provide an uninterrupted supply of pressurized safe drinking water to their consumers.

As these systems age, deterioration can occur due to corrosion, materials erosion, and external pressures that result in water main breaks, storage tank leaks, water pressure fluctuation, and other situations that can pose intermittent or persistent health risks.

Therefore, these systems need to be maintained year-round to ensure delivery of high-quality drinking water.

This is largely done through the conscientious operation and maintenance of the system facilities and includes both preventive and corrective maintenance.

Preventive Maintenance is maintenance that is specifically scheduled, while Corrective Maintenance is not scheduled but is done when a problem, such as a main break, must be corrected to continue satisfactory operation. Some examples of ongoing operation and maintenance programs include: Water Main Flushing programs, Leak Detection programs, and Meter Maintenance programs.

For more information about your water provider and their distribution system, check out our CRWP Member article on page 2, or visit our CRWP website, click [HERE](#)

## The CRWP Thanks You!

For the fifth year in a row, beginning August 7th the CRWP launched our annual summer watering campaign "***Fish On the Run, Irrigation Done!***". We have asked our customers to participate, and help the Clackamas River by reducing or shutting-off outdoor watering by the beginning of September helping to keep water in the Clackamas River for the fall fish migration.

This year we had 47 customers who submitted pledge applications, most of which received yard signs, one pledge applicant reused their yard sign from last year, showing neighbors that they are doing their part to keep water in the Clackamas River.



The CRWP would like to thank all of you for your support and participation in this very important campaign.

### THANK YOU!!!!!!

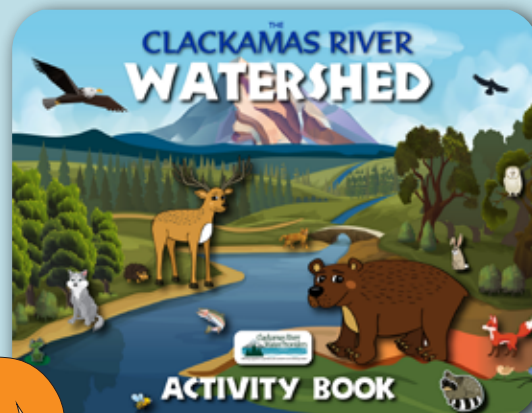
If you did not participate in this year's campaign, no worries, you can participate next year. Keep your eyes on our website in mid-August for the 2024 Summer Watering Campaign, "Fish On the Run, Irrigation Done!"

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

# Watershed Protection:

## Sources of Pollution

The CRWP offers an [Activity Book](#) that teachers can use to help inform students about the importance and value of clean water, and how to protect this precious resource. It includes many cool games, puzzles, and activities to become more familiar with the Clackamas River Watershed where we get our high quality drinking water.



Each time it rains or snows, pollutants wash off our roofs, lawns, streets, and parking lots and flow untreated into creeks and rivers. This is called stormwater runoff or non-point source pollution, and is one of the biggest sources of pollution in our watershed. These pollutants include nutrients from garden fertilizers, bacteria from pet waste and litter, soil erosion, pesticides, and runoff from parking lots.

Can you figure out which are non-point source pollution sources? Place the correct letters in the white box.

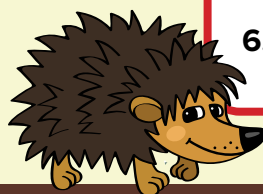
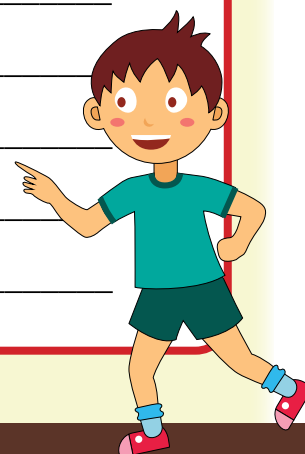


**Stormwater Runoff**

<b>A</b> Washing your car on the lawn	<b>H</b> Runoff from a parking lot
<b>B</b> Soil and silt erosion	<b>I</b> Using too much pesticide
<b>C</b> Putting candy wrappers in the garbage	<b>J</b> Not picking up pet waste
<b>D</b> A beaver making a dam	<b>K</b> A fairy building a sandcastle
<b>E</b> Creating a rain garden	<b>L</b> A car leaking oil
<b>G</b> Dumping antifreeze or paint down a storm drain	<b>N</b> A frog swimming in the river

### Non-Point Source Pollution:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_





# Time to Shut-Off Your Outdoor Irrigation Systems

Summer is over, the days are shorter, nights are longer, and it is beginning to be much cooler. All of the plants are going into their dormant stage which means they do not need any supplemental water. For those of you who let your lawns go dormant during the summer and did not water (thank you), you are beginning to see your lawns turn green again.

The [Weekly Watering Number](#) has ended and if you haven't already done so, it is time to shut off the outside water, disconnect and insulate the hose bibs, and shut off and drain your outdoor irrigation systems before the first winter freeze.

## Putting Your Irrigation System to Bed for the Winter

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

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

### Manual Valve Systems

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

### Automatic Valve Systems

Other irrigation systems are equipped with valves that will automatically drain water out of the pipes if pressure falls

below a certain number of pounds per square inch (PSI).

These can be activated by turning off the water supply and briefly running one of the sprinkler heads to relieve the water pressure in the system. You may still need to drain the water between the shut off valve and the backflow assembly. If the sprinkler heads are equipped with check valves, you will need to empty those separately.

## Irrigation System Blow-Out

The final method of winterizing your irrigation system is to force compressed air through the system to discharge excess water through the sprinkler heads. This method is potentially hazardous, both to the wrong types of irrigation systems and to anyone who attempts to do this without taking the proper safety precautions. If you've never worked with compressed air or have not blown-out an irrigation system, we highly recommend you hire a licensed landscape professional for assistance.

Winterizing your irrigation system is a critical part of annual irrigation system maintenance. It can save you from having to pay for the repair of costly leaks and water line breaks in the spring. Visit our [website](#) for more water conservation tips and information.



## Fall Quiz:

### Answers

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

**Question 3** - Answer is D  
**Question 4** - Answer is B

# Fall Water Conservation Tips

The temperature has begun to drop, the days are shorter and the birds are starting to fly south. All of this means one thing, fall is on the way. We strongly urge consumers to conserve water as you begin preparations for the cold months ahead.

*Ways you can conserve and live a water-wise lifestyle:*

- Sweep patios, driveways and sidewalks. Never hose paved surfaces.
- Know where your Emergency water shut-off valve is located and teach everyone in your household where it is and how to turn off the water. Most shut-off valves are located in the crawl space, basement, garage, or outside near the foundation of a single-family home. If a pipe burst inside your home during the winter, this valve will turn the water off.
- Take your car to a carwash that recycles the water.

- Disconnect and drain hoses from outside faucets and turn them off if they have their own shut-off valve. The shut-off valve is typically located in the basement or crawl space. If your home has an outdoor faucet shut-off valve, be sure to empty the water lines to your faucet by turning on each outdoor faucet after you've closed the shut-off valve. Insulate each spigot with a foam cap or another insulating material like newspaper. If your home does not have a separate shut-off valve for the outside faucets, again, insulate each spigot with a foam cap or another insulating material like newspaper.
- Make a stronger commitment to water conservation inside the home by turning off the water when brushing your teeth or shaving, and take only 5-minute showers. Also, never pour water down the drain if there is another use for it such as watering a plant or cleaning around the home.

Visit our website for more [Indoor Water Conservation Tips](#) for the fall and winter.

## Preparing Your Garden for a Long Winter Nap

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.

Clear out 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. The cool weather is a good time to make a cold frame, dig and box in raised beds, and make general repairs.



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.

Most likely, the organic mulch you spread to protect and retain the soil moisture during the summer months has substantially decomposed. It's so important to spread new mulch now. A thick layer of mulch will feed and protect plants and soil over the winter months. The idea is not so much to keep the soil warm as it is to keep the temperature even.

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

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



# NEW CRWP Careers in the Water Industry

Like most industries, the water industry is in need of employees and our CRWP members are no exception. It takes many different professionals in many different positions to deliver clean, safe drinking water to our CRWP communities 24/7, 365 days a year.

A career in the drinking water field is rewarding, secure, well-paid, has good benefits, and a great way to contribute to your community. Right now, our members need a number of qualified people to fill a number of positions in the public drinking water sector.



Some of the career opportunities include working in Customer Service, Finance, Engineering, Human Resource & Payroll, Information Technology, and Communications, as well as positions in the field such as Water Quality, Distribution, Conservation, and Water Treatment Operators.

If you are interested in a career in public water, education paths, mentorship programs, and more visit our NEW [Careers in Water](#) web page.



## Sign-up for Public Alerts

By signing up you can receive emergency notifications for your home or other address (such as business). You will only be contacted when the associated address is affected by an emergency.

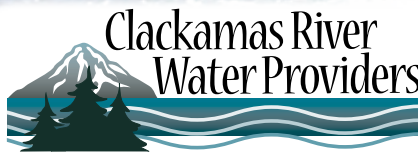
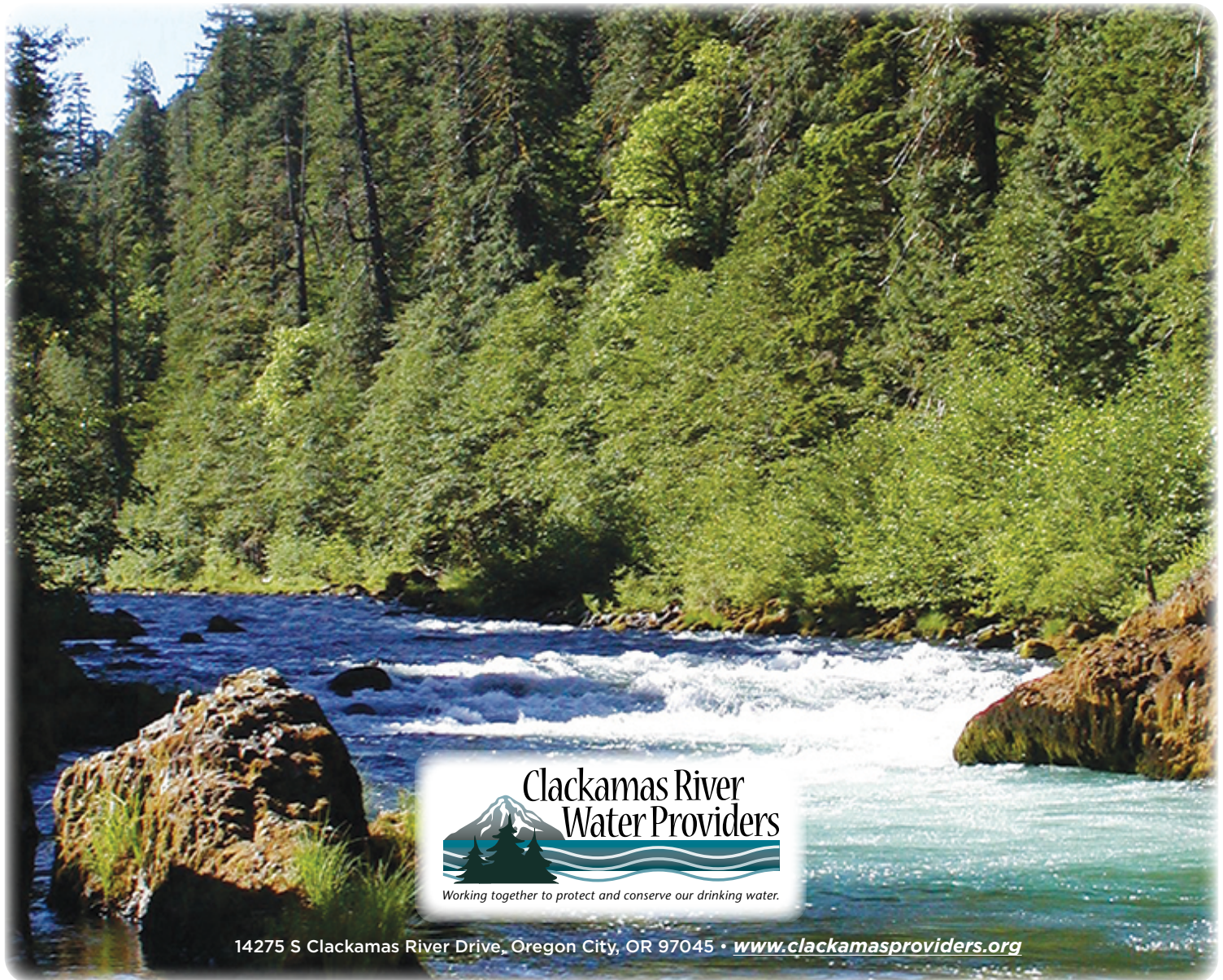
If the call is picked up by an answering machine, it will leave a message and not call back. If the number is busy or there is no answer, the system will try contacting your other contact methods. Once you have acknowledged receipt of a message on one device, the system will stop trying to contact your other devices.



**#ClackCo**   
**PublicAlerts**

By providing your contact information as a county resident you can opt-in to receive critical emergency messaging via email, phone call and text during times of disaster. Important messages that could be relayed include notices to evacuate, shelter-in-place, shelter locations and other extremely important information. To learn more and sign-up click [here](#).





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)



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



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