

# ANNUAL WATER QUALITY REPORT

Reporting Year 2022

*Presented By*

**OAK LODGE**  
WATER SERVICES

## Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2022. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Please remember that we are always available should you ever have any questions or concerns about your water.

### Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 two 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 at (800) 426-4791 or online at: [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

### Important Health Information

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, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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 or <http://water.epa.gov/drink/hotline>.

### Where Does My Water Come From?

Oak Lodge Water Services (OLWS) withdraws water from Clackamas River, an extremely high-quality raw water source. The Clackamas River watershed covers almost 1,000 square miles, mostly located in Clackamas County. Timothy and Ollalie Lakes make up the headwaters of the Clackamas River, and many tributary streams contribute to its flow.

Water is occasionally received from the South Fork Water Board and Clackamas River Water. Both treatment plants also draw water from the Clackamas River. The South Fork Water Board and Clackamas River Water plants are primarily used as a backup supply.

Approximately 100 miles of water mains make up the distribution system that carries water to OLWS customers. OLWS has four reservoirs with a combined storage of 15.6 million gallons.

### How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up with the tap water the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

### Community Participation

You're invited to participate in our public forum and voice your concerns about your drinking water. The Board of Directors hold regular public meetings on the third Tuesday of each month at 6:00 p.m. You're welcome to attend through Zoom or in person at 14496 SE River Road, Oak Grove. Visit [OakLodgeWaterServices.org](http://OakLodgeWaterServices.org) or call (503) 654-7765 for more information.

**QUESTIONS?** For more information about this report, or for any questions relating to your drinking water, please call Marty Guenther, Pollution Prevention Specialist, at (503) 753-9689.

## How Is My Water Treated and Purified?

Drinking water for OLWS is produced by three treatment techniques: slow sand filtration, membrane filtration, and conventional filtration. The Allen F. Herr Water Treatment Facility began production in August 1999. OLWS, Sunrise Water Authority, and the City of Gladstone - known as the North Clackamas County Water Commission (NCCWC) - jointly own the slow sand and membrane filtration systems.

NCCWC began using slow sand filtration in August 1999 and added membrane filtration processes in 2005. Membrane filtration is a state-of-the-art treatment technique that filters water through a series of small tubes with openings 1 micron in size. This ultrafiltered water allows for a continuous supply even when raw water turbidities rise in the winter months.

The slow sand filtration process operates as follows: Untreated water is pumped onto four half-acre beds. As the water is passed down through the filter media, the top six inches of sand at the surface provides an area where pathogenic organisms are trapped or ingested by nonpathogenic organisms. This treatment zone, known as the zoogeal mass, filters out particles and helps break down organic matter. Chlorine is added to the filtered water as a follow-up treatment measure to disinfect any pathogenic organisms that may have passed through the filter media. An adequate amount of chlorine is added to provide a detectable residual throughout the distribution system.

Membrane filtration processes operate as follows: Raw water flows from the river into a cell where the filters are submerged. Each filter cell has 288 membrane modules, and each module has 9,500 individual hollow fibers. The flow is drawn into the membrane fibers through the walls by vacuum. After the membranes have filtered a predetermined flow, the water goes through a backwash procedure for cleaning. The backwash procedure is a process where water and air are used to scour the particles that have accumulated on the fibers. This water is then chlorinated and combined, at most times, with the water from the slow sand filters.

The water from South Fork Water Board is treated in the following conventional fashion: Raw water is pumped to a basin where alum and polymer are added as coagulants. The water then enters hydraulic flocculators and goes to a sedimentation basin where the floc settles. At this point, the relatively clear water is collected and sent to rapid filters. The filtered water is then chlorinated and provided to NCCWC on an as-needed basis.

Clackamas River Water uses conventional water treatment and serves as a backup supply to NCCWC. Clackamas River Water is treated using the following process: (1) Filtration removes a wide range of contaminants, such as particles and microorganisms; (2) disinfection with chlorine adds the smallest amount of chlorine that will maintain disinfection to the farthest reaches of the distribution system; (3) corrosion control adjusts the final chemistry of the water to minimize corrosion in home plumbing that could lead to lead exposure. This is accomplished by slightly adjusting pH, alkalinity, or both.

## Water Conservation Tips

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.

Turn off the tap when brushing your teeth.

Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.

Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.

Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

## Source Water Assessment

A Source Water Assessment Plan (SWAP) is now available at our office and on our website. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply's susceptibility to contamination by the identified potential sources. In the SWAP, potential contaminants to our water system were identified and ranked by risks, which range from low to high depending on the category.

## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Barium</b> (ppm)	2021	2	2	0.0053200	NA	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
<b>Chlorine</b> (ppm)	2022	[4]	[4]	1.67	0.06–1.67	No	Water additive used to control microbes
<b>Fecal Coliform and <i>E. coli</i></b> (# positive samples)	2022	TT <sup>1</sup>	0	0	NA	No	Human and animal fecal waste
<b>Nitrate [as nitrogen]</b> (ppm)	2022	10	10	0.3970000	NA	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Total Coliform Bacteria</b> (positive samples)	2022	TT	NA	0	NA	No	Naturally present in the environment
<b>TTHMs [total trihalomethanes]–Stage 1</b> (ppb)	2022	80	NA	61	23–61	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
<b>Copper</b> (ppm)	2020	1.3	1.3	0.05	0/66	No	Corrosion of household plumbing systems; erosion of natural deposits
<b>Lead</b> (ppb)	2020	15	0	4	0/66	No	Lead service lines; corrosion of household plumbing systems, including fittings and fixtures; erosion of natural deposits

### SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Chloride</b> (ppm)	2022	250	NA	ND	NA	No	Runoff/leaching from natural deposits

### UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
<b>HAA5</b> (ppb)	2022	43	16–43	NA
<b>Sodium</b> (ppm)	03/04/2021	5.2000000	NA	NA

<sup>1</sup> A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or *E. coli* positive.

## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## Definitions

**90th %ile:** The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

**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.

**NA:** Not applicable.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**SMCL (Secondary Maximum Contaminant Level):** These standards are developed to protect aesthetic qualities of drinking water and are not health based.

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