250 SW Taylor Street
Portland, OR 97204

503-226-4211
nwnaturalwater.com

Lake Grove Water District is proud to provide our customers with this year's Annual Water Quality Report for data collected in 2024. Our goal is and always has been to provide you with a safe and dependable supply of drinking water. In this report, you can find general information regarding water quality testing, health information, and specific information regarding the water quality in your water system. We are pleased to report that our drinking water is safe and meets federal and state requirements.

Educational & Health Information

Lake Grove Water District routinely monitors microbiological contaminants in your drinking water and for disinfection by-products, according to federal and state laws. In 2017, we started monitoring for lead and copper apart from the City of Portland. All test results are within the allowable levels. Please review the reports from both the City of Lake Oswego and the City of Portland. The test results demonstrate the high quality of the water we purchase from each of those cities. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It is important to remember that the presence of these constituents does not necessarily pose a health risk. The residual of disinfection by-products was well below the Maximum Contaminate Level (MCL) of 80 parts per billion (ppb). Contaminants that may be present in source water also include:

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

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, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/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 (1-800-426-4791).

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.

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. Lake Grove Water District and its contractor, Hiland Water Services, are 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.*

About Lake Grove Water District and 2024 Sampling Results

Our primary water source comes from the City of Portland, which primarily gets its water from the Bull Run Reservoir. In tandem, our backup supply is the City of Lake Oswego, which gets its water from the Clackamas River.

We continually sample many different chemicals and have found very little contamination. Contamination is anything other than pure water. We sample total coliform bacteria as an indicator of microorganisms that should not be present. The table below lists all the drinking water contaminants that we detected during the past calendar year or in our most recent tests as noted. 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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

Regulated	MCLG	MCL	Our Water	Sample Date	Violation	Typical Source of Contaminant
Total Trihalomethanes TTHM (ppb)	N/A	80	**40**	**Nov.**	No	Byproduct of drinking water disinfection
Total Haloacetic Acids HAA5 (ppb)	N/A	60	**42**	**Nov.**	No	Byproduct of drinking water disinfection
Copper (ppm)	1.3	1.3	**0.02**	**Aug.**	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	0	15	**1.4**	**Aug.**	No	Corrosion of household plumbing systems; erosion of natural deposits

Violations: We had one (1) violation in 2024 for late reporting of the 2023 Water Quality Report. This has since been resolved. The violation had no impact on the water quality provided to our customers at any time.

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 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.
Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

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 contamination.
N/A: not applicable **ND:** not detectable at testing limit
ppm: parts per million or milligrams per liter **ppb:** parts per billion or micrograms per liter **pCi/L:** picocuries per liter (a measure of radiation)

We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the third Monday of every month at 6:00 PM at 15555 Bangy Rd, Lake Oswego, OR 97035.

For additional information about Lake Grove Water District, please visit their website at **www.lakegrovewater.com** or contact them at the information provided. For additional information about NW Natural Water Services, please visit our website at **www.hilandwater.com** or contact us via phone or email.

CCR Questions
NW Natural Water Services
PO Box 699
Newberg, OR 97132
Toll-free: 1 (855) 554-8333
Email: testing@hilandwater.com

General Information & CCR Questions
Tammy Schalk – District Manager
4550 Kruse Way, Suite 360
Lake Oswego, OR 97035
Phone: (503) 636-5066
Email: office@lakegrovewater.com

City of Lake Oswego
2025 Water Quality Report

Your 2025 Water Quality Report is based on data collected during the 2024 calendar year. The City of Lake Oswego prepares this report in accordance with Federal and State regulations to bring our customers the best available information about the water they drink.

Where does Lake Oswego's water come from?

Your drinking water originates in the Clackamas River watershed, which is one of the highest quality water sources in the state. This watershed encompasses 940 square miles and begins in the Mount Hood National Forest. Water is withdrawn from the Clackamas River, then pumped through a pipeline buried beneath the Willamette River to the Lake Oswego Tigard Water Treatment Plant located in West Linn.

A Clackamas River Watershed Source Water Assessment was completed in 2019. The report is available at **www.deq.state.or.us/wq/dwp/docs/uswareports/USWA_00457LakeOswego.pdf**. An additional Clackamas River Water Providers report can be found at **https://storymaps.arcgis.com/collections/d107e2dad24e4a5d9c28dad37a835c16**

Sources of Contaminants

In order to ensure that tap water is safe to drink, the EPA sets regulatory limits on the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration sets limits for contaminants in bottled water which must provide the same protection for public health.

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 earth's surface or through the ground it dissolves naturally occurring minerals and, in some cases, radioactive material. Drinking water can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water throughout the United States include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from wildlife or septic systems e.g. coliform and giardia.
- **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 may come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can occur naturally, e.g. radon.

Cyanotoxin Monitoring Rule

In 2018, the Oregon Health Authority (OHA) developed a drinking water rule that requires many drinking water systems in the state to test for cyanotoxins, and notify the public about the test results.

Cyanobacteria naturally occur in lakes and streams. Under certain conditions, such as in warm water containing an abundance of nutrients, they can rapidly form harmful algal blooms (HABs). These blooms are capable of producing toxins known as cyanotoxins. Cyanotoxins are compounds that are capable of harming humans. The OHA has issued safe drinking water limits for the cyanotoxins microcystins and cylindrospermopsin. Lake Oswego's results are listed below.

Algal Toxin	Health Advisory (Vulnerable Population)	Health Advisory (All Population)	Health Advisory (Recreational Advisory)	Sample Date	Raw Water
Total Microcystins	0.3 µG/L	1.6 µG/L	4 µG/L	2024	Not Detected
Cylindrospermopsin	0.7 µG/L	3 µG/L	8 µG/L	2024	Not Detected

YOUR LO WATER BY THE NUMBERS

Your Drinking Water Meets or Exceeds Every State and Federal Standard

Your drinking water is tested every day. More than 90 contaminants are regularly sampled for, both before and after the water is treated, to ensure it meets the more than 120 water quality standards for drinking water set by the Environmental Protection Agency (EPA) and the State of Oregon.

The accompanying table shows the results of water quality testing for 2024. Every regulated substance detected in Lake Oswego's drinking water is listed. **All of the substances were either not detected or were detected at levels well below limits set by the EPA and State of Oregon for safe drinking water.**

Contaminants (Units)	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Disinfectants & Disinfection By-Products								
Chlorine (CL^2) (ppm)	4	4	0.96(average)	0.10	1.45	2024	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppm)	NA	0.060	0.007 (highest quarterly average)	0.001	0 .008	2024	No	By-product of drinking water chlorination
Total Trihalomethanes/ (TTHMs) (ppm)	NA	0.080	0.008 (highest quarterly average)	0.003	0.016	2024	No	By-product of drinking water disinfection
Bromate (ppm)	0	0.010	0.00325	N/D	0.001	2024	No	By-product of drinking water treatment with Ozone
Microbiological								
Fecal Coliform/E. Coli (positive samples)	0	0	0	Not Detected		2024	No	Human and animal waste
Total Coliform (% positive samples/month)	0	5	0	Not Detected		2024	No	Naturally present in the environment
Turbidity (NTU)	NA	TT <0.30 in 95% of samples	100% of samples meet turbidity standards	0.03	0.16	2024	No	Soil runoff, erosion of natural deposits
Inorganic								
Copper - action level at consumer taps (ppm)	1.3	Action Level=1.3	90th percentile: 0.00 Homes exceeding AL: 0			2023	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	Action Level=15	90th percentile: 0.00 Homes exceeding AL: 0			2023	No	Corrosion of household plumbing systems; erosion of natural deposits

What Else Do We Look For In Our Water?

The following list of chemicals and compounds are what we test for on a regular basis. Most chemicals are measured in parts per billion (ppb) or parts per million (ppm). None of these compounds were detected in Lake Oswego's drinking water.

Volatile Organic Compound: (21 compounds) manmade chemical compounds such as cleaning fluids, degreasers and plastics.

Synthetic Organic Compounds: (30 compounds) manmade chemicals, including insecticides and herbicides.

Inorganic Compounds: (16 compounds) naturally occurring minerals and chemicals that are released into water through erosion and leaching of mineral deposits.

For a complete listing of all test results, go to the Oregon Drinking Water Service website: **https://yourwater.oregon.gov/inventory.php?pwsno=00457**

Unregulated Contaminant Monitoring Rule

The Lake Oswego Tigard Water Partnership is complying with the fifth round of the EPA's Unregulated Contaminant Monitoring Rule (UCMR 5). Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. The UCMR 5 aims to provide the EPA with data to understand the frequency that 29 per- and polyfluoroalkyl substances (PFAS) and lithium are found in the nation's drinking water systems. A full list of contaminants tested and their results can be found here: **www.lakeoswego.city/publicworks/drinking-water-and-and-polyfluoroalkyl-substances-pfas**

No PFAS Detected in Drinking Water Supply

Per- and Polyfluoroalkyl Substances (PFAS), are a group of synthetic chemicals used in a wide range of consumer products and industrial applications. PFAS have been detected in air, water, and soil in and around manufacturing facilities. Due to their chemical structure, PFAS are very stable in the environment and are resistant to breaking down. PFAS move easily through the ground, getting into groundwater that is used for some water supplies or for private drinking water wells. When released into lakes or rivers used as sources of drinking water, they can get into drinking water supplies.

Due to their potential health effects, the EPA selected a group of 29 PFAS to be monitored under the UCMR 5. **The Lake Oswego Tigard Water Partnership has complied with sampling for this group under the UCMR 5 and has found no detectable amounts in our drinking water supply.**

Glossary: EPA Water Quality Definitions

Action Level (AL): the concentration of a contaminant which, if exceeded, triggers a treatment or other requirements 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 technology.

Maximum Contaminant Level Goal (MCLG): the level of a contaminant in drinking water below which there is no known 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 contamination.

Nephelometric Turbidity Units (NTU): the standard unit of measurement used in water analysis to measure turbidity in a water sample. Turbidity is a measure of how clear the water looks.

Parts per Million (ppm): one part per million is equivalent to half of an aspirin tablet dissolved in a full bathtub of water (approximately 50 gallons).

Parts per Billion (ppb): one part per billion is equivalent to half of an aspirin tablet dissolved in 1,000 bathtubs of water (approximately 50,000 gallons).

pH: a scale that measures how acidic or basic drinking water (or another substance) is.

Treatment Technique (TT): a required process intended to reduce the level of a contaminant in drinking water.

Drinking and Bottled Water Notice

Drinking water, including bottled water, may be reasonably expected to contain small amounts of some contaminants. However, the presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's **Safe Drinking Water Hotline** at 1-800-426-4791.

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 persons, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the **Safe Drinking Water Hotline** 1-800-426-4791 or visiting **www.epa.gov/safewater**.

Lead Safety

Lake Oswego's water system meets State and Federal requirements for lead, results from customer sampling demonstrate that the system is optimized to prevent lead from getting into the water.

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. The City of Lake Oswego 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.

Service Line Inventory

Beginning in 2021, Lake Oswego underwent an inventory of all service lines in our water service area to determine if they are lead, non-lead or an unknown material. In September 2024, the City submitted our service line inventory results to the Oregon Health Authority, certifying that **no known lead service lines are present in our distribution system**. This is based on statistical analysis on several thousand field-verified sample sites.

Free Lead Testing

The City offers FREE lead testing to its water customers. Sample bottles and instructions can be picked up at the main reception desk at City Hall. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at **www.epa.gov/safewater/lead**.

MORE INFORMATION

www.lakeoswego.city/publicworks

Water Quality and Treatment:
503-635-0394
or **watertest@lakeoswego.city**

Utility Billing: 503-635-0265
Water Operations: 503-635-0280
Water Conservation: 503-675-3747

Lake Oswego Tigard Water Partnership

www.lotigardwater.org

United States Environmental Protection Agency

Safe Drinking Water Hotline
1-800-426-4791
www.epa.gov

Clackamas River Basin Council

www.clackamasriver.org

Oregon Health Authority

Drinking Water Services
1-503-731-4010
www.oregon.gov/oha/PH/healthyenvironments/drinnkingwater/pages/index.aspx

Regional Water Providers Consortium

www.regionalh2o.org

Clackamas River Water Providers

www.clackamasproviders.org

www.lakeoswego.city

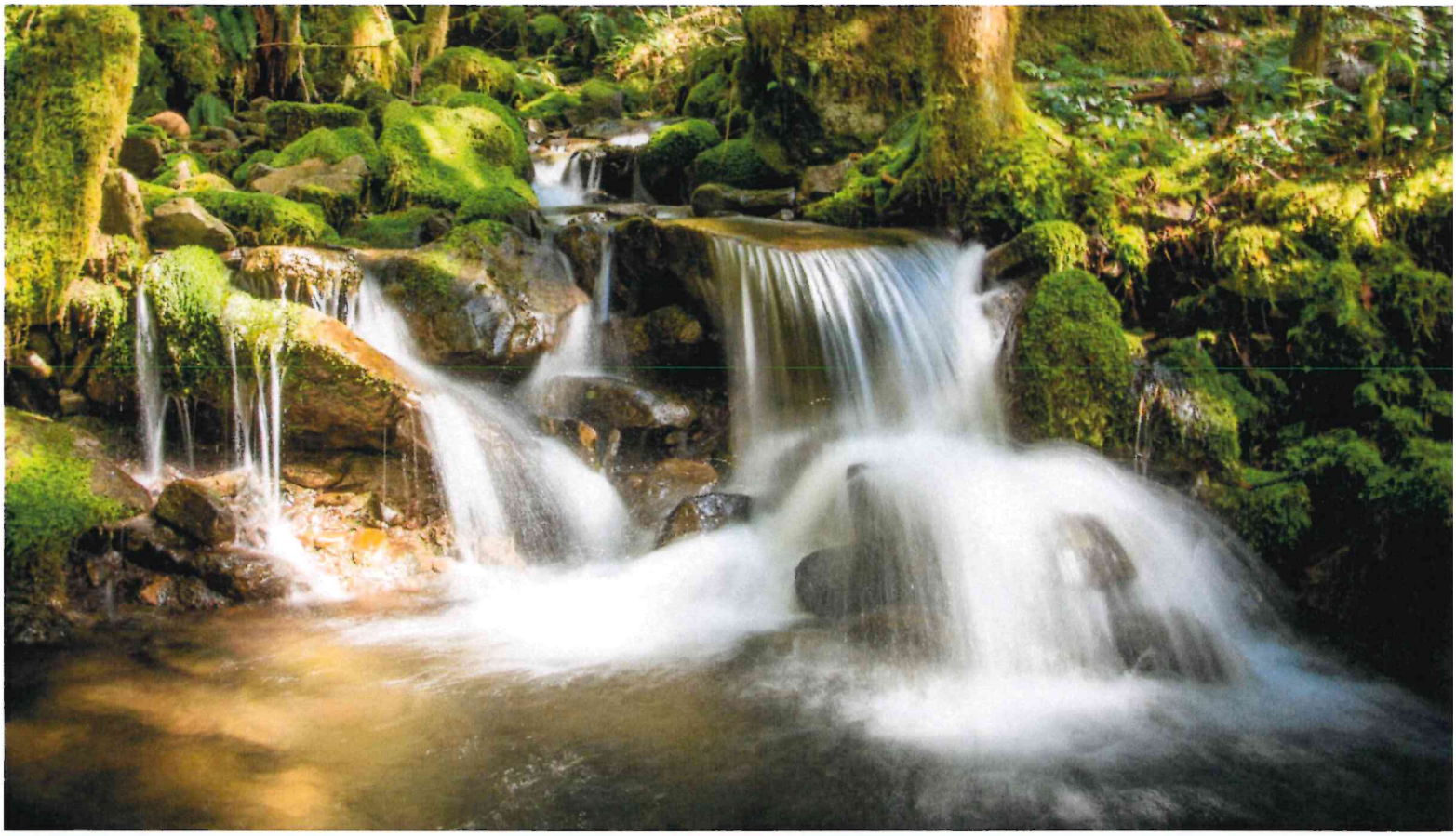
Get Involved

You are invited to attend Lake Oswego City Council meetings and Lake Oswego Tigard Water Partnership Committee meetings. Visit **www.lakeoswego.city/citycouncil** or **www.lotigardwater.org** for meeting details.

Take a Tour of the Water Treatment Plant!

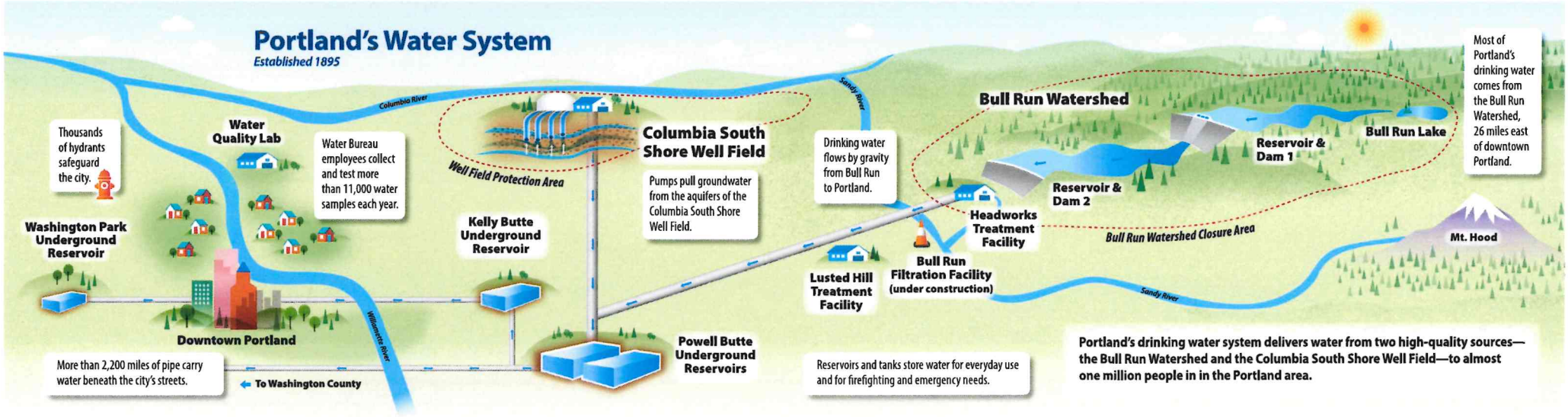
We host public tours of our state-of-the-art water treatment plant.
Visit **lakeoswego.city/publicworks/water** to register for a tour!

For a complete listing of all test results, go to the Oregon Drinking Water Service website:
https://yourwater.oregon.gov/inventory.php?pwsno=00457



PORTLAND WATER BUREAU

2025 Drinking Water Quality Report



About this report

Each year, the Portland Water Bureau provides this Drinking Water Quality Report to all of its customers. This report is required by the state and the EPA and contains important information about Portland's drinking water and water system.

The following 2025 Drinking Water Quality Report contains results for all regulated contaminants the bureau detected in drinking water in 2024.

The contaminants in this report are just a part of the over 200 regulated and unregulated contaminants that Portland tests for in our drinking water. Additional results are available at **portland.gov/water/TestResults**.

Questions about the information in this report or need translations or disability access? Call: **503-823-7525**.

This report is also available online at **portland.gov/WaterQualityReport**.

Our drinking water sources

The Bull Run Watershed, Portland's protected surface water supply, is in the Mount Hood National Forest, 26 miles from Portland. The Portland Water Bureau and the US Forest Service carefully manage the watershed to sustain and supply clean drinking water for nearly one million people. In a typical year, the watershed receives an astounding 135 inches of precipitation (rain and snow), which flows into the Bull Run River and then into two reservoirs that store nearly 10 billion gallons of drinking water.

Source water assessments are completed to identify contaminants of concern for drinking water. For the Bull Run, the only contaminants of concern are naturally occurring microorganisms that live in virtually all freshwater ecosystems, such as *Giardia*, *Cryptosporidium*, fecal coliform bacteria, and total coliform bacteria. The Portland Water Bureau regularly tests Bull Run water for these microorganisms. Portland's most recent source water assessment from 2019 is available at **portland.gov/water/SWA** or by calling **503-823-7525**.

The Portland Water Bureau treats drinking water to control organisms that would make people sick but does not currently treat for *Cryptosporidium*. Portland is installing filtration to remove *Cryptosporidium* and other contaminants from drinking water by September 2027. Learn more on pages 8 and 9.

The Columbia South Shore Well Field, Portland's protected groundwater supply, provides drinking water from 25 active wells located in three different aquifers. The well field is between Portland International Airport and Blue Lake Park. Portland uses the well field for two purposes: to supplement the Bull Run supply in the summer, and to temporarily replace the Bull Run supply during turbidity events, maintenance activities, and emergencies.

The Columbia South Shore Well Field is beneath homes and businesses with a variety of potential contaminant sources. The deep aquifers that are the primary sources of water supply have natural geologic protection from pollutants present at the land surface. Portland, Gresham, and Fairview work together to protect the well field. The cities' Groundwater Protection Program works with residents and businesses in the well field to ensure that pollutants from this urban area do not impact the groundwater source.

Learn more about our water sources at **portland.gov/water/BullRun** and **portland.gov/water/groundwater**.

Our drinking water treatment

Portland treats our drinking water to keep our community safe. Currently, Portland's drinking water treatment is a three-step process:

1. **Chlorine** disinfects against organisms, such as bacteria and viruses, that could otherwise make people sick.
2. **Ammonia** stabilizes chlorine to form a longer-lasting disinfectant.
3. **Sodium carbonate** and **carbon dioxide** are added to Bull Run water while **sodium hydroxide** is added to groundwater to reduce the corrosion of metals such as lead.

Portland is in the process of changing our Bull Run treatment by 2027. Portland does not currently filter Bull Run drinking water. In response to a series of low-level detections of *Cryptosporidium* in Bull Run water, Portland is installing a filtration plant to treat for *Cryptosporidium*. Portland is required to filter Bull Run water by 2027. Learn more on pages 8 and 9.

The Clackamas River Water District, City of Gresham, City of Lake Oswego, City of Milwaukie, 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 receive additional information about these sources in addition to this report.

Get email updates when we make changes to our source water or treatment.
Sign up at **portland.gov/water/notification**.

You have questions about water quality? We have answers!

Lillian and Matt (se habla español), our Water Quality Line staff, answer questions from homeowners, renters, and businesses about water quality and water pressure every day. Here are some common questions.

Do you have questions? Start here: **portland.gov/water/WQLine**
Contact us: **WBWaterLine@PortlandOregon.gov, 503-823-7525**
Contacting us is free, with language interpretation at no cost.

Has Portland tested its drinking water for PFAS?

Yes, and fortunately PFAS have not been detected in drinking water from either of our water sources. PFAS—perfluoroalkyl and polyfluoroalkyl substances—are a group of chemicals that are a nationwide concern. Portland shares this concern and takes steps to protect and test our drinking water for PFAS. Learn more at **portland.gov/water/PFAS**.

Does Portland add fluoride to the water?

No. Fluoride naturally occurs in Portland's water at very low levels. You may want to ask your dentist or doctor about supplemental fluoride for preventing tooth decay. This is especially important for young children.

Is Portland's water soft or hard?

Bull Run water—Portland's main water supply—is soft. It typically has a total hardness of 7 to 11 parts per million (ppm), or approximately ½ a grain of hardness per gallon. Portland's groundwater supply is moderately hard: about 80 ppm, or about 5 grains per gallon.

What is the pH of Portland's water?

The pH of Portland's drinking water typically ranges between 8.0 and 9.0.

How can I get my water tested?

For free lead-in-water testing, residents and child care providers can visit **portland.gov/water/LeadTest**. For other testing, you can pay a private, accredited laboratory to test your tap water. For information about accredited labs, contact the Oregon Health Authority at **ORELAP.Info@state.or.us** or **503-693-4100**.

What causes temporarily discolored water?

Sediment and organic material from the Bull Run Watershed settle at the bottom of water main pipes. These can sometimes be stirred up during hydrant use or a main break. They can also be seen in the fall as a harmless tea-colored tint. Discolored water can also be caused by older pipes in buildings that add rust to the water. Learn more at **portland.gov/water/DiscoloredWater**.

How should property managers maintain water quality in large buildings?

Managers of large buildings should implement a water management program to protect their water quality and address the risk of *Legionella* growth. This is especially important for healthcare facilities and residential buildings for people 65 or older. Learn more at **portland.gov/water/WQBuilding**.

What the EPA says can be found in drinking water

Across the United States, 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.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (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.

Contaminants that may be present in source water include: **microbial contaminants**, such as viruses, bacteria, and protozoa from wildlife; **inorganic contaminants**, such as naturally occurring salts and metals; **pesticides and herbicides**, which may come from farming, urban stormwater runoff, or home and business use; **organic chemical contaminants**, such as byproducts from industrial processes or the result of chlorine combining with naturally occurring organic matter; and **radioactive contaminants**, such as naturally occurring radon.

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 EPA's Safe Drinking Water Hotline at **800-426-4791** or at **epa.gov/SafeWater**.

Testing your drinking water

Testing your drinking water from source to tap is one of our most important jobs. We test water from many locations around our water system, including our water sources, our treatment facilities, and around town. The results from this testing show us that our water is safe to drink and are critical in meeting state and EPA requirements.

Because we test for over 200 contaminants from 400 locations, we test the water in many different ways. Some water samples are collected by treatment operators at 1 a.m., and some water samples are collected by staff who drive to 20 different locations in one day.

Join Drippy on a doctor's visit to learn more about how we test Portland's drinking water.

Regardless of when or where we collect the water samples, the following steps show the general process we use to test Portland's drinking water:

1 **Plan what to test for as well as where, when, and how to test.**

2 **Prepare bottles, instruments, and data sheets.**

3 **Collect water samples and record data.**

4 **Deliver water samples to lab staff.**

5 **Analyze water samples and upload results to a database.**

6 **Review results and report data to the state.**

Additional testing in 2024

Every five years, the EPA requires the Portland Water Bureau and other water utilities across the country to test their water for contaminants that do not have a federal standard or limit. These are called unregulated contaminants. After testing is complete, the EPA evaluates the test results and the potential health risks of the contaminants to determine if a standard is needed to protect public health.

In 2024, we were required to test for 29 types of PFAS as well as lithium in both Bull Run water and groundwater. **We did not detect PFAS or lithium in any of the samples.**

PFAS in particular are a concern nationwide and the EPA recently set drinking water limits for six types of PFAS. **Portland is fortunate that we have not detected PFAS in our drinking water, and we already meet these new EPA requirements.** We will continue to protect our water sources from and test our drinking water for PFAS. Learn more at **portland.gov/water/PFAS**.

Contaminants detected in 2024

Regulated contaminant		Levels detected in Portland's water	EPA limit: MCL or TT	EPA goal: MCLG	Source of contaminant
Untreated source water					
Turbidity (NTU)		0.22–1.65	5	N/A	Erosion of natural deposits
Giardia (cysts/liter)		0–0.04	TT	N/A	Animal wastes
Fecal and total coliform bacteria (% more than 20 CFU or 100 MPN per 100 milliliters [mL] in 6 months)		0.6%	No more than 10% of samples in 6 months can have more than 20 CFU or 100 MPN per 100 mL of water	N/A	Animal wastes; found throughout the environment
Fecal coliform bacteria (CFU/100 mL) Range of single results		0–26	N/A	N/A	Animal wastes
Treated drinking water					
Metals and nutrients at the entry point					
Arsenic (ppb)		<0.50–1.10	10	0	Found in natural deposits
Barium (ppm)		0.0008–0.01	2	2	
Fluoride (ppm)		<0.025–0.090	4	4	
Nitrate (as nitrogen) (ppm)		<0.01–0.31	10	10	Found in natural deposits, animal wastes
Microbial contaminants in the distribution system					
Total coliform bacteria (% positive per month)		Not detected–0.4%	TT	N/A	Found throughout the environment
Disinfectant levels and byproducts in the distribution system					
Total chlorine (ppm)	Running annual average	1.94–1.96	4 [MRDL]	4 [MRDLG]	Chlorine used to disinfect water
	Range of single results at all sites	0.38–2.53	N/A	N/A	
Haloacetic acids (ppb)	Running annual average at any one site	20.2–28.0	60	N/A	Byproduct of drinking water disinfection
	Range of single results at all sites	14.2–33.7	N/A	N/A	
Total trihalomethanes (ppb)	Running annual average at any one site	20.3–32.1	80	N/A	
	Range of single results at all sites	16.8–41.0	N/A	N/A	

Unregulated contaminant	Levels detected in Portland's water	Average level detected in Portland's water	Source of contaminant
Treated drinking water			
Manganese (ppb)	2.5–35.2	20.4	Found in natural deposits
Radon (pCi/L)	<12–409	152.2	
Sodium (ppm)	11–13	12	

Cryptosporidium and lead data are on pages 8 and 10.
Find additional results, including pH, hardness, and PFAS, at **portland.gov/water/TestResults**

Definitions

CFU: colony forming unit
An estimation of the number of fecal coliform bacteria in a water sample.

MCL: maximum contaminant level
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.

MCLG: maximum contaminant level goal
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.

MPN: most probable number
A statistical method used to estimate the concentration of total coliform bacteria in a water sample.

MRDL: maximum residual disinfectant level
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.

MRDLG: maximum residual disinfectant level goal
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.

N/A: not applicable
Some contaminants do not have a health-based level or goal defined by the EPA, or the MCL or MCLG does not apply to that result.

NTU: nephelometric turbidity unit
A unit for measuring the turbidity, or cloudiness, of a water sample.

ppm: parts per million
A small amount of a substance within the water. In terms of time, one part per million is about 32 seconds out of one year.

ppb: parts per billion
A very small amount of a substance within the water. In terms of time, one part per billion is about 3 seconds out of one hundred years.

pCi/L: picocuries per liter
A unit for measuring the radioactivity of a water sample.

Regulated contaminant
A substance in drinking water that has a limit set by the EPA based on health risk or aesthetic characteristics.

TT: treatment technique
A required process intended to reduce the level of a contaminant in drinking water.

Unregulated contaminant
A substance in drinking water that does not have a limit set by the EPA but may have one set in the future.

About these contaminants

Arsenic, barium, fluoride, and manganese
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, these are unlikely to result in negative health effects.

Fecal coliform bacteria
Fecal waste from wildlife in the watershed is the source of fecal coliform bacteria, a microorganism that can cause gastrointestinal illness. Portland is required to test for fecal coliform bacteria before chlorine is added. After testing our untreated water for fecal coliform bacteria, Portland treats its water with chlorine to control these bacteria.

Giardia
Wildlife in the watershed may be hosts to *Giardia*, a microorganism that can cause gastrointestinal illness. The treatment technique is to remove 99.9 percent of *Giardia* cysts. After testing our untreated water for *Giardia*, Portland treats its water with chlorine to control these organisms.

Haloacetic acids and total trihalomethanes
Disinfection byproducts form when chlorine interacts with naturally occurring organic material in the water. High levels of disinfection byproducts can cause health problems in people. Portland adds ammonia to the water to form a more stable disinfectant, which helps minimize disinfection byproducts.

Nitrate (as nitrogen)
Nitrate, measured as nitrogen, can lead to bacterial and algal growth in the water. At levels that exceed the standard, nitrate can contribute to health problems. At the levels found in Portland's drinking water, nitrate is unlikely to result in negative health effects.

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. At the levels found in Portland's drinking water, radon in water is unlikely to result in negative health effects.

Sodium
There is currently no drinking water standard for sodium. At the levels found in Portland's drinking water, sodium is unlikely to result in negative health effects.

Total chlorine
Total chlorine is a measure of free chlorine and chlorine combined with ammonia in the water distribution system. We need effective and safe levels of chlorine to remain in the drinking water to keep the water safe from bacteria and other microorganisms. At the levels found in Portland's drinking water, chlorine is unlikely to result in negative health effects.

Total coliform bacteria
Coliforms are bacteria that are naturally present in the environment and usually do not make people sick. They are used as an indicator that other potentially harmful bacteria may be present. Portland tests for coliform bacteria in both untreated source water and treated water in the distribution system. After testing the untreated water for coliform bacteria, Portland treats its water with chlorine to control these bacteria. If these bacteria are found in more than 5 percent of distribution system samples in a month, the treatment technique requires we investigate and correct any possible causes.

Turbidity
Turbidity is the cloudiness of a water sample. In Portland's system, increased turbidity usually comes from large storms, which suspend organic material in Bull Run water. Increased turbidity can interfere with disinfection and provide an environment for microorganisms to grow. Since Portland does not yet filter Bull Run water, we are required to test for turbidity. The treatment technique limit is that turbidity cannot exceed 5 NTU more than two times in twelve months. When turbidity rises in the Bull Run source, Portland can switch to its groundwater source.

Monitoring for *Cryptosporidium*

Cryptosporidium is a potentially disease-causing microorganism that lives in virtually all freshwater ecosystems. Drinking water treatment for *Cryptosporidium* is required by state and federal regulations. For five years, the Oregon Health Authority (OHA) did not require the Portland Water Bureau to treat for *Cryptosporidium* based on data showing that *Cryptosporidium* was rarely found in the Bull Run Watershed. In 2017, after the start of low-level *Cryptosporidium* detections, the OHA determined that treatment is now necessary. Detections of *Cryptosporidium* from the Bull Run have continued, primarily during the rainy season.

The Portland Water Bureau does not currently treat for *Cryptosporidium*, but is required to do so under drinking water regulations. Portland is working to install filtration by September 30, 2027 under a compliance schedule with the OHA. In the meantime, Portland Water Bureau is implementing interim measures such as watershed protection and additional monitoring to protect public health. Consultation with public health officials continues to conclude that the general public does not need to take any additional precautions.

Exposure to *Cryptosporidium* can cause cryptosporidiosis, a serious illness. Symptoms can include diarrhea, vomiting, fever, and stomach pain. People with healthy immune systems recover without medical treatment. According to the Centers for Disease Control and Prevention (CDC), people with severely weakened immune systems are at risk for more serious disease. Symptoms may be more severe and could lead to serious life-threatening illness. Examples of people with weakened immune systems include those with AIDS, those with inherited diseases that affect the immune system, and cancer and transplant patients who are taking certain immunosuppressive drugs.

The Environmental Protection Agency advises that customers who are immunocompromised and receive their drinking water from the Bull Run Watershed consult with their health care professional about the safety of drinking the tap water.

***Cryptosporidium* detections at the raw water intake in 2024**

Total number of samples tested	Total number of samples positive for *Cryptosporidium*	Levels detected in Portland's water (oocysts/liter)	Source of contaminant
178	33	0–0.12	Animal wastes

Learn more at **portland.gov/water/crypto.**

Special notice for immunocompromised persons

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

Immunocompromised 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**.

Bull Run TREATMENT PROJECTS

Bull Run Filtration Project updates

We are investing in a safe and abundant water future for our community with the Bull Run Filtration Project. The long-term improvements we are building will protect public health by removing *Cryptosporidium* and other potential contaminants from our Bull Run supply, filtering out sediment and organic material, and further reducing lead levels at the tap. This project will not only help us provide consistent high-quality drinking water but also make our water system more resilient to future risks.

Ask a water expert: How does filtration make our water healthier?

Filtration will also help Portland comply with federal and state safe drinking water regulations today and in the future. We are committed to providing the best value to our ratepayers while we make these generational investments in the future of our water system.

Filtration facility construction progress in early 2025

Construction update

Construction of the filtration facility began in summer 2024. From the summer through early winter 2025, construction crews worked to excavate basins that are critical to the filtration process. Crews have to make sure the elevations of these basins are just right so water can continue to flow by gravity through the treatment process.

In February 2025, the Water Bureau temporarily halted construction while Multnomah County and the City address natural resources permitting questions, requested through the Oregon Land Use Board of Appeals process. We look forward to the completion of this permitting process and being able to move forward to meet our regulatory obligation, minimize project cost increases, and reduce our system vulnerability to earthquakes, wildfires, large storms, landslides, and other natural disasters.

Learn more about filtration and construction activities at **portland.gov/water/filtration**.

Reducing exposure to lead

Lead and copper test results from homes with higher risk of lead in water

We offer free lead-in-water tests to anyone in the service area. Every year, we also collect water samples from over 50 homes that have lead solder and are more likely to have higher levels of lead in water. Test results from these homes in 2024 were below the EPA action level.

Regulated contaminant	Levels detected in high-risk homes	90th percentile results[1]	Homes exceeding action level[2]	EPA limit: action level[2]	EPA goal: MCLG[3]	Source of contaminant
Lead (ppb)[3]	0.09–145	4.4	1 out of 101 (1%)	15	0	Corrosion of household and commercial building plumbing systems
Copper (ppm)[3]	0.005–0.5	0.14	0 out of 101 (0%)	1.3	1.3	

[1] 90th Percentile: 90 percent of the sample results were less than the values shown.
[2] Action level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. If the 90th percentile results are above the action level, Portland must take action.
[3] See page 7 for definitions.

What to know about lead

The Portland Water Bureau cares about the health of the families in our community and is committed to helping you reduce your exposure to lead. Lead can cause serious health problems, especially for pregnant people 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 and removing lead pipes. While Portland has no known lead service lines, we cannot control the variety of materials used in plumbing components in your home.

Portland reduces lead at the tap

Portland treats its water to reduce lead levels at the tap. Sodium carbonate and carbon dioxide are added to Bull Run water to increase the pH and alkalinity while sodium hydroxide is added to groundwater to increase the pH. This treatment protects our water from lead in plumbing materials.

Sources of lead in Portland

Lead is rarely found in Portland's source waters. Additionally, in 2024 we certified with the state that Portland has no known lead service lines. We reviewed records and conducted site inspections to make this determination. Learn more at **portland.gov/water/lead**.

In Portland, lead enters drinking water from household plumbing materials containing lead. These materials include lead-based solder used between 1970 and 1985 to join to join copper pipe, and brass parts and faucets installed before 2014.

The most common sources of lead exposure in Portland are lead-based paint and household dust. Learn more at **LeadLine.org** or **503-988-4000**.

What you can do

You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by:

- **Identifying and removing lead materials** within your home plumbing and taking steps to reduce your family's risk.
- **Using only cold water** for drinking, cooking, and making baby formula.
- **Running your water to flush any lead out.** Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes.
- **Using a filter** certified by an American National Standards Institute-accredited certifier to reduce lead in drinking water.
- **Testing your water.** If you are concerned about lead in your drinking water and wish to have your water tested, you can order a free lead-in-water test kit at **portland.gov/water/LeadTest** or call **503-823-7525**.

Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the EPA at **epa.gov/SafeWater/lead**.

Health effects of lead

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of people who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

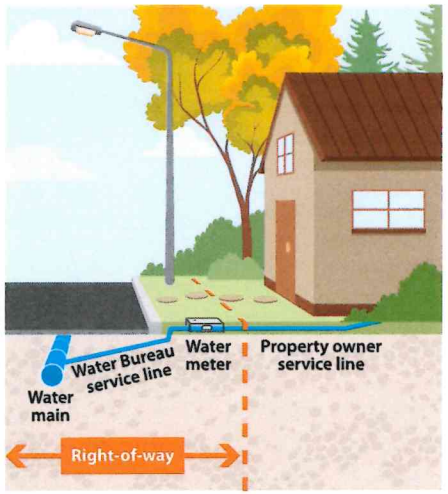
Ahead of the curve in meeting new lead regulations

In 2024, the EPA released its new lead in drinking water rule to significantly reduce exposure to lead in drinking water in communities across the country. The great news for Portland is that we already meet key requirements of the new rule.

Portland has no known lead service lines

Unlike many other cities, Portland never used lead service lines. In 2024, we certified that Portland has no known lead service lines when we completed the EPA-required service line inventory, which included both Water Bureau and property owner service lines.

Ask a water expert: Does Portland have lead pipes in its water system?



Service lines are the pipes that bring water from large water mains to homes and buildings. Portland does not have any lead service lines.

Portland's drinking water treatment significantly reduces lead

Our improved corrosion control treatment has significantly reduced lead levels at the tap since it came online in 2022. Portland's lead levels are now well below the EPA's new, lower regulatory level for lead in drinking water.

Portland continues to provide free lead testing

The EPA rule also requires water utilities to provide their customers with lead testing and education. Portland will continue its free lead testing and extensive lead-in-water education to meet these new regulations and protect our community's children, who are most vulnerable to and impacted by exposure to lead.

Looking to the future

We are already working on our next water treatment investment, the upcoming Bull Run filtration facility. Scheduled to be completed in 2027, filtration combined with corrosion control should reduce lead levels at customer taps even more. These investments ensure we can deliver high-quality, safe drinking water for generations to come.

Learn more at **portland.gov/water/news/2024-lead-update**.

In 2020 and 2021, Water Bureau engineers tested Bull Run water in jars to determine the most effective corrosion treatment to use at the Bull Run filtration facility.

PORTLAND WATER BUREAU
FROM FOREST TO FAUCET

1120 SW Fifth Avenue • Suite 405
Portland, Oregon 97204
Quisha Light, Portland Water Bureau Interim Director

PUBLIC WORKS

The Portland Water Bureau is part of the City of Portland's Public Works Service Area.

Questions? We're here to help.

Central information

For general information about projects, programs, and public meetings.
503-823-7404

Water quality and pressure

For questions regarding water quality or water pressure.
503-823-7525
WBWaterLine@PortlandOregon.gov

Billing and financial assistance

For questions or information about your account or to apply for financial assistance.
503-823-7770
PWBCustomerService@PortlandOregon.gov

Water system emergencies

For reporting street leaks and water service problems.
503-823-4874
24 hours a day, 7 days a week

portland.gov/water | **PortlandWaterBureau** | **@PortlandWater**

Additional drinking water information

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

General information: **oregon.gov/oha/ph/HealthyEnvironments/DrinkingWater**

Data portal for Portland: **yourwater.oregon.gov/inventory.php?pwsno=00657**

Portland Water Bureau's Water System ID: 4100657

Regional Water Providers Consortium

The Portland Water Bureau is a proud member of the Consortium. Learn more about our region's water and our collaborative work in emergency preparedness and water conservation at **regionalH2O.org**.

This report is available online in English, Spanish, Russian, Vietnamese, and simplified Chinese. Please call us if you want a paper copy of this report.

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portland.gov/WaterQualityReport • **503-823-7525** (Relay: 711)

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