

# CAPITAL Improvement Projects

## Our engineer retires after over a decade of service.

We learned mid 2017 that our District Engineer Jim Helton, from Murray Smith and Associates was retiring. He has been our Engineer since 2007. We wish him the best and are thankful for his good work keeping us in line with our Capital Improvement projects, master plan updates, new maps, and overall a good eye overseeing the District's construction projects and the system. HAPPY RETIREMENT JIM!



Jim Helton

So, this started a whole new direction for projects for the District. Our Rivergrove Board of Commissioners decided to do their due diligence and felt that it was a prudent time to go out for Request for Proposals for Engineering services. A committee of two Commissioners, Chair DeVries, Commissioner Patterson, Water District Manager DJ Ezell, Operator Brian Faist, and customer and retired Engineer Larry Magura helped us choose a new firm.

Our new Engineering firm is RH2 Engineering with Kyle Pettibone being our newly appointed Engineer and his assistant Dennis Kessler, PE, formerly with the City of Portland, now with RH2. They are off and running with our next new Capital Improvement project Reservoir #3 Landslide remediation, seismic retrofitting and painting both the interior and exterior of the Reservoir. WELCOME KYLE AND DENNIS!



Dennis Kessler, PE



Kyle Pettibone

## Water Rate Increase

Rivergrove Water District's charter was originally signed on March 5, 1957. DJ Ezell has been employed at the District for almost 22 years, and knows a lot of the District's history. She knows that it began on a shoe string budget. 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 what is called 'redundancy', with the upper and lower level elevation systems working together.

DJ recalls a story about our 100,000-gallon Reservoir which is still in use today. It was purchased for \$850, delivered and re-assembled for a total of \$12,000. The cost of the first pipes in the District were \$2.50/ft. Oh, those were the days!! The last main installation costs were \$359/ft, quite the difference.

## Our 'Professional Operators'



Oregon Water Distribution Certification is necessary for Operators working at Rivergrove Water District. DJ is Water Distribution-2 and Water Treatment-2 certified, and Brian is Water Distribution-2 certified.

The Association of Boards and Certification has instituted a new program called 'Professional Operators' which offers more challenges. Brian started the movement at Rivergrove because he saw the National recognition given to 'Professional Operators' at the AWWA organization. So, he talked with DJ, and on his own, he took the steps necessary to become a Professional Operator Water Distribution-1!

DJ decided a little later to try for Water Distribution-2. She said it was very challenging but she qualified, and is now Water Distribution-2 Professional Operator. So RGWD wants to let our customers know that we have two Professional Operators in our small District. There are only six POs in the entire state, so we have an excellent reason to be proud.

## Top Operations Competition

In 2017 Rivergrove Water Operators competed in the 'Top Operations Competition' in both the subsection, and section 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.

In 2017, Rivergrove Water District's team called the "Smooth Operators" won the NW AWWA subsection contest.



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## Financial Assistance for Septic Systems Owners

Rivergrove Water District has two different financial assistance programs available for Septic System owners who live within the District Source Water Protection Area. Both programs have limited funds and are available on a first-come, first serve basis until funds are depleted.

To qualify, you must have an approved septic inspector with the Smart Septic program (listed on the DEQ website) do your inspection. And you MUST include the completed inspection form from the DEQ website. Please note that any repair work done after October 2017 that falls in the noted categories is eligible until all grant funds are depleted.



## 2017 WATER QUALITY

### TRY AUTO PAY!

Make it easy to pay your bills. Set up today!  
For more information call (503)635-6041

## YOUR DRINKING WATER



Eelia Bean



DJ Ezell



Brian Faist

# Water Quality Report 2018



Dennis Kessler checks the structure and status of the reservoir.

# DRINKING YOUR WATER

www.rivergrovewater.com



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## Reservoir Project # 3

We are in the design phase for our next project. In 1976, when reservoir #3 was built the soil and hillside slumped into the back of the steel reservoir. Instead of taking the material away from the reservoir they did a slump correction. This involved coating the back of the steel reservoir with a black epoxy coating and then putting the soil and rocks back up against the steel reservoir. Oh no! As they say hindsight is 20/20.

So, in this next project the slump will be removed and the hill stabilized. We are not sure what we are going to find once the slump is removed, but also included in this project is doing additional seismic retrofits, (to prepare for the BIG ONE) and then performing some much-needed painting both inside and out.

The funding for this huge project is coming from a Safe Drinking Water Loan Fund Loan and the balance from the funds that the District has been saving and transferring to our Capital Improvement Fund. These funds were generated by the recent water rate increases. We are anticipating finding out how the back of the Reservoir looks at this time. But what would you think happens when you put water, soil, and rocks up against steel? We're crossing our fingers but we will see!

## This Water Quality Report is Required Each Year.

This report describes the Rivergrove Water District water sources and quality from data taken during the 2017 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](http://www.rivergrovewater.com).

## Meet Jeff Tucker, student intern



We have partnered with Clackamas Community College to hire a student of the Water Quality program to work with our staff. This year we have Jeff Tucker. He will help with all types of water work this spring and summer. A win-win situation, we get an enthusiastic worker and they get water work experience in exchange. Thank you, Jeff!



Jeff Tucker

## 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 assembly at the service connection we are getting there. Until then if you have a backflow assembly in your plumbing, you will need to have it annually tested by a certified backflow tester and have the test results sent in to the Water District by the end of the year.



## 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 prevention assembly 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 • 2017

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	11/20/17	NO	1.68	2.21	.430	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	11/17/17	NO	31	16	ppm	<250 recommended
Hardness	11/17/17	NO	8.18	6.78	gpg	<10.5 recommended
Silica	8/21/15	NO	57	58	ppm	No recommended standards
Sodium	8/9/11	NO	10.05	8.1	ppm	<20 recommended
pH	11/17/17	NO	6.4	6.5	pH units	6.6-8.5 recommended
Total Dissolved Solids	11/17/17	NO	256	213	ppm	<500 recommended
Iron	11/17/17	NO	ND	ND	ppm	0.3 ppm
Fluoride	11/17/17	NO	0.11	0.10	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 building plumbing systems.
Copper	9/19/16	NO	0.4020 ppm	ppm	1.3	

## 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.

**Picocuries 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.

## 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](http://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:

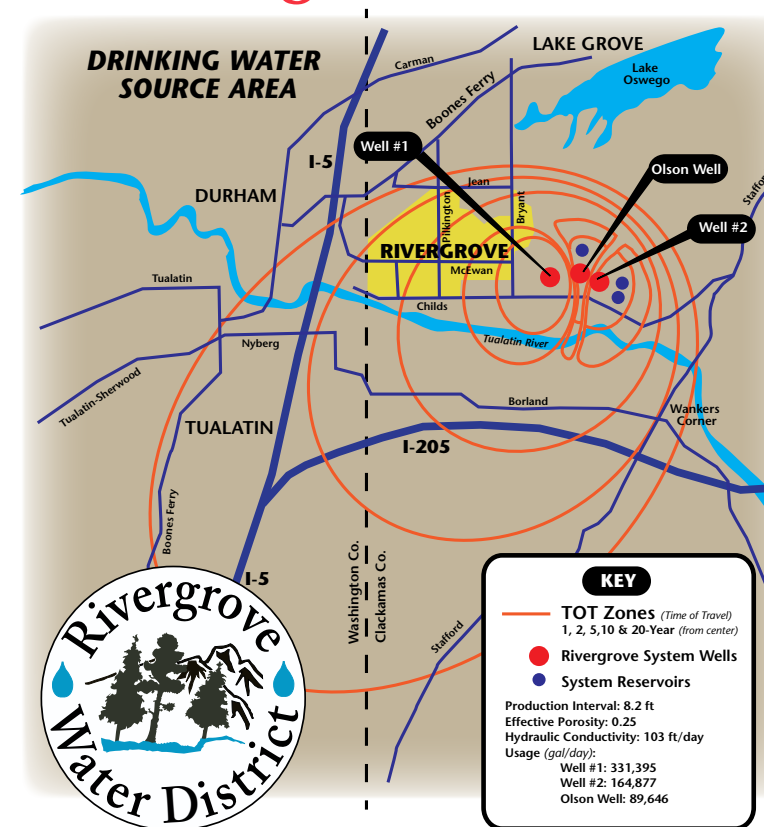
**EPA Safe Drinking Water Hotline:** (800)426-4791

**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:**  
Phone: (503)635-6041, Fax: (503)699-9423  
Email: [rgwd@rivergrovewater.com](mailto:rgwd@rivergrovewater.com),  
Website: [www.rivergrovewater.com](http://www.rivergrovewater.com)

## 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 #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.