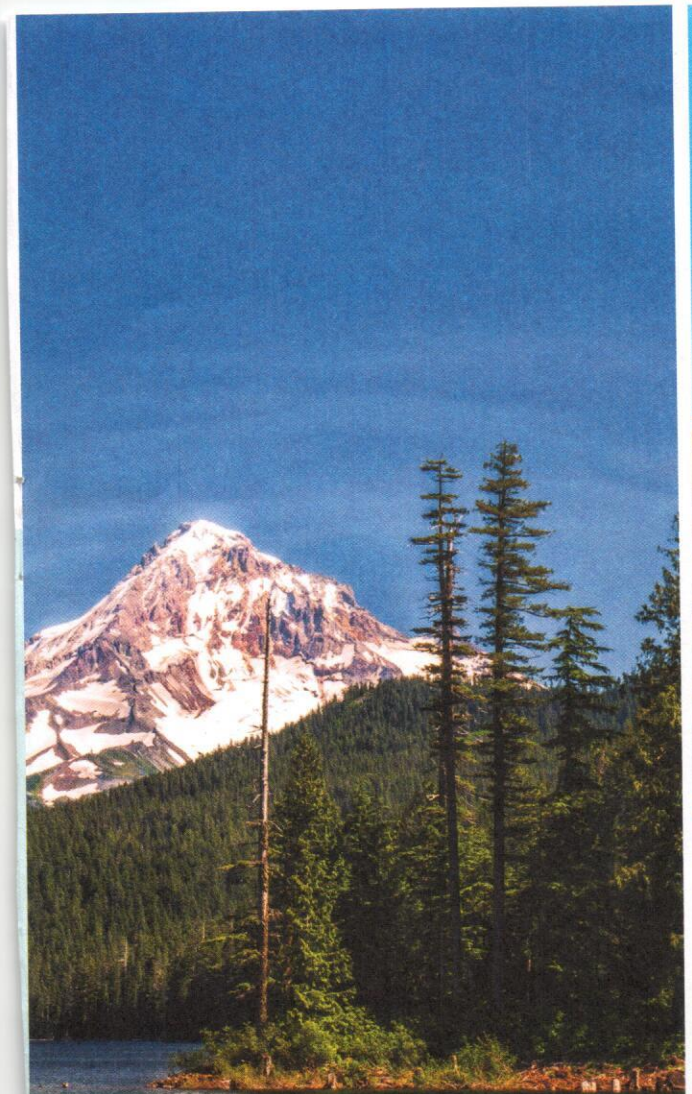
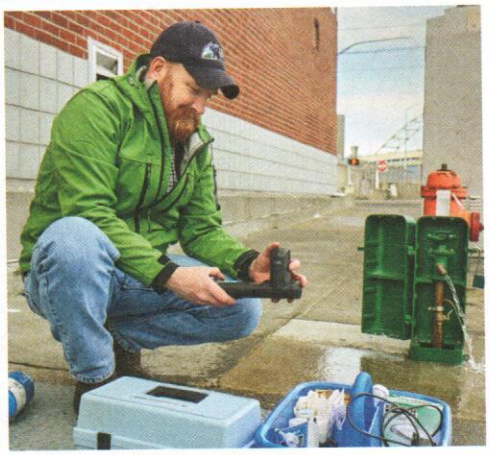
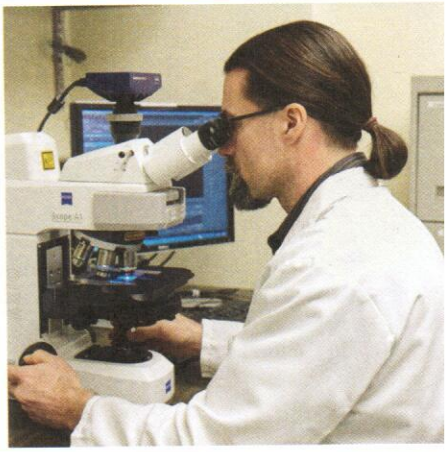
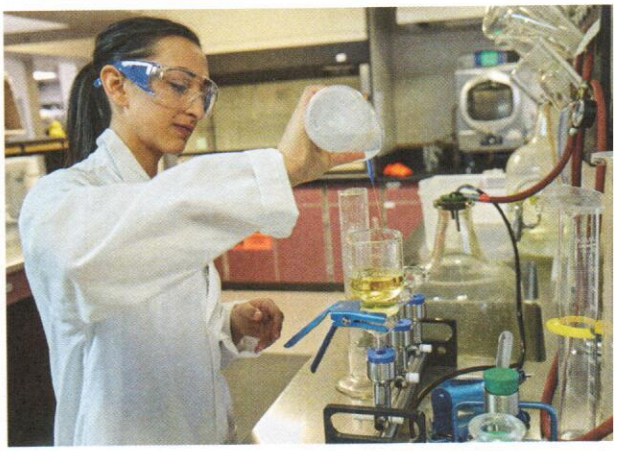


PORTLAND WATER BUREAU

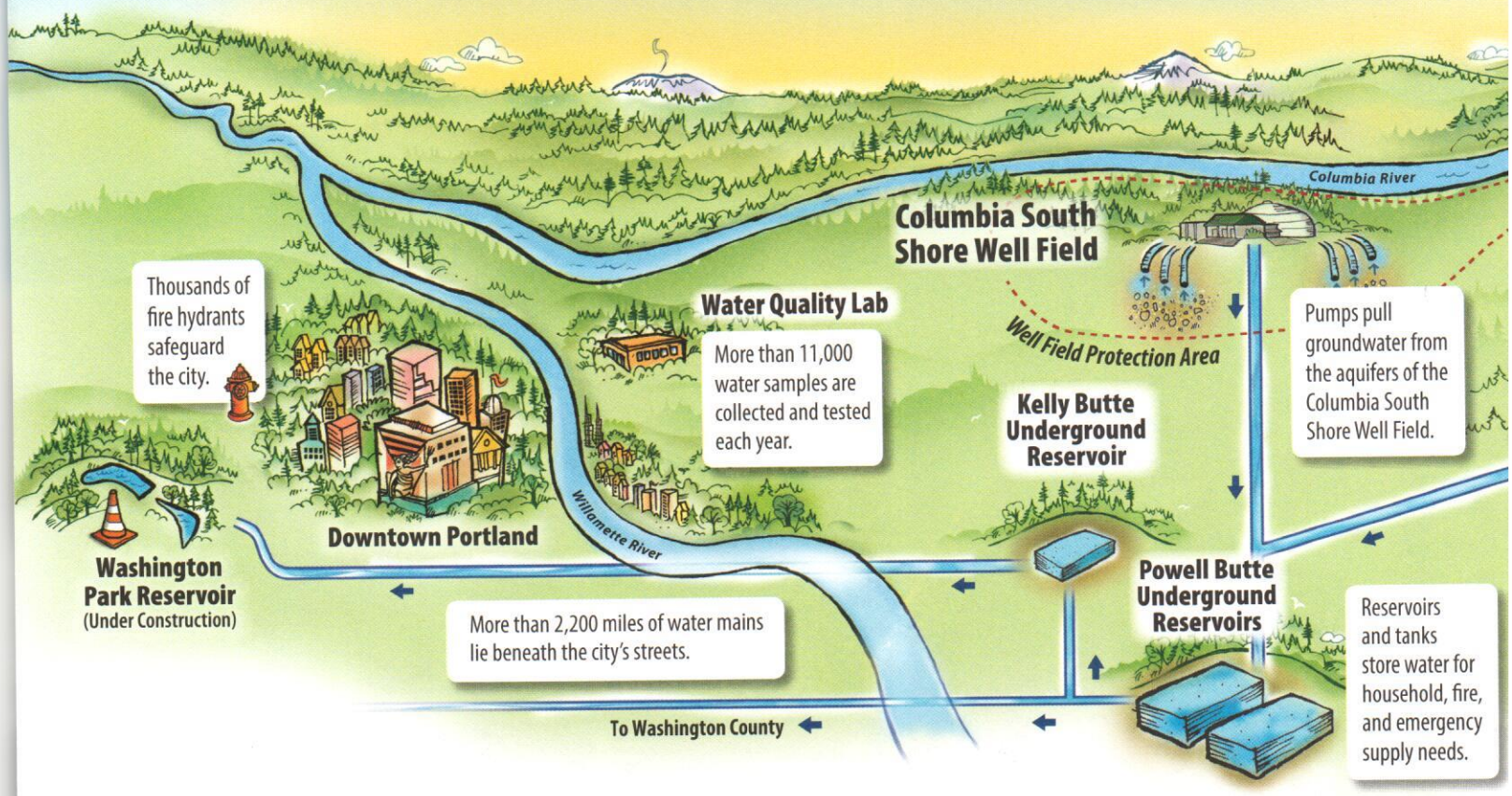
2017 Drinking Water Quality Report

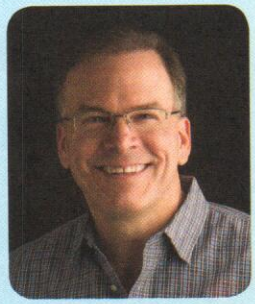






Portland's Water System *Established 1895*

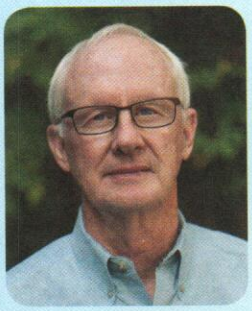




From the Commissioner

Welcome to the Portland Water Bureau's *2017 Drinking Water Quality Report*. We are fortunate to have two high-quality drinking water sources — the Bull Run Watershed and the Columbia South Shore Well Field. These complementary sources, capable of storing billions of gallons of water, provide safe and reliable drinking water through long, dry summers and heavy winter storms. We strive to deliver the highest quality service at a fair price.

Nick Fish
COMMISSIONER-IN-CHARGE

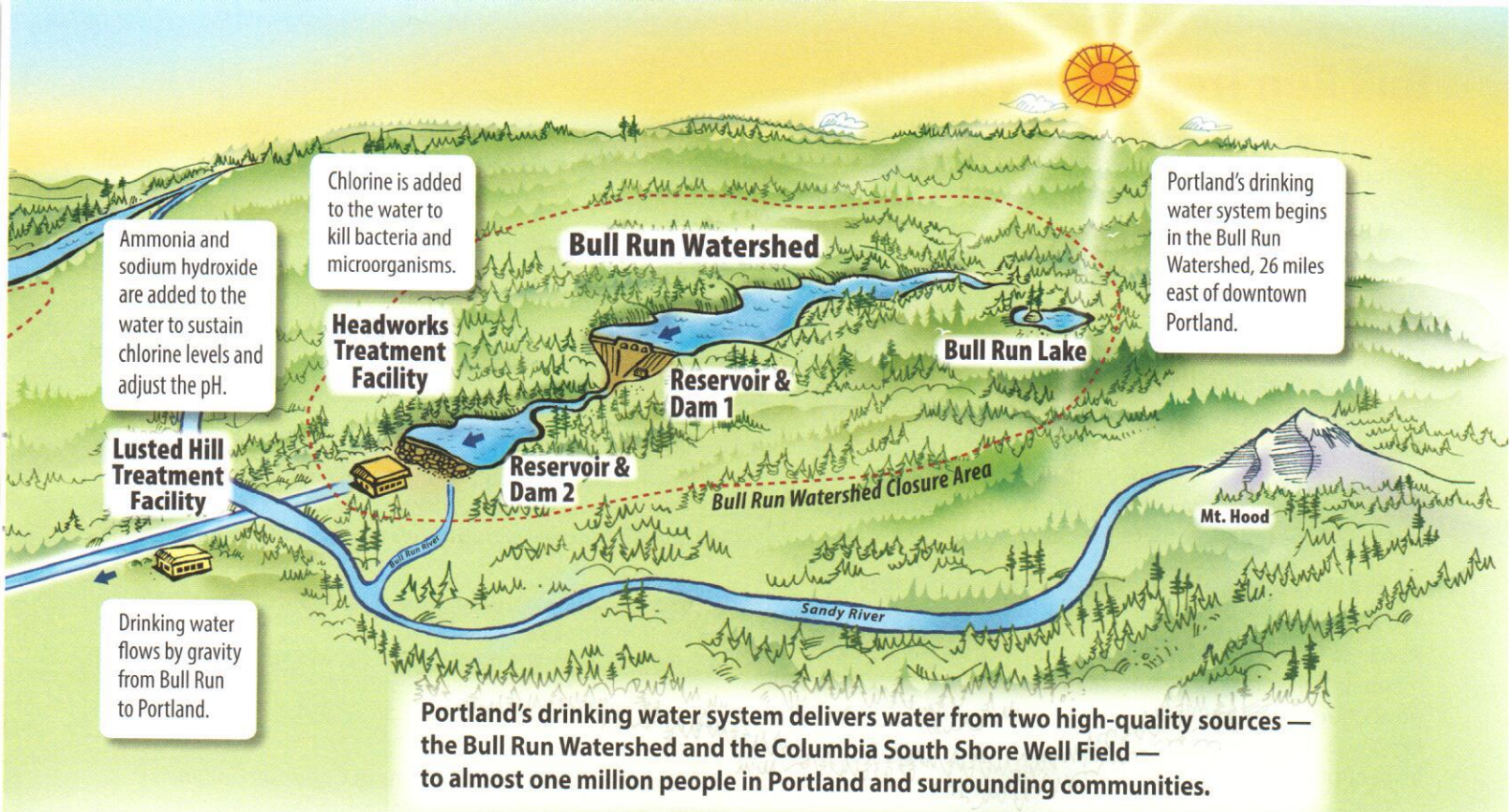


From the Director

As the largest water provider in Oregon, the Portland Water Bureau delivers clean, safe, and reliable drinking water to nearly one million people. Public health continues to guide our decisions. We regularly monitor water quality, test for more than 200 possible contaminants, and stay ahead of emerging issues. This ensures that our first-rate water moves reliably 'from forest to faucet' and through 2,200 miles of pipe. Through wise investments, we make decisions today that will benefit Portland's next generations.

Michael Stuhr, P.E.
DIRECTOR

On the cover: Roman Johnson (left) and Sally Painter (right)



Portland's drinking water system delivers water from two high-quality sources — the Bull Run Watershed and the Columbia South Shore Well Field — to almost one million people in Portland and surrounding communities.

The Bull Run Watershed, our protected surface water supply, is located in the Mt. Hood National Forest 26 miles from Portland. The watershed is carefully managed to sustain and supply clean drinking water to a quarter of Oregon's population. In a typical year, the watershed receives an astounding 135 inches of precipitation (rain and snow), that flows into the Bull Run River and then into two reservoirs that store nearly 10 billion gallons of drinking water. Due to the availability of the Columbia South Shore Well Field and the strong protections in place for the watershed, water from the Bull Run meets federal standards without needing to be filtered.

Our Bull Run supply complies with all applicable state and federal regulations for source water. You can learn more by reading our 2003 Source Water Assessment (available at **www.portlandoregon.gov/water/sourcewaterassessment** or by calling **503-823-7525**). The Assessment identifies the only contaminants of concern as naturally occurring microbes such as *Giardia*, *Cryptosporidium*, fecal coliform bacteria, and total coliform bacteria. These organisms are found in virtually all freshwater ecosystems and may be present in our supply at very low levels. The Portland Water Bureau is the only US water system to have obtained a variance from treatment for *Cryptosporidium*; see page 3 for more information.

The Columbia South Shore Well Field provides high-quality drinking water from 26 active wells located in three different aquifers. Located on the south shore of the Columbia River, the well field is the second largest water source in Oregon, and can produce up to 95 million gallons of water per day. The well field is used to supplement, or as an alternative to, the Bull Run supply during routine maintenance, turbidity events, emergencies, and when the bureau needs additional summer supply.

In collaboration with Gresham and Fairview, we work with businesses in the area to prevent hazardous material spills that could seep into the ground and impact groundwater. We also hold public events such as Aquifer Adventure, Cycle the Well Field, and Groundwater 101 to educate residents on how they can get involved. To learn more about our Well Field Protection Program or find upcoming events, visit **www.portlandoregon.gov/water/groundwater** or call **503-823-7473**.

The Clackamas River Water District, City of Gresham, City of Lake Oswego, Rockwood Water People's Utility District, Sunrise Water Authority, and Tualatin Valley Water District provide drinking water to some Portland customers who live near service area boundaries. Customers who receive water from these providers will also receive detailed water quality reports about these sources in addition to this report.

Bull Run Treatment Variance

The Portland Water Bureau is the only water provider in the United States to have received a variance to the treatment requirements for the parasite *Cryptosporidium*. A variance is state permission not to meet a maximum contaminant level (MCL) or a treatment technique under certain conditions. Water systems are eligible for these types of variances when regulators find that the required treatment is not necessary to protect public health because of the nature of the water system's raw water source. Due to our high-quality raw water and protected watershed, the State of Oregon Health Authority (OHA) issued such a variance for the treatment of *Cryptosporidium* in March 2012. The treatment variance is valid for 10 years from the date it was issued. OHA may revoke the variance if the required conditions are not met.

To meet the requirements of our treatment variance, we:

Protect the Watershed: Protection measures include maintaining or strengthening all existing legal and operational protections, monitoring the watershed to prevent trespassing, keeping strict controls for sanitary facilities, and regular field inspections of wildlife scat in the watershed.

Monitor the Raw Water Intake: In 2016, we conducted regular monitoring for *Cryptosporidium* where raw water first enters the drinking water system at least two days each week. If *Cryptosporidium* is detected in any one sample, then we are required to begin a much more intensive year-long monitoring program to demonstrate whether the *Cryptosporidium* concentration is less than 0.075 oocysts per 1,000 liters of water. We began this intensive monitoring after detecting *Cryptosporidium* in January 2017. Additional detections of *Cryptosporidium* during this period of monitoring could result in the loss of our variance.

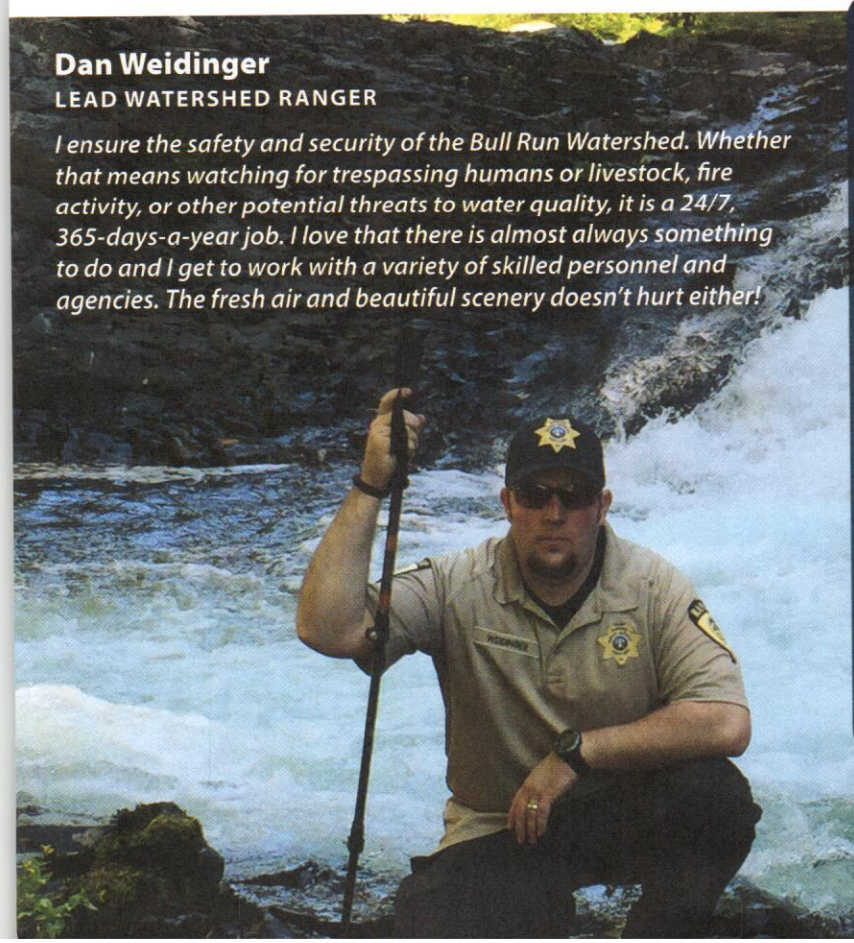
Report and Notify: We report the results of watershed and raw water monitoring to OHA. Any *Cryptosporidium* detections must be reported within 24 hours and all our field inspections and tributary and wildlife scat monitoring results are reported annually. For *Cryptosporidium* detections at the raw water intake, we notify the public through our website and press releases.

Additional information on Portland Water Bureau's treatment variance, including monthly intake reports and our annual *Bull Run Treatment Variance Watershed Report*, can be found at **www.portlandoregon.gov/water/treatmentvariance**.

2016 Results of *Cryptosporidium* Monitoring at the Raw Water Intake

Number of Samples	Total Volume	Detections
208	5,368.9 L	None

In 2016, there were no detections of *Cryptosporidium* during Raw Water Intake Monitoring. In January 2017, two samples from the raw water intake collected during observation monitoring were positive for *Cryptosporidium*. As a result, on January 8, 2017, the Portland Water Bureau began increased demonstration monitoring. These and additional results, as well as updated information on the status of the treatment variance, can be found at **www.portlandoregon.gov/water/cryptoresults**.



Dan Weidinger
LEAD WATERSHED RANGER

I ensure the safety and security of the Bull Run Watershed. Whether that means watching for trespassing humans or livestock, fire activity, or other potential threats to water quality, it is a 24/7, 365-days-a-year job. I love that there is almost always something to do and I get to work with a variety of skilled personnel and agencies. The fresh air and beautiful scenery doesn't hurt either!

Special Notice for Immuno-Compromised Persons

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Environmental Protection Agency (EPA)/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at **800-426-4791**.

Frequently Asked Questions About Water Quality

How does Portland test our drinking water?

The Portland Water Bureau monitors for over 200 regulated and unregulated contaminants in drinking water. All monitoring data in this report are from 2016. **If a known health-related contaminant is not listed in this report, the Portland Water Bureau did not detect it in drinking water.**

How is our drinking water treated?

The first step in the treatment process for Portland's drinking water is disinfection using chlorine. Next, ammonia is added to form chloramines which ensure that disinfection remains adequate throughout the distribution system.

Finally, sodium hydroxide is added to increase the pH of the water to reduce corrosion of plumbing systems. This treatment helps control lead and copper levels at customers' taps, should these metals be present in commercial and household plumbing systems. See page 9 for more information about lead.

Is our water treated by filtration?

No. Neither the groundwater nor the Bull Run source water is filtered. Groundwater is not required to be filtered and the Bull Run source meets the filtration avoidance criteria of the Surface Water Treatment Rule. The State of Oregon approved Portland's compliance with these criteria in 1992. Portland continues to meet these criteria on an ongoing basis.

Does Portland add fluoride to our drinking water?

No. The Portland Water Bureau does not add fluoride to the water. Fluoride is a naturally occurring trace element in surface and groundwater. You may want to consult with your dentist about fluoride treatment to help prevent tooth decay, especially for young children.

Is Portland's water soft or hard?

Portland's water is very soft. The hardness of Bull Run water is typically 3–8 parts per million (ppm), or approximately ¼ to ½ a grain of hardness per gallon. For periods of time Portland may supplement the Bull Run supply with groundwater. Portland's groundwater hardness is approximately 80 ppm (about 5 grains per gallon), which is considered moderately hard.

What is the pH of Portland's water?

The pH of Portland's drinking water typically ranges between 7.5 and 8.5.

How can I get my water tested?

Contact the LeadLine at **www.leadline.org** or **503-988-4000** for information about free lead-in-water testing. For more extensive testing, private laboratories can test your tap water for a fee. Not all labs are accredited to test for all contaminants. For information about accredited labs, call the Oregon Health Authority, Oregon Environmental Laboratory Accreditation Program at **503-693-4100**.

What causes temporary discolored water?

Since Portland's water is not filtered, natural sediment and organic material from the Bull Run Watershed is present in our water supply. This can sometimes be seen in the Fall as a harmless tea-colored tint. Sediment that has settled at the bottom of the water mains can be temporarily stirred up when the direction or flow of water changes due to hydrant use, nearby construction or maintenance activities, firefighting, or main breaks. Corrosion of older pipes inside buildings can also cause rusty water after water has been sitting in the pipes for several hours. More information is available at **www.portlandoregon.gov/water/discoloredwater**.

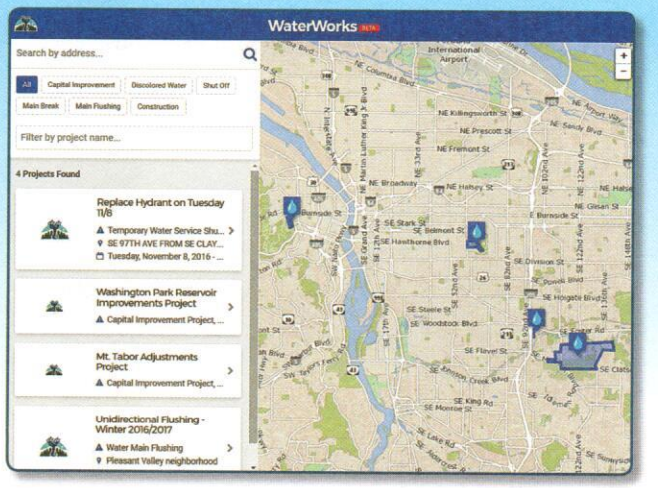
More Questions? Contact the Water Line

WBWaterLine@portlandoregon.gov | 503-823-7525 | More FAQs: www.portlandoregon/water/FAQ

WaterWorks in Your Neighborhood

The Portland Water Bureau is excited to release WaterWorks, a map-based, online tool that helps our customers see where we are actively working in the City. Using WaterWorks, customers will be able to find current projects or events that impact their water service or water quality, such as water system improvement projects, water main breaks, or water main flushing. The map also includes additional information, including what customers can do and who to contact for more information. WaterWorks adds to the Water Bureau's already outstanding customer service by providing information at our customer's fingertips, either on the computer or a mobile device.

To see what is happening in your neighborhood, visit WaterWorks at www.portlandoregon.gov/water/waterworks.



WaterWorks was developed using a grant awarded by the City of Portland Innovation Fund and the Portland City Council.

Contaminants Detected in 2016

Regulated Contaminant	Minimum Detected	Maximum Detected	Maximum Contaminant Level (MCL), Treatment Technique or Maximum Residual Disinfectant Level (MRDL)	Maximum Contaminant Level Goal (MCLG) or Maximum Residual Disinfectant Level Goal (MRDLG)	Sources of Contaminant
Untreated Source Water from the Bull Run Watershed					
Turbidity	0.20 NTU	0.94 NTU	Cannot exceed 5 NTU more than 2 times in 12 months	Not Applicable	Erosion of natural deposits
Fecal Coliform Bacteria	Not detected	100% of samples had 20 or fewer bacterial colonies per 100 milliliters of water (1 sample had 8 bacterial colonies per 100 milliliters)	At least 90% of samples measured during the previous six months must have 20 or fewer bacterial colonies per 100 milliliters of water	Not Applicable	Animal wastes
Giardia	Not detected	2 *Giardia* cysts in an 11-liter sample	Treatment technique required: Disinfection to kill 99.9% of cysts	Not Applicable	Animal wastes
Treated Drinking Water from Bull Run Watershed and Columbia South Shore Well Field Entry Points to the Distribution System					
NUTRIENTS					
Nitrate - Nitrogen	<0.010 parts per million	0.16 parts per million	10 parts per million	10 parts per million	Found in natural aquifer deposits; animal wastes
METALS AND MINERALS					
Arsenic	<0.50 parts per billion	0.84 parts per billion	10 parts per billion	0 parts per billion	Found in natural deposits
Barium	0.00077 parts per million	0.00938 parts per million	2 parts per million	2 parts per million	
Copper	<0.00050 parts per million	0.00205 parts per million	Not Applicable	1.3 parts per million	
Fluoride	<0.025 parts per million	0.18 parts per million	4 parts per million	4 parts per million	
Lead	<0.050 parts per billion	0.12 parts per billion	Not Applicable	0 parts per billion	
Treated Drinking Water from Points throughout the Distribution System of Reservoirs, Tanks and Mains					
MICROBIOLOGICAL CONTAMINANTS					
Total Coliform Bacteria	Not Detected	2 samples in October (0.8%) had detectable coliform bacteria	Treatment technique required: Less than 5% of samples in a month have detectable coliform bacteria	Not Applicable	Found throughout the environment
DISINFECTANT RESIDUAL					
Total Chlorine Residual Running Annual Average	1.75 parts per million	1.84 parts per million	4 parts per million	4 parts per million	Chlorine used to disinfect water
Total Chlorine Residual at Any One Site	0.26 parts per million	2.33 parts per million	Not Applicable	Not Applicable	
DISINFECTION BYPRODUCTS					
Haloacetic Acids					
Running Annual Average at Any One Site	1.0 parts per billion	39.4 parts per billion	60 parts per billion	Not Applicable	Byproduct of drinking water disinfection
Single Result at Any One Site	<2.0 parts per billion	68.1 parts per billion	Not Applicable		

Total Trihalomethanes					
Running Annual Average at Any One Site	20.8 parts per billion	27.0 parts per billion	80 parts per billion	Not Applicable	Byproduct of drinking water disinfection
Single Result at Any One Site	16.8 parts per billion	39.6 parts per billion	Not Applicable		

Regulated Contaminant	90th Percentile Value	Number of Sites Exceeding the Action Level	Lead and Copper Rule Exceedance	Maximum Contaminant Level Goal (MCLG)	Source of Contaminant
Lead and Copper Sampling at High-Risk Residential Water Taps					
Lead	17.4 parts per billion	12.5% of samples (14 out of 112) exceeded the lead action level of 15 parts per billion	More than 10% of the homes tested have lead levels greater than 15 parts per billion	0 parts per billion	Corrosion of household and commercial building plumbing systems
Copper	0.314 parts per million	0% of samples (0 out of 112) exceeded the copper action level of 1.3 parts per million	More than 10% of the homes tested have copper levels greater than 1.3 parts per million	1.3 parts per million	

Unregulated Contaminant	Minimum Detected	Average Detected	Maximum Detected	Source of Contaminant
Treated Drinking Water from Bull Run Watershed and Columbia South Shore Well Field Entry Points to the Distribution System				
Radon	340 picocuries per liter	340 picocuries per liter	340 picocuries per liter	Found in natural deposits
Sodium	3.36 parts per million	6.70 parts per million	16.3 parts per million	
Vanadium	<0.00050 parts per million	0.00098 parts per million	0.00390 parts per million	

*See **Notes on Contaminants** on page 7 for more information.*

Definitions

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

Maximum Contaminant Level (MCL)
The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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

Maximum Residual Disinfectant Level (MRDL)
The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG)
The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Nephelometric Turbidity Units (NTU)
The unit of measurement of turbidity or cloudiness in water as measured by the amount of light passing through a sample.

Part Per Million (ppm)
One part per million corresponds to one penny in $10,000 or approximately one minute in two years. One part per million is equal to 1,000 parts per billion.

Part Per Billion (ppb)
One part per billion corresponds to one penny in $10,000,000 or approximately one minute in 2,000 years.

Picocuries Per Liter
Picocurie is a measurement of radioactivity. One picocurie is one trillion times smaller than one curie.

Treatment Technique
A required process intended to reduce the level of a contaminant in drinking water.

ADDENDUM

WATER QUALITY REPORT 2017

Raleigh Water District participates in the joint monitoring program with the City of Portland. This joint monitoring program allows the District to use samples from Portland's system, to meet most of the monitoring requirements.

The following tables list the additional sampling that the District performed within our own system in 2016.

Regulated Contaminants					
Distribution System	Minimum Detected	Maximum Detected	MRDL	MRDLG	Source of Contaminant
Chlorine Residual	Not detected ppm	2.24 ppm	4 ppm	4 ppm	Chloramines are used to disinfect water.
Total Coliform Bacteria Raleigh Water District Distribution System	0 samples in **MONTH** (0 out of 5) had detectable coliform bacteria	0 samples in **MONTH** (0 out of 5) had detectable coliform bacteria	**MCL** Must not detect coliform bacteria in more than 1 sample in any month	**MCLG** N/A	Found throughout the environment
Disinfection Byproducts Total Trihalomethanes Running Annual Average of all sites. Single result at any one site.	17.325 ppb 31.3 ppb	17.325 ppb 38.0 ppb	MCL 80 ppb	**MCLG** Not Applicable	Byproduct of drinking water disinfection
Haloacetic Acids Running Annual Average of all sites. Single Result at any one site	12.15 ppb 24.1 ppb	12.15 ppb 24.5 ppb	MCL 60ppb	Not Applicable	Byproduct of drinking water disinfection

If you have any questions or comments about this report, please call Raleigh Water District at **503-292-4894**.

Notes on Contaminants

Arsenic, Barium, Fluoride, and Vanadium

These metals are elements found in the earth's crust. They can dissolve into water that is in contact with natural deposits. At the levels found in Portland's drinking water, they are unlikely to contribute to adverse health effects.

Disinfection Byproducts

During disinfection, certain byproducts form as a result of chemical reactions between chlorine and naturally occurring organic matter in the water. These byproducts can have negative health effects. Trihalomethanes and haloacetic acids are regulated disinfection byproducts that have been detected in Portland's water. Adding ammonia to chlorine results in a more stable disinfectant and helps to minimize the formation of disinfection byproducts.

Fecal Coliform Bacteria

The presence of fecal coliform bacteria in source water indicates that water may be contaminated with animal wastes. The Portland Water Bureau uses chlorine to kill these bacteria.

Giardia

Wildlife in the watershed may be hosts to *Giardia*, the organism that causes giardiasis. The Portland Water Bureau uses chlorine to control these organisms.

Lead and Copper

Lead and copper are rarely detected in the source water. The main source of lead and copper in drinking water is the corrosion of home and building plumbing. Lead and copper are tested at customers' homes that have lead solder and where levels are the highest. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. For more information, see *Reducing Exposure to Lead* on page 9.

Nitrate - Nitrogen

Nitrate, measured as nitrogen, can support microbial growth (bacteria and algae). Nitrate levels exceeding the standards can contribute to health problems. At the levels found in Portland's drinking water, nitrate is unlikely to contribute to adverse health effects.

Logan Bourdon
ENVIRONMENTAL SPECIALIST

I coordinate water quality activities for Portland's groundwater source, the Columbia South Shore Well Field. I enjoy the mix of hydrology, geology, and chemistry that come with managing a groundwater drinking water source.

Crissy Cotnam
LABORATORY ANALYTICAL SPECIALIST

I work in the Water Quality Lab, analyzing and monitoring levels of organic compounds in our water. I'm fascinated by seeing how treatment impacts our water, and I love providing meaningful data about the chemistry of our water to inform treatment decisions.

Radon

Radon is a naturally occurring radioactive gas that cannot be seen, tasted, or smelled. Radon can be detected at very low levels in the Bull Run water supply and at varying levels in Portland's groundwater supply. Based on the historical levels of radon in groundwater combined with the limited amount of groundwater used, radon is unlikely to contribute to adverse health effects. For information about radon, call the EPA's Radon Hotline **(800-SOS-RADON)** or **www.epa.gov/radon**.

Sodium

There is currently no drinking water standard for sodium. Sodium is an essential nutrient. At the levels found in drinking water, it is unlikely to contribute to adverse health effects.

Total Chlorine Residual

Total chlorine residual is a measure of free chlorine and combined chlorine and ammonia in our distribution system. Chlorine residual is a low level of chlorine remaining in water and is designed to maintain disinfection through the entire distribution system.

Total Coliform Bacteria

Coliforms are bacteria that are naturally present in the environment. They are used as an indicator that other potentially-harmful bacteria may be present. The Portland Water Bureau uses chlorine to kill these bacteria.

Turbidity

Turbidity is a measure of the water's clarity. Increased turbidity is typically caused by large storms that suspend organic material in our source water. This can interfere with disinfection and provide an environment for microbial growth. When turbidity rises, the Portland Water Bureau can shut down the Bull Run system and serve water from the Columbia South Shore Well Field.

Information from the EPA About Drinking Water Contaminants

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at **800-426-4791** or at **www.epa.gov/safewater**.

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 the 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 in drinking water sources may include:

Microbial contaminants, such as viruses and bacteria, which may come from wildlife or septic systems.

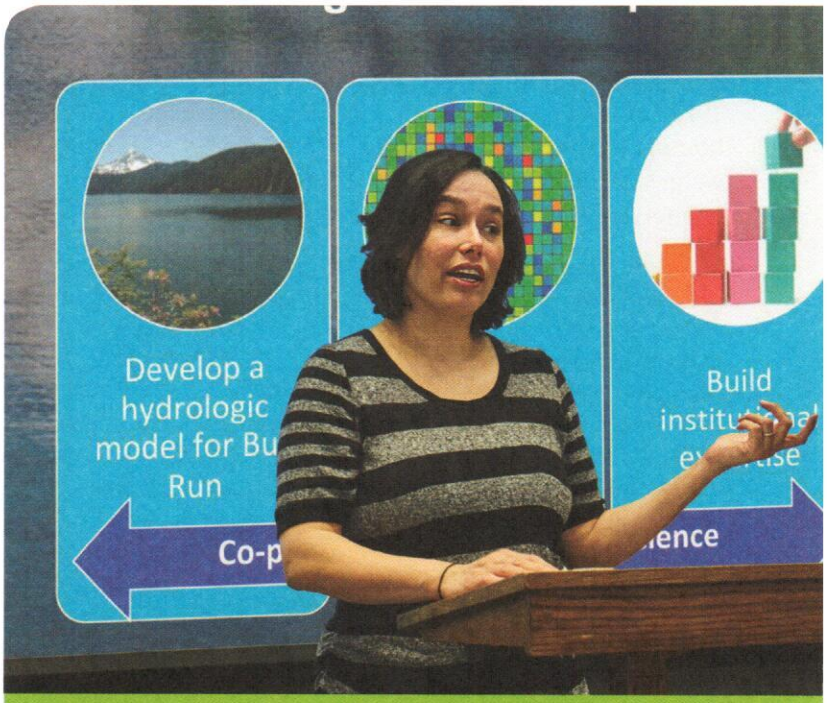
Inorganic contaminants, such as salts and metals, which can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges or farming.

Pesticides and herbicides, which may come from a variety of sources such as farming, urban stormwater runoff and home or business use.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes, and can also come from gas stations, urban stormwater runoff and septic systems.

Radioactive contaminants, which can occur naturally.

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



Kavita Heyn
CLIMATE SCIENCE COORDINATOR

I incorporate climate change into Portland's long-term water supply and water quality planning. I really enjoy the science in my work. Climate and water are dynamic and always fascinating.

Dave Demchak
ASSET MANAGEMENT ENGINEER

I identify high-risk pipes and valves. I make assessments of large pipes, pump stations, and tanks to ensure our system delivers high-quality water both on a daily basis and in the case of a severe earthquake. I love the fantastic people I have the privilege of working with every day. We share an appreciation for ensuring that Portland has some of the best drinking water in the world!

Reducing Exposure to Lead

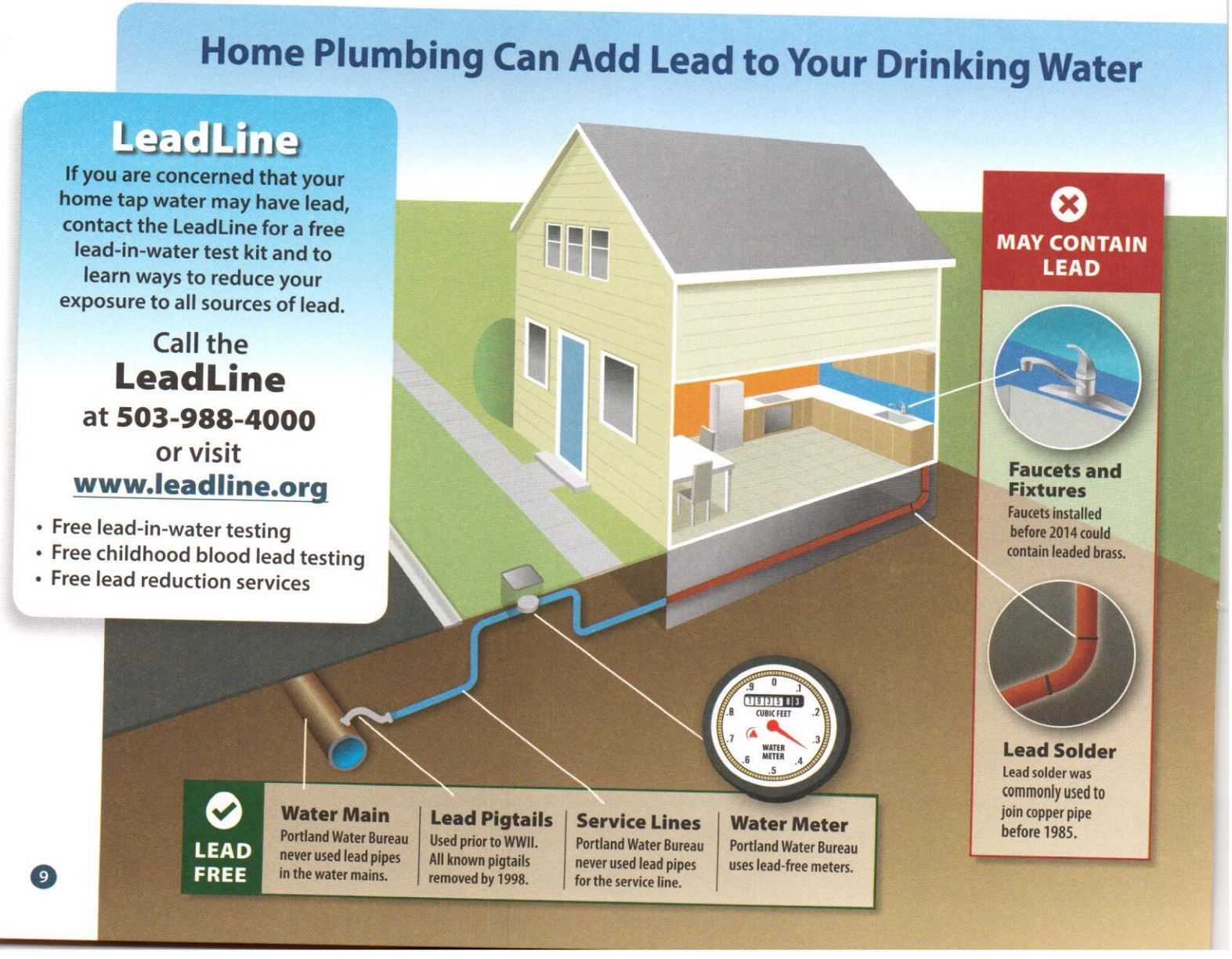
Lead is commonly found in a variety of places throughout our environment. While lead is rarely found in our source waters and there are no known lead service lines in the water system, lead can be found in some homes. In Portland, lead enters drinking water from the corrosion (wearing away) of household plumbing materials containing lead. These materials include lead-based solder used to join copper pipe — commonly used in homes built or plumbed between 1970 and 1985 — and brass components and faucets. Lead in household plumbing can dissolve into drinking water when water sits in those pipes for several hours, such as overnight or after returning from work or school.

If present, lead at elevated levels 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. The Portland Water Bureau is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components in homes or buildings. 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 drinking water, you can request a free lead-in-water test from the LeadLine. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the **LeadLine**, **503-988-4000**, **www.leadline.org** or the **Safe Drinking Water Hotline, (800) 426-4791**, **www.epa.gov/safewater/lead**.

In Portland, the most common sources of lead exposure are lead-based paint, household dust, soil, and plumbing materials. Lead is also found in other household objects such as toys, cosmetics, and pottery.

Water Testing

Twice each year, the Portland Water Bureau and regional water providers in the Bull Run service area monitor for lead and copper in tap water from a sample group of more than 100 homes. These are homes where the plumbing is known to contain lead solder, and represent a worst-case scenario for lead in water. Samples are collected after the water has been standing in the household plumbing for more than 6 hours.



A Lead and Copper Rule exceedance for lead occurs when more than 10 percent of these homes exceed the lead action level of 15 parts per billion. In testing conducted in October 2016, more than 10 percent of homes, 14 of 112, exceeded the lead action level. As a result of exceeding the action level, the Portland Water Bureau has been informing customers and encouraging them to follow the easy steps to reduce exposure to lead in water.

Protecting Public Health

The Portland Water Bureau's Lead Hazard Reduction Program is a comprehensive approach to reduce exposure to lead. Through this program the Portland Water Bureau provides:

Corrosion Control Treatment. Reduces corrosion of lead in plumbing by increasing the pH of the water. This pH adjustment has reduced lead in tap water up to 70 percent.

Lead in Water Testing. Provides free lead in water testing to everyone, but targets testing the water in households most at-risk from lead in water. These are homes built between 1970 and 1985 with pregnant women or children ages six or younger in the home.

Education, Outreach and Testing. Funds agencies and organizations that provide education, outreach, and testing on all sources of lead.

Home Lead Hazard Reduction. Supports the Portland Lead Hazard Control Program to provide grants to minimize lead paint hazards in homes.

Future Improvements

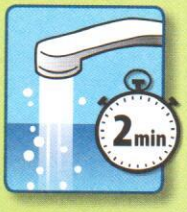
On March 1, 2017, Portland City Council authorized the Portland Water Bureau to begin a Corrosion Control Treatment Pilot. This is the first step to implementation of improved corrosion control treatment to further reduce the levels of lead in drinking water.

This decision was based on results from a corrosion control study to determine the main causes of lead in drinking water in our system. The results of this study indicated that additional treatment is the most effective means of further reducing lead in water from home and building plumbing.

The Corrosion Control Treatment Pilot will evaluate the different treatment potentials for effectiveness at reducing lead as well as other potential impacts to water quality and operations. This information will then guide the design and construction phases of the project.

The entire project is anticipated to take up to five years, with treatment in place by Spring 2022.

Easy steps to reduce possible exposure to lead from household plumbing



Run your water to flush the lead out. If the water has not been used for several hours, run each tap for 30 seconds to 2 minutes or until it becomes colder before drinking or cooking. This flushes water which may contain lead from the pipes.

Use cold, fresh water for cooking and preparing baby formula. Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.

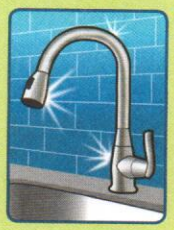
Do not boil water to remove lead. Boiling water will not reduce lead.

Test your child for lead. Ask your physician or call the LeadLine to find out how to have your child tested for lead. A blood lead level test is the only way to know if your child is being exposed to lead.

Test your water for lead. Contact the LeadLine at **www.leadline.org** or **503-988-4000** to find out how to get a FREE lead-in-water test.

Consider using a filter. Check whether it reduces lead — not all filters do. Be sure to maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality. Contact NSF International at **800-NSF-8010** or **www.nsf.org** for information on performance standards for water filters.

Regularly clean your faucet aerator. Particles containing lead from solder or household plumbing can become trapped in your faucet aerator. Regular cleaning every few months will remove these particles and reduce your exposure to lead.



Consider buying low-lead fixtures. As of January 2014, all pipes, fittings and fixtures are required to contain less than 0.25% lead. When buying new fixtures, consumers should seek out those with the lowest lead content.

Raleigh Water District

RALEIGH WATER DISTRICT
5010 SW Scholls Ferry Road
Portland, Oregon 97225
503-292-4894

Questions? We're Here to Help

You have a range of options for contacting the Portland Water Bureau on topics from programs and projects to issues with your account and information about public meetings.

Central Information Line

8 a.m. – 5 p.m., Monday – Friday
503-823-7404

For general information about projects, programs, and public meetings.

You can also learn more on our website:
www.portlandoregon.gov/water

Water Line

8:30 a.m. – 4:30 p.m., Monday – Friday
503-823-7525
WBWaterLine@portlandoregon.gov

For questions regarding water quality or water pressure.

Emergency Line

24 hours, 7 days a week
503-823-4874

For water system emergencies.

Customer Service

8 a.m. – 5 p.m., Monday – Friday
503-823-7770
PWBCustomerService@portlandoregon.gov

For questions or information about your account.

For Additional Information

Oregon Health Authority
Drinking Water Services: 971-673-0405

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

Portland Water Bureau's Water System ID: 4100657

Look for us on Facebook and Twitter:

www.facebook.com/portlandwaterbureau
@portlandwater

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Для получения копии этого отчета на русском языке позвоните по указанному ниже номеру телефона или зайдите на указанный ниже вебсайт:

Để có được một bản sao của báo cáo này bằng Tiếng Việt, xin vui lòng gọi số điện thoại hoặc truy cập vào trang web dưới đây:

要索取这份报告的中文复本, 请拨打下列电话号码或访问下列网站

www.portlandoregon.gov/water/wqreport
(503) 823-7770

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Copies of this report are available on the Portland Water Bureau's website:
www.portlandoregon.gov/water/wqreport

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