CAPITAL Improvement Projects and Water Rates

Celebrating 60 Years! That's right, Rivergrove Water District's charter was signed on March 5, 1957. So the District is celebrating being 60 year's old. Now I've been employed here 20 of those years, one third of the time Rivergrove was here. I have read a lot of history of this District and I believe this District began on a shoe string. An FHA loan was used to start drilling the wells and help pay for the first main installations. The original Engineer was amazing and the system was designed with redundancy with the upper and lower level elevation systems working together. The one story I remember was about our #1, 100,000 gallon Reservoir , which is still in use today. It was purchased for $850 and brought to our reservoir site and reassembled for a total of $12,000. The cost of the first pipe installed in the District was $2.50 a foot. Oh those were the days!! Of course the water rates when we started were low too!

But unfortunately times change and costs of things keep going up. One of the projects that we did this year was to put in 130 feet of 10 inch Ductile Iron pipe along with some new gate valves next to the new development on Pilkington Road. The developer is only responsible for upgrading the frontage of their project so this left 130 feet of 60 year old pipe and old valves there. We jumped on the chance to have that 130 feet replaced while they were doing it. The cost $46,671 for 130 feet or $359.00 per foot. As I said things change. But the new valves work and do shut off water as they should and that section of pipe will not be as vulnerable to earthquake damage as the pipe that was in there before.

In the last few years our Board has approved updating our Master Plan which included Capital Improvement projects. Then taking those projects that need to be done we did a rate study that told us what rate increases we need to fund the projects to be done. The District is in the middle of completing those rate increases to fund projects. On June 10th it will be the beginning of the next billing cycle and there will be an 8% water rate increase for all customers. These rate increases were approved by the Board of Commissioners back in 2015. The District held all the public hearings and provided information as required by statute but nobody came to the meetings. The rate increases were approved.

So far, one of the projects we have completed is installing emergency generators at two of our well sites. One is a portable generator that can be towed to our other well site in case of emergency. If one site is down we can use the generator at our other pump Station. Our next project is going to be several of the Capital projects in combination. From the seismic study the District completed in past years our #3 Reservoir located on Olson Court needs upgrades to meet the current seismic codes. When the Reservoir was built there was a slump of material (landslide) that came up against the back of the reservoir. In addition in this project the slump

will be removed and the reservoir coatings both inside and out will be repaired and painted. This will be done in the next two years. The District is planning to resolve this deficiency and do our best to be prepared for the "Big One" along with keeping our critical assets maintained. We know the costs of replacement these days so that is why it is important to maintain our current reservoirs, pumps, wells and mains in good working order.

Top Operations Competition

In 2016 Rivergrove Water Operators DJ, Rick, and Brian competed in the Top Operations Competition in both the subsection, section, and National contests in the American Water Works Association. The AWWA Top Ops Competition is a competitive, question-and-answer tournament. A moderator will pose a broad range of technical questions in water operations. Points will be awarded to each team that displays a correct answer. The team with the most points wins the competition. The purpose behind the AWWA Top Ops Competition is to recognize and promote excellence and professionalism in water operations.

Rivergrove Water District's team collectively called the "Smooth Operators" won both the AWWA subsection and Pacific section contests. In Nationals they landed respectfully in the middle of the pack of 17 teams.

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YOUR DRINKING WATER

Water Quality Report 2017

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DRINKING Your WATER

Outstanding Performer Award

Did you know that since August 2016 Rivergrove Water District was awarded the Outstanding Performance award from the Oregon Health Authority Drinking Water Program? This award was something that I as District Manager, felt I would never see before I retired or moved on from Rivergrove Water.

And here are the criteria for the outstanding performance award. The water system shall have:

1. No maximum contaminant level (MCL) or Treatment Technique violations in the last 5 years.

2. No more than one Monitoring and Reporting violation in the last 3 years. The one violation must be resolved and results submitted.

3. No significant deficiencies identified during the current water system survey; and

4. Has not had a waterborne disease outbreak attributable to the water system in the last 5 years.

Usually number 3 has been the criteria that has stopped us before. We had some improvements to the water system that needed to be done. But at the completion of our last well rehabilitation project we corrected those items that were listed as deficiencies.

I know it is just a certificate but it is one our staff and Board take pride in. It also offers the District more time between water system surveys-five years instead of three. It also helps with the District budget. We only have to pay the State's sanitary survey fee, (one which they have substantially increased) every five years instead of three.

Here is the link to the Oregon Health Authority Drinking Water Programs on line data page to see our District's name listed. https://yourwater.oregon.gov/osp.php Rivergrove Water District Outstanding Performer!!!!

The Yearly Water Quality Report is Required

This report describes the Rivergrove Water District water sources and quality from data taken during the 2016 calendar year.

This document conforms to Federal Environmental Protection Agency (EPA) regulations requiring water utilities to provide the following information annually. The water that we serve you is required to meet the water quality standards set by EPA.

Bottled water that you may otherwise purchase comes under different standards and requirements. Those companies are regulated by the Food and Drug Administration (FDA). These standards are not the same. Please be an informed consumer and check the sources and standards of your drinking water.

"All drinking water, 'including bottled water,' may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants potential health effects can be obtained by calling the: EPA Safe Drinking Water Hotline at **800-426-4791**."

Safe water is vital to our community. Please read this report carefully, and if you have questions, call the resource numbers supplied, and check us out at **www.rivergrovewater.com**.

Backflow / What is It?

We have Water (or possibly nasty stuff) going in a direction that is opposite of where it normally goes. If what comes back into our system is contaminated do you want that in our safe drinking water? I am pretty sure no one does.

Cross Connection / What is it?

This is the means of how backflow might happen. You may have one on your side of the meter. Think about it: Do you have a well on your property or are irrigating from the Tualatin River that might somehow get connected to your water service? Once there is more pressure that we have the contaminant goes right into the District water system. We are required by the Oregon Health Authority to have a program to help prevent this from happening.

Other examples of cross connections are irrigation systems, pesticide applicators put on a hose, waterbed siphons, radiator flushing equipment, mortuaries, car wash dirty water, the list goes on and on.

Premise Backflow Protection

This is our program and our goal is to retrofit each of the District's water services with a meter backflow unit. It is also required on all new construction. We test them annually and repair if needed. All of the costs to fund the program are included in the District water rate charges.

If your water service doesn't have a meter and backflow at the service connection we are getting there. Until then if you have a backflow say on an irrigation system you need to have it annually tested by a certified backflow tester and have the test results sent in to the Water District.

Thermal Expansion Issue

When we put a backflow at the meter the issue of thermal expansion may happen and this could affect your plumbing system. Here's what it is and how to prevent it. Water in your plumbing system expands every time the hot water heater starts to heat water. This is thermal expansion. When there is no backflow at the meter the water flows back into the system. If one is installed water flowing back into our system is stopped. When this happens water pressure may begin to build up.

The following condition is rare and the odds that all the factors happen together are great. However, with the backflow prevention assembly in place this potential hazard exists and that is the reason for this notification.

Water heaters are installed with a temperature and pressure valve (T&P), which is designed to relieve excessive water temperature or pressure. If the thermostat in a hot water heater becomes defective and allows the water temperature to increase to more than 212 F, and the T&P valve fails, your domestic water can become "superheated." Superheated water can cause water heaters to explode or can allow scalding steam to be released from faucets upon personal use. **IN ORDER FOR THIS TO OCCUR THE HOT WATER HEATER THERMOSTAT AND THE T&P VALVE MUST BOTH MALFUNCTION SIMULTANEOUSLY.** Your water heater manufacturer recommends that the T&P valve be OPERATED ANNUALLY and REPLACED OR INSPECTED AT LEAST ONCE EVERY THREE YEARS. A licensed plumber can inspect, repair, or replace the T&P valve to ensure your safety.

These are things to look for when thermal expansion becomes an issue. Faucets may leak or you might get brief burst of excess water pressure shortly after opening, or the temperature and pressure valve on your water heater begins to spit water. If these are present first turn the water temperature down and if that doesn't work you should correct this by installing a thermal expansion tank.

A thermal expansion tank is a can about twice the size of a three-pound coffee can with a rubber bladder inside. When the pressure in your water line increases, the rubber bladder is squeezed into a smaller space. When a faucet is opened and the pressure is released, the rubber bladder re-expands to its former size inside the can. The only moving part is the rubber bladder that is squeezed and released by the pressure. Expansion tanks are installed on a cold water line, and require inserting a fitting to accommodate the expansion tank. Most installations are done by a certified Plumber.

If you have any questions concerning backflow and our cross connection program please contact DJ at **(503) 635-6041**.

Water Quality Data

For your safety, water is regularly monitored for contaminants found in these charts. We continue to provide you with safe, clean drinking water that meets all EPA regulations.

Regulated Contaminants

Contaminants	Date Tested	Violation?	Well #1 Detected	Well #2 Detected	Well #3 Detected	How We Measure	MCL	Likely Source of Contamination
Gross Alpha Radiological	9/12/11	NO	3.0	3.1	–	pCi/L	15	Erosion of Natural Deposits
Total Chromium	3/29/11	NO	.63	.34	–	ug/L or ppb	100	Erosion of Natural Deposits or
Nitrate	8/26/16	NO	1.6	1.9	1.5	ppm	10	Runoff from fertilizer use; leaching from septic tanks, sewage

Non-Regulated Contaminants

Contaminants Tested	Date	Violation?	Well #1 Detected	Well #2 Detected	How We Measure	Recommended Level Limits
Chloride	9/21/16	NO	31	15	ppm	<250 recommended
Hardness	9/21/16	NO	7.84	6.78	gpg	<10.5 recommended
Silicia	8/21/15	NO	57	58	ppm	No recommended standards
Sodium	8/9/11	NO	10.05	8.1	ppm	<20 recommended
pH	8/21/15	NO	6.6	6.7	pH units	6.6-8.5 recommended
Total Dissolved Solids	8/21/15	NO	262	217	ppm	<500 recommended
Iron	8/21/15	NO	ND	ND	ppm	0.3 ppm
Zinc	8/21/15	NO	ND	0.015	ppm	5 ppm
Fluoride	9/21/16	NO	0.14	0.15	ppm	4 ppm

Lead & Copper

Contaminants	Date	Violation?	RGW Systemwide Testing Results	How We Measure	Action Level	Likely Source of Contamination
Lead	9/19/16	NO	0.0047 ppm	ppm	0.015	Corrosion of household/commercial
Copper	9/19/16	NO	0.4020 ppm	ppm	1.3	building plumbing systems.

Table

In this table you will find many terms and abbreviations with which you might not be familiar. To help you better understand these terms we've provided the following definitions:

Action Level (AL). The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow.

Contaminants. When microbiological, inorganic, organic, and radioactive compounds in drinking water have exceeded regulated maximum levels they are considered contaminants.

Grains Per Gallon (GPG). Unit of water hardness. One GPG is 1 grain (64.8 milligrams) of calcium carbonate dissolved in 1 US gallon of water.

Maximum Contaminant Level* *(maximum allowed)* **(MCL)**. The highest level of a contaminant that is allowed in drinking water. MCL's are set at very stringent levels.

Maximum Contaminant Level Goal *("goal")* **(MCLG)**. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

Non-Detects (ND). Laboratory analysis indicates that the constituent is not present or that it is present at levels too low for modern laboratory equipment to detect.

Parts per million (ppm) or **Milligrams per liter (mg/L).** One part per million is comparable to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) or **Micrograms per liter (ug/L).** One part per billion is comparable to one second in 32 years, or one minute in 2,000 years, a single penny in $10,000,000,or the first 16 inches on a trip to the moon.

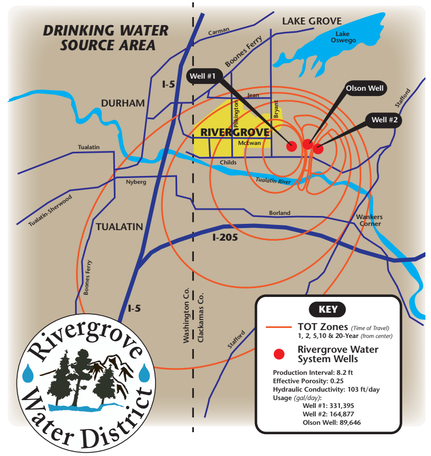
Picocurries per liter. Picocurie is a measure of radioactivity. One picocurie is a trillion times smaller than one curie.

Regulated Contaminant. Regulated by law to protect public health. The law specifies maximum contaminant levels allowed in drinking water.

Non Regulated Contaminant. Have guidelines set to assure good aesthetic quality, the guidelines identify levels of substances that may affect taste, odor or color of water.

* MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described effect.

Where Does Your Drinking Water Originate?



Rivergrove Water District water sources are three wells. It has been determined through our Source Water Assessment done by the State Drinking Water Department that the water is drawn from the interflow zones within the Frenchmen Springs member of the Columbia River Basalt. The aquifer is considered to be deep and confined. The full copy of the source water assessment is available for reviewing at our District office if you are interested. Our wells are considered susceptible to various activities within the location of the well. Imagine if you will that even though we are in a confined aquifer that some chemicals or contaminants put on the ground above may cause problems. We ask you to STOP AND THINK ABOUT YOUR ACTIONS ABOVE GROUND.

Well #1 is located on Old Gate Road. In 1959 it was drilled with a 16" bore and finished with a 12" casing at a depth of 204 feet. It can produce up to 595 gallons per minute and services the majority of our 1366 customers.

Well #2 is located on Hilltop Road. In 1967 this well was drilled with an 18" bore and finished with a 12" casing at a depth of 430 feet deep. It can produce up to 400 gallons per minute.

Well #3 ***Olson Well*** is located on Olson Ct. near Reservoir No. 3. In 2010 this well was drilled with an 20" bore to a depth of 82 feet and 16" bore down to 425 ft. The upper casing is 16" diameter and the lower casing is 12" to a depth of 415 feet. It can produce up to 350 gallons per minute.

Lead & Copper Testing

If you have read the results of our lead and copper testing you can see that the results are well-below the action levels for lead and copper. However, the wording below is required by the EPA to be printed in all consumers Water Quality Reports.

"If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Rivergrove Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at **www.epa.gov/safewater/lead.**

If you Are "At Risk"

Some people may be more vulnerable to the contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, or persons who have undergone organ transplants, or persons who have HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections.

If this is you please contact your health provider for advice about drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline at **(800)426-4791**.

To learn more plan to attend one of our regularly scheduled Board meetings held 4th Monday of the month at 7:30 AM at the District office. Changes to meeting dates and times are published in the Lake Oswego Review.

Resources:

EPA Safe Drinking Water Hotline: (800)426-4791

Oregon Department of Human Services-Drinking Water Program: (971)673-0405

State of Oregon Certified Lab Testing:
Rivergrove Water-Alexin Analytical: (503)639-9311

DJ Ezell, Rivergrove Water District:
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Email: rgwd@rivergrovewater.com,
Website: www.rivergrovewater.com