



Rivergrove Water District
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The WATER You Drink 2012 WATER QUALITY

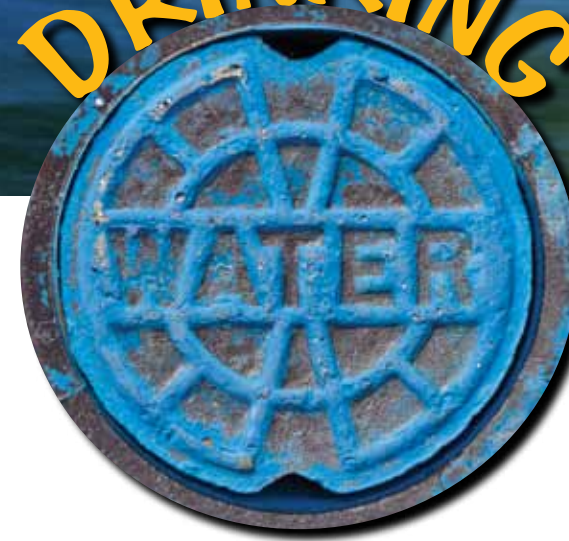
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Your Drinking Water - RIVERGROVE Water Quality Report

2012



YOUR DRINKING



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The Yearly Report - It's Required

This report describes the Rivergrove Water District water sources and quality from data taken during the 2011 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 (1-800-426-4791)."

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.

What's the Source of it All

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural, livestock operations, and wildlife.

- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Where your drinking water comes from

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 208 feet. It can produce up to 595 gallons per minute and services the majority of our 1310 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.

Backflow-What is It?

Just as it implies we have water going in a direction that is opposite of where it normally goes.

But you query why do we care? Well we care a lot if there is a cross connection and something flows back into our water system; and contaminates our safe drinking water!

The conditions that can cause backflow or back siphonage are high demands on our system such as high peak demands in the summer, fire fighting, or when a main gets shut down due to a break or construction.

We were once told by a customer that lives up in the high elevation level of our district that he could hear the water rush back out of his house during the hot weather. His service connection has been protected since his comment by what we call our premise isolation meter/backflow protection. WOW, that is a mouthful isn't it. But just think if it wasn't there. Maybe he could have a hose in a barrel of water with some real nasty pesticide such as Chlordane in it. Then he walks away for just a bit and when he returns the barrel is empty. Can you imagine where it went? Of course right into the water system. **HIGHLY UNLIKELY YOU REPLY!**

Nope it is a true story, not here but back East. The result was millions of dollars of damage done to the District's pipes, customer's homes, not to mention the customers' health issues. Luckily no one died in this backflow incident.

Premise Isolation Backflow Protection

In a nutshell, this is Rivergrove Water District's program. Our program goal is to retrofit each of the District's existing meters with a meter/backflow unit. All new construction is installed with these units. We test them annually. The District supplies all the parts and repairs for the assemblies. All of these costs are included in the water rate charges.

We have a ways to go for complete coverage but we are headed there. In the mean time if you have a backflow preventer within your plumbing such as one that covers the irrigation system you need to have that tested annually by a certified backflow tester and the tester is required to send the test results to us.

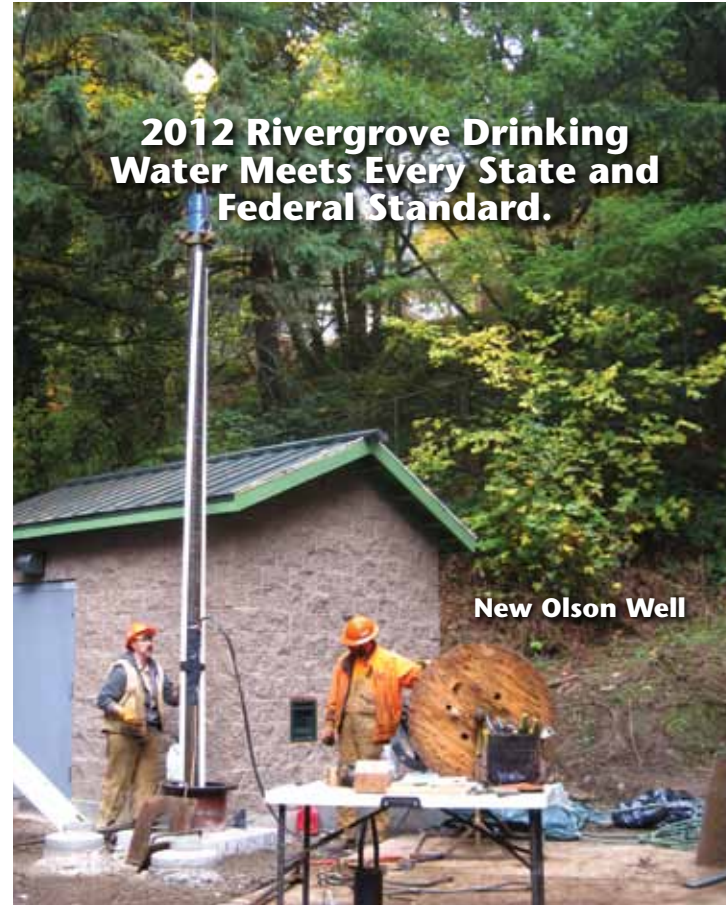
So you ask how do I know if I have a meter backflow unit? You will have a large meter box with both a meter and a backflow preventer installed in that box or two boxes- one with a meter and the box behind it has a backflow.

DJ accepts "Best Tasting Water" award.



2011 RGWD Projects - Phase 1 Close to completion

It's been a long and winding road but getting the Olson well on line and rehabilitation of the #1 well seal is complete. We hit some potholes in the rehabilitation to the #2 well seal but will complete in 2012. After that comes Phase 2 adding a 10 x 10 building to our Old Gate well site then adding onsite chlorination to the Olson Well and #1 well so that the entire Rivergrove Water District System is chlorinated. Phase 2 is not started yet. Hopefully we will be done in 2012 cross our fingers!



Cross Connection-What is it?

Have you ever heard the words above or given any thought to this? In simple terms it is just this-we have a connection between a potable drinking water source and a non potable source.

Well if you are curious ask yourself the following have you:

1. Used one of those gadgets that hooks to your faucet and put in your toilet to unclog the toilet?
2. Flushed your antifreeze from your car radiator?
3. Used a pesticide sprayer that you attach to a hose to spray your lawn or garden?
4. Here's another: the infamous lawn irrigation system:

Think about those sprinkler heads immersed in dirty (water which is the non potable source.)

These are just some of the possible cross connections and it is the reason why we are required to do cross connection protection programs.

Key to table definitions

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.

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."

WATER QUALITY DATA

Regulated Contaminants

Contaminants	Date Tested	Violation?	Detected-Well #1	Detected Well #2/#3	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
Chrome 6		NO	.34	.24			Discharge from steel and pulp mills
Total Coliform	2/8/11	NO	Present/Distribution	0	Absence/Presence	>1	Naturally present in the environment
Nitrate	5/28/11	NO	1.7	1.9	ppm	10	Runoff from fertilizwer use; leaching from septic tanks, sewage

Non-Regulated Contaminants

Contaminants	Date Tested	Violation?	Detected-Well #1 2/8/10	Detected Well #2/#3 3/15/10	How We Measure	Recommended Limits
Aluminum	2/8/11	NO	.05	.06	ppm	0.05-0.2
Chloride	8/9/11	NO	10.5*	8.1*	ppm	*<250 recommended
Hardness	2/8/11	NO	124*	112*	ppm	*<250 recommended
Silicia	10/12/07	NO	64.4	67.2	ppm	No recommended standards
Sodium	8/9/11	NO	10.05	8.1	ppm	*<20 recommended
pH	2/8/11	NO	6.68	6.73	pH units	6.6-8.5 recommended
Total Dissolved Solids	2/8/11	NO	242**	209**	ppm	**<500 recommended

Lead & Copper

Contaminants	Date	Violation?	RGW Systemwide Testing Results	How We Measure	Action Level	Likely Source of Contamination
Lead*	7/29/09	NO	0.0020 ppm	ppm	0.0155	Corrosion of household/commercial
Copper*	7/29/09	NO	0.1600 ppm	ppm	1.35	building plumbing systems.

Rivergrove Water

It has great taste, is clean, and has been thoroughly tested!

Thermal Expansion Issue/Solutions-

What it is and why do I need it?

In our efforts to assure safe drinking water, Rivergrove Water District is installing a backflow prevention assembly on district water services. The backflow prevention assembly will help to assure the safety of our drinking water, but it may also affect the operation of your plumbing system.

The water within your plumbing system expands every time the water heater begins its heating cycle. When a backflow prevention assembly is not present, this expanded volume flows backward, through the water meter, and into the public water supply. A backflow prevention assembly does just what the name implies-it prevents this backward flow of water. When the backward flow is stopped, water pressure may build up when the water heater begins its heating cycle.

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 and assist you with other methods of protection such as thermal expansion tank and toilet tank stop and relief valve.

If the water pressure gets higher than normal, you should note if faucets begin to leak, have brief bursts of excess water pressure shortly after opening, or if the temperature and pressure valve on your water heater begins to spit water. If excess pressure remains uncorrected, it could lead to leaks or other damage to your plumbing system, or in some cases, it could lead to damage to your water heater.

For some homeowners, merely lowering the temperature setting on the water heater will eliminate the potential for plumbing problems. A temperature setting between 125° and 145° is considered appropriate for most household uses. Other homeowners may find that lowering the temperature will not solve the problem.

In this case, a device such as a thermal expansion tank or a toilet tank stop and relief valve will be needed to deal with thermal expansion. 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 water pressure. Expansion tanks are installed on a cold water line, and require inserting a fitting to accommodate the expansion tank. It is not a complicated job.

A toilet tank stop and relief valve replaces the mechanism inside your toilet tank that regulates the water coming into the tank. It is a pressure relief valve that allows the excess water pressure to be relieved inside the toilet tank instead of out a dripping faucet, or instead of activating the water heater pop-off valve. It requires replacing the current valve in the toilet tank with the new valve. Stop and relief valves will not work if the line pressure exceeds 80 pounds per square inch (psi) unless you also install a pressure-reducing valve near your water meter. If your line pressure exceeds 80 psi and you do not install a pressure-reducing valve, your toilet stop and relief valve will run constantly, wasting water and resulting in higher water bills. Due to the fact that customers that had thermal expansion issues in the past and could not locate these valves the District is purchasing them through their supplier and will sell them at cost to those customers that need them. If you have any questions concerning our cross connection program please contact DJ at (503) 635-6041.

Non-Detect Editorial Comments

So here are just the facts. We test RGW Water for many constituents. In this Water Quality Report the rules say only publish the detections. So when you get this report you may wonder-"Is that all you test for?" The answer is an emphatic "NO". If you would like to see everything that we test for check it out at <http://170.104.63.9/>. Click on the link "Name Look Up" then type in Rivergrove. You can see all the chemicals and the results. If you have any questions, check us out at www.rivergrovewater.com, or give DJ a call at (503)635-6041.

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 3rd 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.



Do's & Don'ts of Wellhead Protection

DO: If you are on a septic tank-pump your tank on a recommended schedule-Contact your local County Sanitarian for the best information.

DON'T: Pour chemicals such as gasoline, oil, or concentrated pesticides on the ground or in mole holes. One gallon of gasoline can contaminate thousands of gallons of water. Be responsible with wastes.

Working Together for Safe Water

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 everyone's water quality report.

"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.

Rivergrove Water District System Facts:

Year of Incorporation: 1957

Customers: 1310 service connections: Approximately 3,720 population consisting of Residential, Commercial and Irrigation 3/4" to 3" meters.

Jurisdictions Served: City of Rivergrove, part of Lake Oswego, and unincorporated Clackamas & Washington Co.

District Area: 1 square mile

Water Storage: Hilltop Road-Reservoir #1-120,000 gallons built in 1935, RGW District acquired from West Slope for \$850 in 1959; Reservoir #2-500,000 Gallons-1966; Olson Ct Reservoir #3-1,250,000 Gallons-1976: All repainted in year 2004, interior cleaned in 2006.

Pipelines: 15 miles of pipelines-Materials: Transite; Ductile iron-Age of pipelines vary from 1959-2009

System Components: 105 Fire Hydrants, 1277 meters, 2 Pressure Zones-denoted as the Upper and Lower, Upper system-183 connections with storage capacity of 620,000 gals., Lower system-1094 connections with storage capacity of 1,250,000 gals.

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, Website: www.rivergrovewater.com