2023 Oregon City water QUALITY REPORT

welcome...

We are pleased to provide you with Oregon City's 2023 Water Quality Report. Our drinking water continues to meet or surpass all state and federal standards and regulations.

orcity.org/publicworks/water-quality-reports

Committed to:

- **Protecting public health –** Providing clean, safe drinking water that complies with all state and federal regulations.
- **Protecting public safety –** Ensuring reliable, plentiful water for fire suppression.
- **Protecting the environment –** Providing a safe and reliable stormwater system and implementing watershed protection and restoration actions that consistently promote surface water quality and stream health.

Our Drinking Water Source

Water from the Clackamas River is made safe to drink by conventional treatment at the South Fork Water Board (SFWB) Treatment Plant, located in the Park Place area of Oregon City. Oregon City purchases treated drinking water from SFWB and distributes it to Oregon City Water customers. The basic steps to the treatment process are:

- **Coagulation** – adding chemicals (alum and polymers) to the water that causes very small suspended particles to attract one another and form larger particles.
- **Flocculation** – gently stirring the water to bring the suspended particles together so they will form larger clumps, called floc.
- **Sedimentation** – the velocity of the water is reduced allowing gravity to settle out the floc.
- **Filtration** – any remaining particles not settled out earlier are removed as water flows through filters made up of sand and anthracite coal.
- **Corrosion Control** – adding soda ash in order to increase the pH of the water, making it less likely to deteriorate piping material and plumbing fixtures.
- **Disinfection** – adding sodium hypochlorite (a liquid form of chlorine that is similar to household bleach) to kill any disease-causing organisms in the water. It is important to have a small amount of chlorine remain in the water as it travels throughout the distribution system. This is called a chlorine residual.

SFWB, and by extension, Oregon City, is a member of the Regional Water Providers Consortium which is a collaborative and coordinating organization that works to improve the planning and management of municipal water supplies in the greater Portland metropolitan region. Find out more about the Consortium, its members, and its work in emergency preparedness, water conservation, and regional coordination at ww.regionalh2o.org. Learn more about SFWB by visiting their website at www.sfwb.org.

Source Water Protection Tips:

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- Pick-up after your pets.
- If you have a septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly.
- Volunteer in your community.

Protecting Our Drinking Water Source

The Clackamas River watershed begins on the slopes of Olallie Butte near Mount Hood, and flows nearly 83 miles from its headwaters (elevation 6,000 feet) to its confluence with the Willamette River near Clackamette Park (elevation 12 feet); it encompasses 940 square miles.

Unlike the City of Portland's Bull Run watershed, the Clackamas River watershed is completely unprotected. The watershed crosses two counties and includes federal, state and private lands. It is 72% publicly owned, 25% privately owned and 3% tribally owned.

An updated Source Water Assessment was completed in 2019. The delineated drinking water protection area is occupied by a wide variety of land uses: residential/municipal, agricultural/forest, and commercial/industrial. The updated Source Water Assessment identified over 3,000 potential sources of pollution for the lower Clackamas River intakes. Many of these potential sources of pollution pose a moderate to high risk to the drinking water. To learn about contamination risks to our drinking water source go to the updated Source Water Assessment Report (May 2019) at: https://www.orcity.org/publicworks/source-water-assessment-report

In 2010, the Clackamas River Water Providers (CRWP) completed a Drinking Water Protection Plan for the Clackamas River. The purpose of this plan is to provide a road map of potential strategies and programs to implement over the next decade, and beyond, to preserve the Clackamas River as a high quality drinking water source. You can read the plan and learn more about the CRWP by going to: www.clackamasproviders.org.

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 that may be present in source water include:

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

In order to ensure that tap water is safe to drink, 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 (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Important MESSAGE FROM The EPA

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 **1.800.426.4791**.

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 at **1.800.426.4791**.

LEAD & Drinking 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. South Fork Water Board and Oregon City 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.

The main source of lead in drinking water is typically from household plumbing. This is usually lead solder that was used in homes built or plumbed with copper pipes before 1985. Lead was banned for use in household plumbing construction in 1985. Lead can also be found in brass plumbing fixtures and components. Oregon City has no known lead water service lines in the distribution system. The water treatment plant increases the pH of the water, making it less likely to deteriorate piping materials and plumbing fixtures. Oregon City is in compliance with all state and federal standards for both lead and copper.

Reduce YOUR EXPOSURE to Lead

- **Run the cold water faucet to flush out lead.** If water has not been used for several hours, run the cold water for 30 seconds to 2 minutes, or until it becomes cold or reaches a steady temperature, before using it for drinking or cooking.
- **Use only cold water for cooking, drinking, and preparing baby formula.** Do not use hot water from the tap to cook, drink, or make baby formula. Lead dissolves more easily into hot water.
- **Do not boil water to remove lead.** Boiling water will not reduce lead levels.
- **Consider using a filter.** Confirm the filter is approved to reduce lead. Always maintain and replace a filter device in accordance with the manufacturer's instructions to protect water quality. Contact NSF International at **1.800.673.8010** or www.nsf.org for information on performance standards for water filters.
- **Consider buying low-lead fixtures.** As of January 4, 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. Visit www.nsf.org to learn more about lead content in plumbing fixtures.
- **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.

For more information visit http://www.drinktap.org/water-info/whats-in-my-water/lead-in-water.aspx.

Lead Service Line Inventory

In December 2021, the EPA published the revised Lead and Copper Rule including a requirement for water suppliers to create an inventory of all service line pipe materials in the City's service area. The City of Oregon City has over 13,000 water services in our distribution system. The City is asking the community to help comply with the new rule by identifying and reporting their service line material. Together we can comply with the new rule and provide an accurate service line inventory. Learn how to check your home's pipe material and fill out the online form here: https://www.orcity.org/publicworks/lead-drinking-water.

Frequently Asked Questions About Drinking Water

I can taste and smell chlorine in the water. Why?
You may be sensitive to the taste and smell of the disinfectant. The chlorine residual varies throughout the distribution system, but it generally measures around 1 part per million (ppm). This is well below the maximum residual disinfectant level, of 4 ppm set by EPA.

Here are some suggestions for minimizing the taste and odor of chlorine:

- Fill a glass container with water and set it aside. Within an hour the chlorine will evaporate. Then cover the container and store it in the refrigerator.
- Mix the water in a blender. This will speed up the dissipation of the chlorine residual.
- Use a filter designed to remove chlorine.

Remember that if you plan to store drinking water after the chlorine residual has been removed, treat the water as you would a perishable food. Store it in clean, airtight containers and refrigerate.

Is there fluoride in Oregon City's drinking water?
No fluoride is added to Oregon City's drinking water. Naturally-occurring fluoride in the Clackamas River is generally less than 0.20 ppm (the detection limit for fluoride analysis). Check with your dentist to see if supplemental fluoride is recommended for your family.

Why does the water have an "earthy, musty" smell and/or taste in late summer? In late summer or early fall we can experience taste and odor issues in our drinking water. Often the odor is more obvious when one is in the shower or washing dishes. Heating the water also seems to increase the odor. These taste and odor changes are typically due to increased algae in the river. Although unpleasant, there is no indication that these taste and odor issues are a health hazard. Chilling the water before drinking can improve the taste. Generally, these events are short-lived and disappear with cooler temperatures and autumn rain.

Sometimes the water coming out of the faucet looks dirty. Why? If your home or business has galvanized pipes, they can give water a reddish-brown or yellow appearance. It is most noticeable if the water has been sitting in the pipes for an extended period of time. Iron is the cause of this color. Discolored water rarely causes health problems. Turning on all your cold water faucets and letting them run for a few minutes usually clears the discoloration. Occasionally water system maintenance or firefighting activities can result in customers receiving discolored water. Again, flushing the plumbing in your home is the best way to get the water to clear up.

Find more questions and answers at:
www.orcity.org/publicworks/drinking-water-faqs

Monitoring for Contaminants

Our most recent test results can be seen in the data table on Page 5 of this report. This table includes data collected by Oregon City and South Fork Water Board. We are required to report only those substances that were present at detectable levels. We are allowed to monitor some contaminants less than once per year; therefore, some of the data may be more than one year old.

You may view all monitoring results and compliance records by visiting the Oregon Health Authority Data Online website at https://yourwater.oregon.gov/.

Search by water system name or ID number:
Oregon City – OR4101511
South Fork Water Board – OR4100591

2022 Monitoring Data

Substance/Contaminant (Unit of Measure)	MCL (MRDL)	MCLG (MRDLG)	Oregon City Measurement or Average (Range)	Major Sources in Drinking Water	Violation?
DISINFECTANT RESIDUAL, DISINFECTION BY-PRODUCTS, AND BY-PRODUCT PRECURSORS					
Chlorine (ppm)	(4)	(4)	0.97 (0.29 - 1.69)	Water additive used to control microbes	No
Haloacetic Acids (ppb)	60	N/A	40.7[1] (30.0 - 52.7)	By-product of disinfection with chlorine, combined with organic matter	No
Total Trihalomethanes (ppb)	80	N/A	55.1[1] (35.3 - 61.5)		
Total Organic Carbon *Raw Water* (ppm)	TT	-	1.06 (0.59 - 2.66)	Naturally present in the environment	No
Total Organic Carbon *Finish Water* (ppm)	TT	-	0.14 (ND - 0.99)	Total Organic Carbon has no health effects; however, it provides a medium for the formation of disinfection by-products	No
Turbidity (NTU)	Less than or equal to 0.3 in 95% of samples		0.17 (Highest) 100% of samples met Turbidity standards	Soil runoff - Turbidity is a measure of cloudiness caused by suspended particles in the water. Turbidity is monitored every 4 hours during treatment plant operation.	No
MICROBIOLOGICAL CONTAMINANTS					
Total Coliform Bacteria (presence/absence)	***	0	0	Naturally present in the environment	No
E. coli (presence/absence)	***	0	0	Human and animal fecal waste	No
METALS & INORGANIC CONTAMINANTS					
Barium (ppm)	2	2	0.00269	Erosion of natural deposits; Discharge from drilling waste/metal refineries	No
Nitrate (ppm)	10	10	0.124	Run-off from fertilizer use; Septic leaching; Sewage; Erosion of natural deposits	No
Fluoride (ppm)	4	4	ND	Erosion; Discharge fertilizer/aluminum factories	No
Lead (ppb) (Tier 1 homes)	AL = 15	0	90th% = ND	Corrosion of Household plumbing; Erosion of natural deposits	No
Copper (ppm) (Tier 1 homes)	AL = 1.3	1.3	90th% = ND	Lead and Copper samples are collected every 3 years - These most recent results are from 2021. Next sampling is in 2024.	No
SECONDARY STANDARDS					
Chloride (ppm)	250	-	10	Secondary standards are non-enforceable guidelines regarding contaminants that may cause cosmetic and/or aesthetic effects such as taste, odor, or color. EPA recommends secondary standards, but does not require water systems to comply.	-
Sulfate (ppm)	250	-	4.6		
Hardness (ppm) [2]	250	-	32		
Total Dissolved Solids (ppm)	500	-	75		
UNREGULATED CONTAMINANTS					
Sodium (ppm)	-	-	13.4	Erosion of natural deposits	-
Alkalinity (ppm)	-	-	25.6 (20.0 - 32.6)	Alkalinity is a measure of water's ability to neutralize acids. There are no health concerns with alkalinity.	-

[1] **Highest Locational Running Annual Average** is the highest calculated annual average at a single location. Oregon City samples for disinfection by-products quarterly, at 4 locations.

*** **Total coliform/E. coli** - No more than 5% total coliform positive in a month. Every total coliform positive sample must be analyzed for E. coli. If any routine or repeat samples are E. coli positive, the system has an acute MCL violation.

[2] **Hardness.** 10-50 ppm is considered soft water.

Cross Connection/ Backflow Prevention Program

Oregon City water customers play a big role in helping to keep our drinking water safe by complying with the Cross Connection/Backflow Prevention Program. Most modern water-using fixtures and appliances such as sinks, toilets, and clothes washers have built-in backflow prevention features. However, sometimes installation of a separate backflow prevention assembly is required to comply with plumbing code and to protect against a potential backflow incident. If your home has a landscape irrigation system, fire sprinkler system, or boiler you will most likely have a backflow assembly. Backflow assemblies must be tested annually to ensure they are working properly and providing adequate protection for your drinking water. Over time, the internal parts can wear out or get clogged with dirt and debris causing the assembly to fail. A failing backflow assembly will not protect your drinking water properly and could put you and your family at risk. Find a list of state-certified backflow assembly testers, and much more information at : https://www.orcity.org/publicworks/cross-connection-backflow-prevention-program

Henrici Reservoir Upgrade

Oregon City's Henrici Reservoir is currently undergoing some much-needed improvements! The Henrici Reservoir is a 2-million-gallon water storage tank located just outside the city limits on Henrici Road. The reservoir was installed in 1992 and has not had any rehabilitative maintenance since it was built and placed into service.

The planned improvements include, replacement of the interior and exterior protective coatings, safety upgrades to the ladder and roof system, tank vent replacement, an interior water mixing system, seismic upgrades to the tank's structure, and a new tank wall penetration for a future transmission main. In order to complete these key improvements, the reservoir must be drained and taken offline; therefore, the work must be completed during our low-water use season. Due to material supply issues and the extent of the improvements, the work will take two seasons to complete.

The first phase of work was started in October 2022 and will continue through May 2023. The reservoir will be brought back online for the 2023 summer season and then drained again in the fall to complete the work. All work is anticipated to be completed by spring 2024.

Definitions

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

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.

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.*

N/D: *Not Detected.* The results were below the laboratory reporting limit.

NTU: *Nephelometric Turbidity Unit.* A measurement of the water turbidity. Turbidity greater than 5 NTU is noticeable to the average person.

ppb: *Parts per billion.* A measure of the concentration of a substance in a given volume of water. One part per billion corresponds to one penny in $10,000,000.

ppm: *Parts per million.* A measure of the concentration of a substance in a given volume of water. One part per million corresponds to one penny in $10,000.

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

90th Percentile: The highest result found in 90% of the samples when listed in order from the lowest to the highest results.

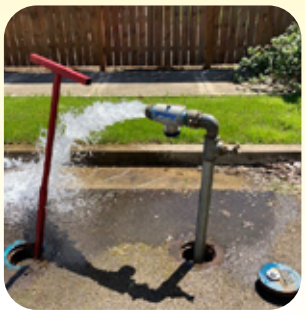
2022 System Improvement Projects

Project Name **2022 Ductile Iron Pipe (Length in Feet)**

Pipe Diameter	4”	6”	8”	12”	
Advantis/Meyers Road			33.5		
4th Street		240			
Gain Street			160		
6th Street		187			
Lincoln Street & 9th Street	220				
Willamette Falls Hospital			462		
Clairmont Area	75	30	3088		
Timberview			1840	1480	
Beavercreek North Campus			1328		
Totals	295	457	6,911	1480	

Total New Pipe (Length in Feet) = 9,143

Replacement of aging components in the drinking water distribution system is necessary to maintain good water quality and system reliability.



Stormwater MANAGEMENT

Oregon City’s National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit became effective October 1, 2021. Oregon City is one of 12 co-permittees that comprise the Clackamas County Group. The permit issued by Oregon Department of Environmental Quality (DEQ) lists numerous programs and tasks required of the city as we work to prevent storm-water pollution and improve stream and river health.

Learn more about our ongoing stormwater programs and read our annual reports, submitted to DEQ each year, by going here: http://www.orcity.org/publicworks/npdes-documents-page

WATER MAIN Flushing Program

Clean, safe drinking water and plentiful water for fire suppression are important to our community. The city Water Division has implemented a water main flushing program to provide these important benefits:

Clean, Safe Drinking Water - Forcing water to move through water mains and out of fire hydrants and blow-offs helps remove rust and other organic sediments that can collect over time in the water system. It also helps ensure high water quality and acceptable chlorine residual throughout the distribution system.

Fire Protection - Flowing each fire hydrant during flushing allows staff to spot potential problems with hydrant operation. Repairs can be made to ensure all hydrants will be available if needed.

Water System Reliability - While flushing, staff can find and repair malfunctioning valves or other water system issues before they become major problems.

Oregon City
Public Works
13895 Fir St.
Oregon City, OR
97045-8906

2023 Oregon City water QUALITY REPORT

Join Us

You are encouraged to participate in City decisions that may affect water quality. City Commission meetings are held at Libke Public Safety Facility, 1234 Linn Ave, the first and third Wednesday of each month, starting at 7:00 pm. Find meeting agenda information or watch archived videos of public meetings at www.orcity.org.

Resources

Este informe contiene información importante acera de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

В этом сообщении содержится важная информация о воде, которую вы пьёте. Попросите кого-нибудь перевести для вас это сообщение или поговорите с человеком, который понимает его содержание.

City of Oregon City: *www.orcity.org*
City Hall (625 Center Street): **503.657.0891**
Public Works Operations (13895 Fir St.): **971.204.4600**
Questions about your utility bill: **503.657.8151**
To report a water leak: **971.204.4600**
OC Request!: *https://www.orcity.org/community/my-oregon-city-my-oc-faqs-and-requests*
South Fork Water Board: *www.sfwb.org*
Clackamas River Water Providers: **503.723.3511**, *www.clackamasproviders.org*
Oregon Health Authority, Drinking Water Program: *http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/Pages/index.aspx*
Oregon Department of Environmental Quality: *www.oregon.gov/DEQ*
Environmental Protection Agency: *www.epa.gov*
EPA Safe Drinking Water Hotline: **1.800.426.4791**
Greater Oregon City Watershed Council: **503.427.0439**, *www.gocwc.org/*
Clackamas River Basin Council: **503.303.4372**, *www.clackamasriver.org*
Clackamas Soil and Water Conservation District: *www.conservationdistrict.org*
Metro: *www.oregonmetro.gov*
OSU Extension Service: *www.extension.oregonstate.edu*
Regional Water Providers Consortium: *www.regionalh2o.org*

Drinking water questions or concerns: Kevin Hanks - **971.204.4662**, *khanks@orcity.org*
Stormwater questions or concerns: Eric Hand - **971.204.4661**, *ehand@orcity.org*