



How **Water** **Systems** *Work*

Providing clean, safe, drinking water 365 days a year.



*We are the beneficiaries of a magnificent water network
handed down to us by previous generations.*

Clackamas River Water Providers

Working together to protect and conserve our drinking water.

The Clackamas River Water Providers is a coalition of the municipal water providers that get their drinking water from the Clackamas River. The purpose of the organization is to fund and coordinate efforts regarding source water protection and public outreach and education around watershed issues, drinking water, and water conservation, so that we can preserve the Clackamas River as a high quality drinking water source and minimize 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 the providers 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 basin such as PGE. It also 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.

DID YOU KNOW?

- We 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.
- In Clackamas County 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 in someone's backyard (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 Clackamas County 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.



The Value of Water



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.

Much of today's public water systems were built more than 50 years ago and little has been done to rebuild or replace these pipes, pumps, and reservoirs that ensure water safely reaches your tap. We now face a large problem of figuring out how to pay to fix these systems before they fail. Therefore, our choice is to either adopt strategies to renew our water infrastructure, or accept the erosion over time of reliable water service.



You simply cannot put a price on a service that delivers:

- **Public Health.** 3 million people die each year from preventable water borne diseases. Our water systems allow you to drink from any tap with a high assurance of safety.



- **Quality of Life.** Tap water is more than a convenience, it is central to our everyday lives. How would we brush our teeth, shower or flush our toilets?

- **Fire Protection.** Well maintained water systems are critical in protecting our communities from the threat of fire. Water flowing to fire hydrants and home faucets come from the same system.

- **Economy & Development.** A safe, reliable water supply is central to the economic success of our communities.



When you consider the critical needs addressed by our water systems, public drinking water will always be a tremendous value.

FOR MORE INFORMATION:

- **Water Is Your Business:** <http://waterisyourbusiness.org/>

- **Buried No Longer - Confronting America's Water Infrastructure Challenges:**

<http://www.awwa.org/portals/0/files/legreg/documents/buriednolonger.pdf>



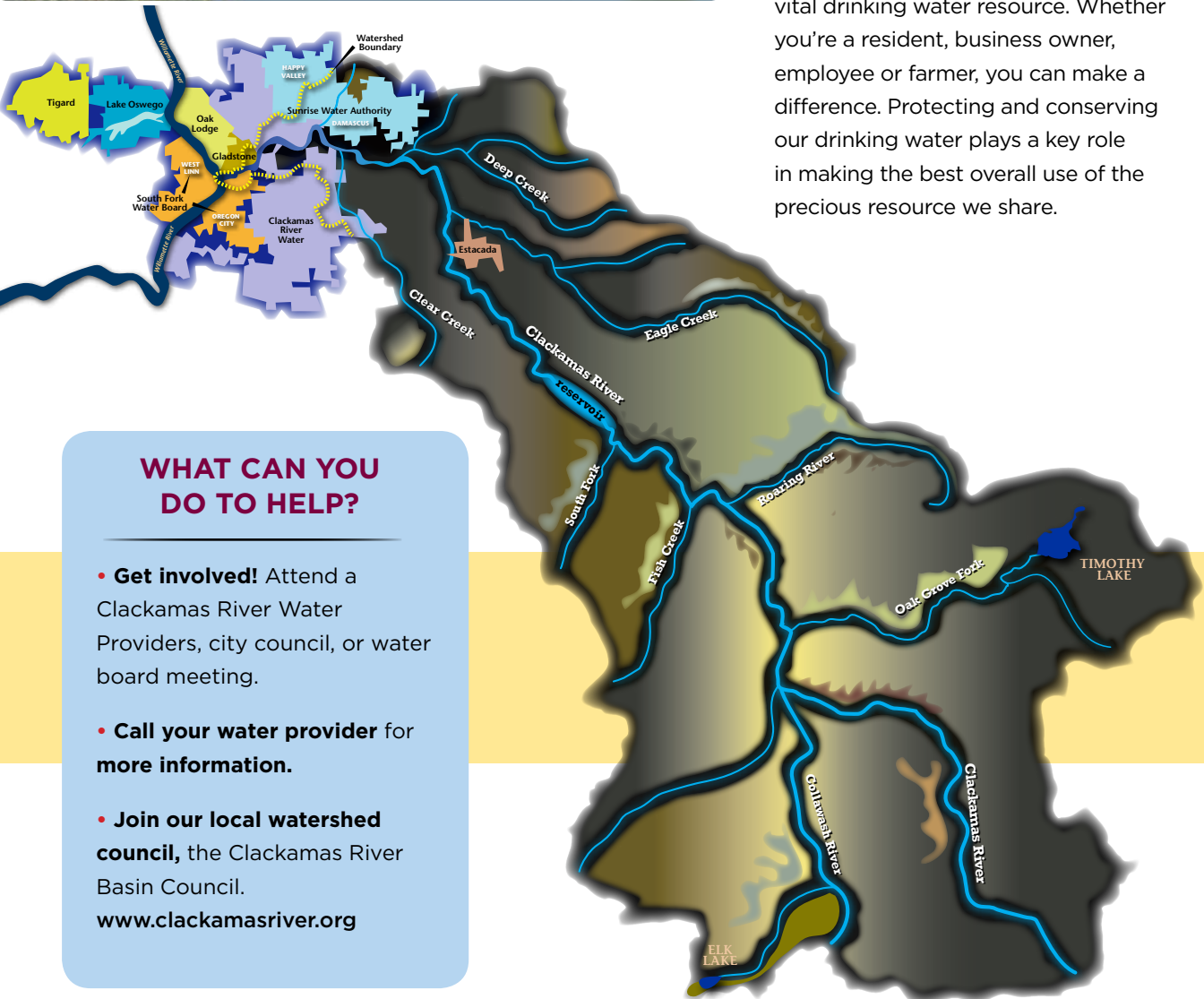


PROTECTING OUR WATERSHED

Unlike the City of Portland's protected Bull Run watershed, the Clackamas is a multi-use watershed with various users and ownership throughout the watershed.

Each time it rains or snows, pollutants wash off the land and flow untreated into nearby surface and groundwater sources. Human activities such as construction, timber harvest, livestock management, fertilizer and pesticide use if not performed responsibly can degrade water quality.

We all play a role in preserving our vital drinking water resource. Whether you're a resident, business owner, employee or farmer, you can make a difference. Protecting and conserving our drinking water plays a key role in making the best overall use of the precious resource we share.



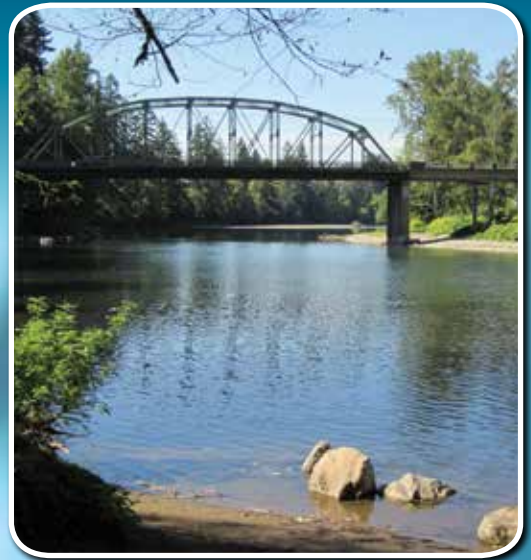
WHAT CAN YOU DO TO HELP?

- **Get involved!** Attend a Clackamas River Water Providers, city council, or water board meeting.
- **Call your water provider** for more information.
- **Join our local watershed council**, the Clackamas River Basin Council.
www.clackamasriver.org

ABOUT THE CLACKAMAS RIVER WATERSHED

The Clackamas River supplies high quality drinking water to almost 300,000 people in Clackamas County. In addition the Clackamas River Watershed:

- 1.** Flows 83 miles from its headwaters to its confluence with the Willamette River near Gladstone and Oregon City.
- 2.** Drains more than 940 square miles.
- 3.** Is made up of 16 subwatersheds.
- 4.** Crosses two counties and includes federal, state, and private land.
- 5.** Is 72% public owned, 25% privately owned, and 3% tribally owned.
- 6.** Generates hydroelectric power.
- 7.** Is home to Steelhead, Chinook and Coho salmon, as well as Lamprey and Sea-run Cutthroat trout.
- 8.** Hosts many productive farms and nurseries.
- 9.** Offers a wealth of recreational activities such as fishing, hiking, camping, white water rafting, kayaking, and hunting.
- 10.** Provides important habitat for many plant, wildlife and aquatic species.
- 11.** Sections of the river are designated as Federal and State Wild and Scenic Waterways.



Key Watershed Concerns

1) Naturally spawning and anadromous salmonids.

The Clackamas supports a variety of salmon species.

2) Land Use. Land use impacts can increase pollution runoff, sediment loads, and water temperatures.

3) Urban Growth. Impervious surfaces increase the impact of stormwater runoff.

4) Water Quality. Water for people must be balance with water for fish.

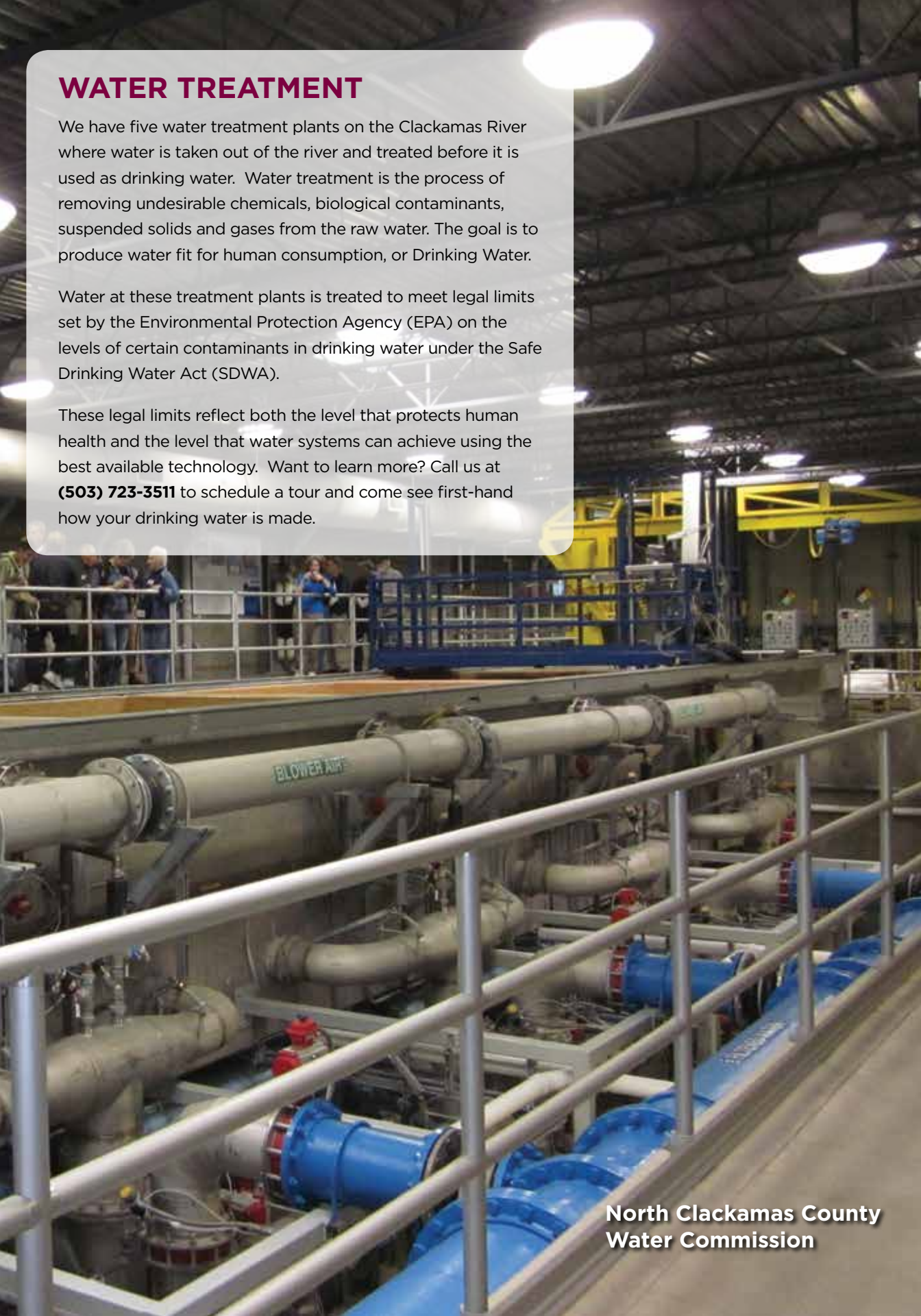


WATER TREATMENT

We have five water treatment plants on the Clackamas River where water is taken out of the river and treated before it is used as drinking water. Water treatment is the process of removing undesirable chemicals, biological contaminants, suspended solids and gases from the raw water. The goal is to produce water fit for human consumption, or Drinking Water.

Water at these treatment plants is treated to meet legal limits set by the Environmental Protection Agency (EPA) on the levels of certain contaminants in drinking water under the Safe Drinking Water Act (SDWA).

These legal limits reflect both the level that protects human health and the level that water systems can achieve using the best available technology. Want to learn more? Call us at **(503) 723-3511** to schedule a tour and come see first-hand how your drinking water is made.



**North Clackamas County
Water Commission**

WATER QUALITY & TESTING

Clackamas River Water member's drinking water is closely regulated by both the Environmental Protection Agency (EPA) and the Oregon Health Authority (OHA). Water Provider staff and testing experts conduct more than a thousand tests every month in our source water, drinking water treatment plants, and in our distribution systems. This continuous monitoring of quality and safety, ensures that our drinking water more than meets strict federal and state drinking water standards.

A few examples of required water quality testing are:

- **Coliform Bacteria.**
- **Inorganic Compounds & Radionuclides** - Nitrates, manganese, other simple chemicals and minerals, and radium.
- **Volatile Organic Compounds (VOCs)** - Solvents, cleaners, pesticides, and other man-made contaminants.
- **Disinfection Byproducts.**

You can find a detailed report on our water quality monitoring process by looking at your water provider's Annual Water Quality Report online.



FOR MORE INFORMATION:



- **Environmental Protection Agency Safe Drinking Water Act:**
<http://water.epa.gov/lawsregs/rulesregs/sdwa/index.cfm>

• State Of Oregon Drinking Water Program:

<http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater>



DRINKING WATER DISTRIBUTION SYSTEMS

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 home, offices and industries in our service areas. These systems allow us to provide an uninterrupted supply of pressurized safe drinking water to our 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 that we are able to deliver high quality drinking water to our customers. 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.



Water system inventory of fire hydrants and ductile iron pipe.



Moving our WATER

PRESSURE ZONES

Because most of our water service areas are not flat most water systems have multiple water pressure zones. A water pressure zone is a geographic section of a water distribution network that is determined by the elevation of the area served.

The pressure in the water system, known as hydraulic pressure, is created by gravity pulling a column of water downwards. At an average height of about 120 feet, water towers properly pressurize the water distribution pipes within a pressure zone.

Within a pressure zone, a minimum pressure is established by pumping stations or reservoirs. Water does not flow between pressure zones unless it flows from a higher pressure zone to a lower pressure zone, through a pressure reducing valve. Water pressure in a pressure zone typically ranges from 40 to 130 psi, but may be higher.

PUMPING STATIONS

Most water systems are designed to utilize gravity to efficiently move water throughout the distribution system. When the use of gravity cannot be utilized, pumps take over to move the water.

The energy required to pump water is an extremely demanding component of water distribution system. Since electrical power for pumping is a major expense, the goal is to develop a system which minimizes pumping.

Pump stations fall into two different categories. The first type lifts water from lower elevations to fill water reservoirs located at various high points. From there gravity takes over to supply customers at the lower elevations.

For other areas where customers cannot be served by gravity, another option exists, the booster pump. These stations pump water to customers and help ensure adequate pressures are maintained at all times.

CRWP members have numerous pumps and pump stations in various locations throughout their service areas. Distribution system operators don't use all of the pumps in the system at the same time; rather they cycle them on and off based on the demand.

Some pump stations will always have pumps running, i.e. booster pumps, while others may only be needed in the height of the summer water-use season. Many of our systems have pumps that automatically increase and decrease pumping capacity with shifts in water demand helping us save money on electrical costs.

WATER RESERVOIR TANKS AND TOWERS

In Clackamas County water reservoirs are a familiar sight, often constructed on hills or supported in steel tanks on towers. These reservoirs provide storage for treated water before it is distributed to homes and businesses throughout CRWP communities.

Typically the volume of water stored in these towers or reservoirs is equal to the community's average water demand for a single day. When water demand exceeds the average daily demand, water flows from the reservoirs into the distribution system. When water demand is low pumps refill the reservoirs.

Water reservoirs and tanks are elevated or found at high points in a water distribution system to provide adequate water system pressures. They rely on hydrostatic pressure produced by elevation (due to gravity) to push the water into the water distribution system. Each foot of height provides 0.43 PSI (pounds per square Inch) of pressure.

Water stored in reservoirs is also gives us the ability to respond to emergencies such fires, power blackouts, and pump station failures.

Our reservoirs serve to satisfy the peak hourly water demands in our communities



**Rosemont Tower
West Linn**



When water demand exceeds the average daily demand, water flows out of the reservoirs into the distribution system.

FIRE HYDRANTS

Fire Hydrants are a critical part of fighting fires in our communities. Fire hydrants are connected to our water distribution systems network of underground pipes. Therefore, the water that comes out of a fire hydrant is the same drinking water used in our homes, businesses, and schools.

Fire hydrants in colder climates, such as our area, use “dry barrel hydrants” which means no water stays in the upper section of the hydrant when the hydrant valve is turned off. “Wet barrel” fire hydrants are popular in climates where freezing is not an issue. Although materials have improved and some of the elements of fire hydrant design have been refined, the basic form, of both the dry and wet barrel fire hydrants have remained relatively unchanged since the mid 1800s.

FLUSHING PROGRAMS

Hydrants are also used for water main (pipe) flushing. Flushing programs maintain water quality and minimize discoloration by comprehensively flushing water mains with a technique known as unidirectional flushing. The procedure involves the systematic opening and closing of fire hydrants and valves, one section of main at a time, to force the water through the pipes at high velocity, removing accumulated mineral sediment until the water is clear.

When flushing crews are working close to your residence or business you may experience discolored water which can be drawn into homes and business if the water is being used during or immediately following the flushing. If discoloration occurs, open the cold water faucet nearest the water meter - usually an outside faucet or utility sink -let the water run at full flow until the water runs clear, about 5 to 15 minutes. For further assistance or more information contact your water provider.



LEAK DETECTION PROGRAMS IN WATER DISTRIBUTION

Detecting and repairing leaks is one of the main components of water conservation in water distribution systems.

Old or poorly constructed pipelines, inadequate corrosion protection, poorly maintained valves and mechanical damage are some of the factors contributing to leakage. Leak detection has historically assumed that all, if not most, leaks rise to the surface and are visible. In fact, many leaks continue below the surface for long periods of time and remain undetected.

With an aggressive leak detection program, water systems can search for and reduce previously undetected leaks. Water lost after treatment and pressurization, but before delivered for the intended use, is water, money and energy wasted. Accurate location and repair of leaking water pipes in a supply system greatly reduces these losses. Once a leak is detected, the water utility must take corrective action to minimize water losses in the water distribution system.



Benefits of leak detection and repair

Minimizing leakage in water systems has many benefits for water customers (and their suppliers). These benefits include:

- Improved operational efficiency.
- Lowered water system operational cost.
- Reduced potential for contaminants.
- Extended life of facilities.
- Reduced potential property damage and water system liability.
- Reduced water outage events.
- Improved public relations.

Some added benefits of leak detection and repair that are difficult to quantify include:

- Increased knowledge about the distribution system, which can be used to respond more quickly to emergencies and set priorities for replacement or rehabilitation programs.
- More efficient use of existing supplies and delayed capacity expansion.
- Increased fire fighting capability.





WATER METERS

Water metering is the process of measuring water use. Water meters use mechanical, magnetic or electronic devices to measure the amount of water being used. An effective metering program allows us to compare measured flows in our systems and metered deliveries to our customers.

Residential and commercial water meters are generally owned, read and maintained by the public water provider. Water meters are read regularly and you receive a bill based the amount of water used since the meter was last read. Meters are most often made of bronze or brass and plastic, and are often located in front of your property, inside a concrete or plastic meter box that is set flush with the ground.

Water meters not only help utilities collect the revenue they are due, they also help pinpoint leaks, locate pressure problems along their waterways, and identify and study periods of peak and non-peak use among both residential and business consumers.

METER MAINTENANCE PROGRAMS

All CRWP members are required to have Meter Maintenance Programs which facilitate regular calibration and/or replacement of water meters to ensure accuracy.

Water meters tend to deteriorate with age, resulting in inaccurate readings. Old meters are often damaged or do not record water use at all. Inaccurate readings result in inaccurate information about water usage which impacts system audits and leak detection efforts.

Meter maintenance programs are designed to test all system meters at regular intervals. This is to ascertain that meters are appropriately sized, and to ensure meters are working properly. In addition, it identifies meters that should be replaced or repaired. Accounting for all water is a number one priority of our water utilities.

DID YOU KNOW
you can use your water meter
to check for household leaks?

Visit our website at:
www.clackamasproviders.org to find out how.



THE CROSS CONNECTION & BACKFLOW PROGRAMS

Every Public Water system in the State of Oregon is required by State law to have a Cross Connection Control and Backflow Program. This program is designed to protect the public drinking water from contamination and/or pollution.

- **A Backflow** is the unintended backward movement of water from your house back into the public water supply caused by hydraulic conditions such as loss of water system pressure or an increase in pressure after point of delivery.
- **A Cross Connection** is the unintended or intentional direct connection between the public water supply and any other substance.
- **Public Water Providers Protect** the drinking water system from these kinds of incidents by ensuring the installation of a backflow prevention assembly on the customer's side of the water meter. These assemblies prevent water from flowing back into the public water system and are required to be tested annually.
- **The Success** of a cross connection and backflow program often relies on the direct cooperation and understanding of their customers.

Some of the most common residential cross connections:

- 1) Underground lawn irrigation systems.
- 2) The outside garden hose being left in a swimming pool or hot tub while filling.
- 3) Utility sinks with hoses that hang down below the rim of the sink.
- 4) Liquid fertilizer containers which directly attach to the hose.
- 5) Window washing cleaners which attach directly to the hose.



FOR MORE INFORMATION:

- 1) About your public water provider's cross connection and backflow program contact your water provider.
- 2) On the State of Oregon's Cross Connection Control and Backflow program, visit their website at, <http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/CrossConnection/Pages/index.aspx>

WATER CONSERVATION PROGRAMS

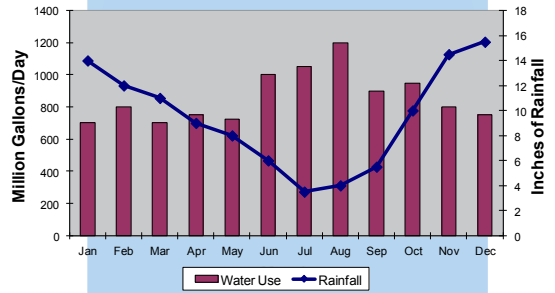
Municipal Water Management and Conservation Plans provide a process for municipal water supplies to develop plans to meet future water needs. All CRWP members are required to develop these Plans as part of their water right permit conditions. These Plans are used to demonstrate our communities' needs for increased diversions of water under their water permits as our communities and water demands grow. The Plans explain how we will manage and conserve water supplies and are intended to represent a pro-active evaluation of conservation measures that we can undertake.

All water providers must implement the following conservation measures:

- Conduct annual water audit.
- Full metering of the system.
- A meter testing and maintenance program.
- A rate structure based, at least in part, on the quantity of water metered.
- A leak detection program.
- A public education program on efficient water use and low water use landscaping.

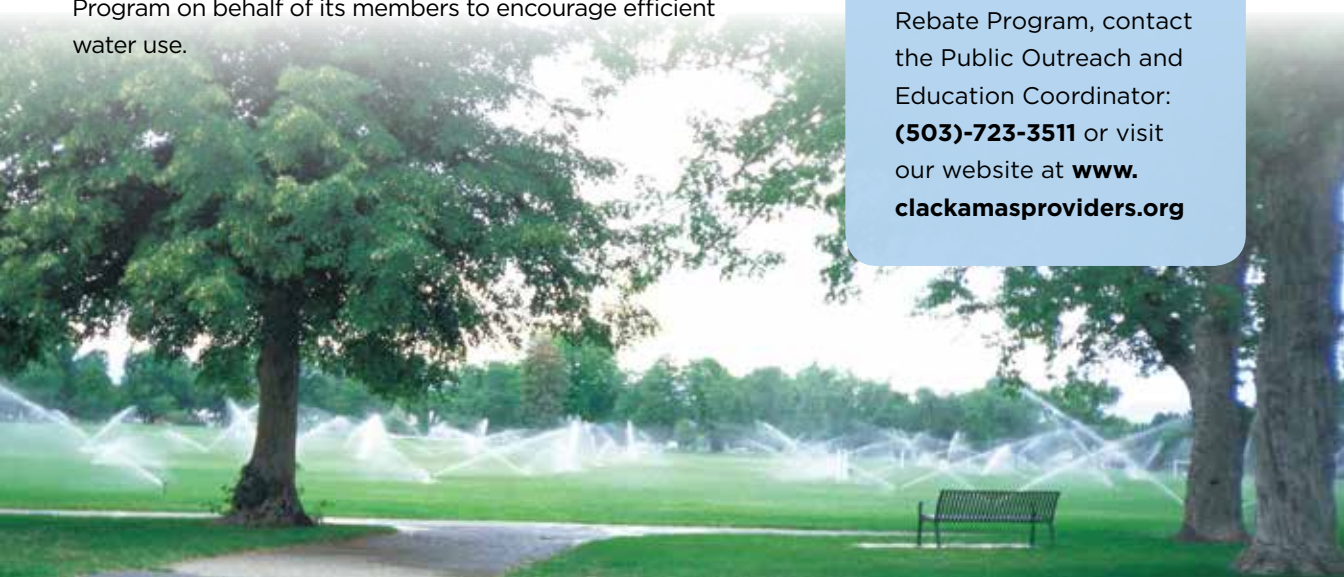
In addition, many water providers are required to implement technical and financial assistance programs such as rebate programs, where the cost of purchasing water-efficient fixtures or equipment are partially offset.

Water conservation is an important tool in meeting the water supply needs of our communities and can help us reduce the cost of developing new water supplies. It also allows us to leave more water in the rivers for fish and recreation. The CRWP implements a Public Outreach and Education Program on behalf of its members to encourage efficient water use.



FOR MORE INFORMATION

To learn more about how you can save water year round, to receive free conservation devices, or information about the *Clackamas River Water Providers Conservation Rebate Program*, contact the Public Outreach and Education Coordinator: **(503)-723-3511** or visit our website at **www.clackamasproviders.org**



WATER MANAGEMENT AND CAPITAL IMPROVEMENT PROGRAMS

CRWP members establish long-range strategies focused on community development and sustainability through the use of Master Plans (MP). Master Plans provide a vision for capital project plans and investments. Master Plans are supported by planning documents and solid financial policies. Master Plans identify jurisdictional needs ten to twenty-five years into the future. Regular updates to these plans are imperative as local conditions change.

In addition to long-range Master Plans, water providers utilize Capital Improvement Programs (CIP) to identify present and future needs requiring capital infrastructure. Such programs operate for a shorter duration, often three-to-five years.

Capital Improvement Programs - Capital Improvement Programs (CIP) are a planning and budgeting tool that provides information about a water system infrastructure needs. It identifies requirements for replacing and rehabilitating the facilities and infrastructure that support water supply and any new transmission lines that may be necessary.

Capital Improvement Programs (CIP) serve as a comprehensive road map to achieve capital replacements and preventive maintenance for the benefit of public water customers. The program identifies the work to be performed. CIP updates are integral to sound financial planning. It also prioritizes and schedules the projects for funding and implementation through a multi-year plan normally 20 years.

CIP Objectives - Overall objectives of the CIP include:

- Appropriate replacement of aging and at-capacity water facilities/condition assessment.
- Ensuring safe and reliable water facilities.
- Compliance with regulatory mandates.



UTILITY BILLING

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


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

The usage or consumption charge typically pays for Capital Improvement Projects for water distribution and water treatment improvements. Through the water 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 and natural resources and environment.

WONDERING WHY YOUR BILL SEEMS HIGHER THAN EXPECTED?

Often leaks both inside and out can go undetected. Make sure pipes are properly winterized, fix all dripping faucets, check toilets for quiet leaks and have 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.





OAK LODGE WATER DISTRICT
14496 SE River Road
Oak Grove, Oregon 97267
(303) 654-7765

Account Number	AMOUNT DUE
06-00580-001	\$133.30
Service Address	

These bill has a charge on all returned checks.
Please retain this portion with your payment.
When paying in person, please bring both portions of this bill.

06009800010000000113300005000113303

OAK LODGE WATER DISTRICT
14496 SE River Road
Oak Grove, Oregon 97267

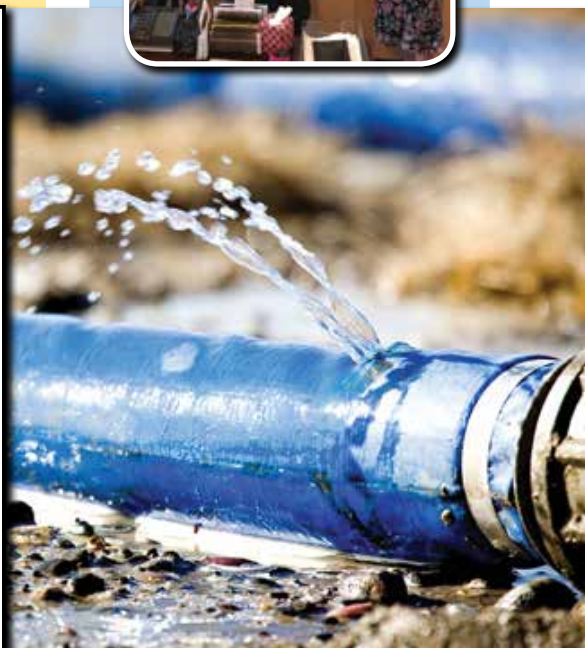
Please return this portion with your payment. When paying in person, please bring both portions of this bill.

CUSTOMER ACCOUNT INFORMATION - RETAIN FOR YOUR RECORDS

Name		Service Address			Account Number	
Status	Service Dates		Number of Days	Bill Date	Penalty Date	Due Date
	From	To				
Active	4/15/2013	6/15/2013	61	6/30/2013		7/15/2013

PREVIOUS BALANCE	\$138.95
PAYMENTS	\$138.95
ADJUSTMENTS	\$0.00
PENALTIES	\$0.00
PAST DUE AMOUNT	\$0.00

CURRENT		PREVIOUS		USAGE		
DATE	READING	DATE	READING			
6/15/2013	1,210	4/15/2013	1,150	60	Base Charge	27.40
6/15/2013	1,210	4/15/2013	1,150	60	Consumption Charge	85.99



EMERGENCY PREPAREDNESS



2013/14 seismic upgrade to the Oak Lodge Water District View Acres water reservoirs.

We don't just plan for the "Big One," we plan for "Every One." Out of sight out of mind, service on demand, and it's as easy as turning on your tap. As water providers we not only ensure that you have water 24/7/365 days per year but we are also plan for emergencies which can come in all shapes and sizes.

Be it a quake, an eruption, a drought, ice storm, power outage, or a major line break, people still need water. The Clackamas River Water Providers are working together, and with other providers in the region, to plan for events that could impact your water supply, because our job is to make sure water is there for you when you need it – even in an emergency.

Planning Ahead - To avoid emergencies before they happen Clackamas River Water Providers are replacing old water lines, seismically upgrading facilities, planning for future or alternative water supplies, monitoring watersheds, and ensuring regulatory compliance.

Being Prepared - Practice make perfect. We conduct yearly emergency exercises to test our capabilities and constantly look for ways to improve our coordination and communication during an emergency

What You Can Do - As prepared as we are, some emergencies are potentially bigger than us – especially natural disasters. That's why everyone needs to help. If an earthquake, winter storm, or other disaster strikes our community, you may not have access to food and water for days or even weeks. Take time now to prepare for you and your family. The most important thing you can do to prepare for an emergency is to plan ahead and have essential emergency supplies on hand. Here's what you can do to plan for the "Big One" yourself – and help us, help you.

Having an ample supply of WATER is a top priority in an emergency. You can live for weeks without food, but without water, you can die in as little as 3 days. Help your water provider, emergency responders and other relief organizations help you by having an adequate emergency supply of water, food and other essentials.

You will need to store at least one gallon per person per day. According to the Red Cross and FEMA, you should store at least a two week supply of water for each member of your family. A minimum three-day supply is essential. Don't forget to store additional supplies for your pets.

In an emergency, drink at least 2 quarts of water a day, 3 to 4 quarts a day if you are in a hot climate, pregnant, sick, or a child. If supplies run low, don't ration water: Drink the amount you need today and look for more tomorrow.

For more information on how you can prepare for an emergency, visit our website at www.clackamasriverproviders.org



Pouring concrete in the support foundation at the View Acres water reservoirs seismic upgrade.

CRWP MEMBERS

The Clackamas River Water Providers (CRWP) is made up of eight municipal water providers that get their drinking water from the Clackamas River. Participation in the organization is voluntary and is funded through membership dues. Though the CRWP projects and staff are jointly funded, each individual organization retains their own individual autonomy.

CLACKAMAS RIVER WATER - Clackamas River Water is a domestic water supply district serving residents of Clackamas County, located in the southeastern part of the Portland metropolitan area. CRW serves approximately 60 square miles, including much of north Clackamas County, Sunnyside, Milwaukie and Clackamas. The southern boundaries of the district extend into the rural areas surrounding Oregon City in south Clackamas County. For more information visit Clackamas River Water at <http://www.crwater.com>

***CITY OF ESTACADA** - The City of Estacada located at the base of the Clackamas River Gorge and the Mt. Hood National Forest serves drinking water to a population of 2,855 customers. For more information visit www.cityofestacada.org/index.html

***CITY OF GLADSTONE** - The City of Gladstone located near the confluence of the Willamette River serves drinking water to a population of over 12,000 people. For more information visit <http://www.ci.gladstone.or.us/index.html>

CITY OF LAKE OSWEGO - The City of Lake Oswego, located in Clackamas County, serves drinking water to over 36,000 people. For more information visit <http://www.ci.oswego.or.us/maintain/water.htm>

***OAK LODGE WATER DISTRICT** - Oak Lodge Water District serves drinking water to approximately 33,000 people in the Oak Grove/Jennings Lodge communities. For more information regarding Oak Lodge Water District go to <http://www.oaklodgewater.org/>

***SOUTH FORK WATER BOARD** - South Fork Water Board is a water treatment plant that is jointly owned by the Cities of Oregon City and West Linn providing drinking water to approximately 63,000 people. In addition South Fork has two wholesale customers, Clackamas River Water South and the North Clackamas County Water Commission. For more information about South Fork Water Board visit <http://www.sfwb.com/>

SUNRISE WATER AUTHORITY - Sunrise Water Authority currently serves drinking water to a population of approximately 30,000 in the Cities of Happy Valley and Damascus. For more information about Sunrise Water Authority visit <http://www.sunrisewater.com>

CITY OF TIGARD - The City of Tigard provides water to 58,000 residents of the Tigard Water Service Area (TWSA) which includes the cities of Durham, King City, two-thirds of Tigard, and the Tigard Water District. With the completion of the Lake Oswego/Tigard Water Partnership in 2016 the City of Tigard will get all of their water from the Clackamas River.

** Public Outreach and Conservation programs and services are provided to these members.*

The Value of Water



CRWP Public Education and Outreach Coordinator

14275 S Clackamas River Drive
Oregon City, OR 97045
503-723-3511

christine@clackamasproviders.org