

# WATER QUALITY REPORT

CONSUMER CONFIDENCE REPORT 2024



## A Message to Milwaukee Water Customers



### CITY COUNCIL

Mayor Lisa Batey  
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Adam Khosroabadi  
Rebecca Stavenjord  
Robert Massey

Dear Milwaukee Water Customers,

The City of Milwaukee is pleased to provide you with this water quality report. In 2023, Milwaukee supplied about 775 million gallons of clean drinking water to more than 21,000 people. This report is a summary of 2023 test results and reflects the City's continuous commitment to providing you with reliable, safe, high-quality drinking water.

Milwaukee's water comes from the Troutdale aquifer. Our water undergoes rigorous testing, as required by state and federal laws. In 2023, your water met, and in many cases exceeded all state and federal requirements.

Milwaukee has six active wells, three storage tanks, two pump stations, hundreds of miles of pipes and more than 7500 service connections. Managing these assets means taking good care of what we have and keeping up with demands of growth. Milwaukee does this by repairing system leaks, installing new pipelines, and connecting our sources with new transmission lines.

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# Where Does Milwaukie Water Come From?

Milwaukie's water comes from groundwater in the Troutdale Gravel Aquifer located over 200 feet below ground, not from surface water from local rivers or streams. The Troutdale Aquifer encompasses about 300 square miles and extends from northern Clark County in Washington State to south of Milwaukie and from East of Troutdale to the Willamette River, providing water for communities on both the North and South side of the Columbia River. The land mass above the aquifer and the Columbia River's prehistoric paleo-channel (old-channel) serves to maintain water levels within the aquifer. In Milwaukie, the groundwater flows primarily from the northeast to southwest.

The City of Milwaukie reaches this source of water through six operating wells that range from 250 to nearly 500 feet deep.

## Reporting Violations

City of Milwaukie failed to submit the water quality report certification to OHA on time which led to 1 reporting violation. The certification was submitted on July 12, 2023, and Milwaukie was returned to compliance.

This violation did not have any adverse health effects to the public. The City of Milwaukie failed to submit a source sample in a timely manner in October 2023. The sample has been submitted and, Milwaukie has returned to compliance.

## Source Water Assessment

In 2004, a drinking water source assessment was conducted by Oregon DEQ and Oregon Health Division Drinking Water Program with assistance from Milwaukie staff. The assessment report indicates that the water system would be moderately to highly susceptible to a contamination event inside the drinking water protection area. The drinking water protection area is defined in the Source Water Assessment Report based on the distance water migrates toward a well over a specified amount of time.

The presence of several high and moderate risk potential contaminant sources within the protection area was confirmed through a potential contaminant source inventory. Under a "worst case" scenario, where it is assumed that nothing is being done to protect groundwater quality at the identified potential contaminant sources, the assessment results indicate that the water system would be highly susceptible to several of the identified potential contaminant sources.

Emergency water connections with Clackamas River Water District (CRWD) and the Portland Water Bureau, as well as a possible future connection with Oak Lodge Water Services, are capable of supplying the water Milwaukie may need in an emergency situation. These interties allow the city's water system to assist other water systems when they need water in times of emergency or high-level maintenance. Milwaukie's water system currently isn't using water from the interties. The only time Milwaukie would use City of Portland or CRWD water is during an emergency or for project needs.

For more information about Milwaukie's drinking water, visit [www.milwaukieoregon.gov/water](http://www.milwaukieoregon.gov/water).

## How Milwaukie Keeps Our Water Safe?

The City of Milwaukie works hard to protect our groundwater resources and the water distribution system. Milwaukie works closely with Oregon DEQ and US EPA to monitor and cleanup past contaminated sites and to properly evaluate and render safe any newly discovered sites. Contaminated sites include former gas stations, dry cleaners, industrial and residential properties with contaminants ranging from naphthalene, heating oil and industrial solvents. Oregon DEQ maintains a complete listing of these sites that can be viewed at Oregon DEQ: <http://www.oregon.gov/deq/Hazards-and-Cleanup/env-cleanup/Pages/ecsi.aspx>.

In addition, the city's stormwater, erosion control, and cross-connection programs continuously work together keeping our groundwater, surface water, and drinking water safe.



In 2010, the drinking water protection area around Well #4 was reevaluated and the area was expanded slightly to the north and west. Oregon DEQ is currently working to update source assessments and the city will publish any changes to the assessment when it is complete. In addition, the assessment results indicate that Milwaukie's water system is currently considered susceptible to viral contamination. Viral contamination is typically caused by failed septic systems.

A copy of the source assessment can be viewed or obtained for no charge at the Public Works and Community Development Facility, located at 6101 SE Johnson Creek Blvd.

## Everyone Can Help Protect Our Groundwater

You are in control of what chemicals are used in your yard and what falls onto your driveway. Limit your chemical use of cleaners that are harmful to the environment. Clean up any oil or gas spills in your driveway, do not wash them into the street. Do not store fertilizers, pesticides, or herbicides outdoors. These chemicals should be stored in a weatherproof shed equipped with a floor. Properly discard old or unused chemicals including cleaners, solvents, paints, and lubricants through the local METRO Hazardous waste program. For more information go to [www.oregonmetro.gov](http://www.oregonmetro.gov).

Do you have a septic system? If so, please contact the City of Milwaukie Engineering staff at **503-786-7600** and ask for information on connecting to sewer. Old septic systems are the leading cause of high nitrate levels that lead to viral contamination of the drinking water aquifer.

## Lead in Drinking Water

Household plumbing is the main source of lead in drinking water. This is usually from lead solder used in homes built or plumbed with copper pipes before 1985. Lead can also be found in brass plumbing fixtures and components. Lead can enter drinking water from water service lines, pipes in the home and other plumbing fixtures, or solder that contain lead corrode. 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.

Water served by Milwaukie is tested regularly to ensure every drop meets all federal and state safe drinking water standards, including those for lead and copper. On a required schedule set by the OHA, Milwaukie tests for lead and copper directly at customers' taps, instead of in the water distribution system. Testing ensures water consumed by customers meet safe drinking water standards. Lead and copper testing last occurred in 2022 and levels were not detected at or above the action level – 15 parts per billion (ppb) for lead, 1,300 ppb for copper – in either source water or private households. Results from past testing for the Milwaukie's water system are available on the State's website at [YourWater.oregon.gov](http://YourWater.oregon.gov).

In 2022, we tested for lead and copper in numerous homes across Milwaukie, the city did not have samples that exceeded the action level.

As part of the U.S. EPA's new Lead and Copper Rule Revisions, Milwaukie is developing an online database – which will be available to the public by October 2024– with information on the materials that make up water service lines in Milwaukie. Water service lines– or the pipes responsible for carrying water from the underground water main in the street to the plumbing in homes and businesses – are jointly owned by Milwaukie and the customer. Service lines can be made of different materials, including plastic, galvanized steel, copper, or lead. Milwaukie is using a combination of property records, asset data, water quality tests, and visual inspections of service lines to determine most customer's service line materials do not have lead components. Milwaukie will continue to identify the material of service lines in the service area through methods approved by the U.S. EPA and OHA. If a customer's service line is confirmed to have lead components, Milwaukie will work on a replacement plan with the customer.



## Lead and Copper

Revisions to the Lead/Copper Rule Revisions by the EPA (Environmental Protection Agency) require the city to inventory all public and private service lines for material types. The goal is to identify, locate and replace all lead service lines. Service lines are the connection from the water main to the building that supplies potable water. An inventory is due to the EPA by mid-October 2024. The city has hired a consultant to compile all of the information and make sure the city will be in compliance. We will be sharing more information on the inventory as it is available.

## Minimizing Lead Exposure

Milwaukie provides high quality, lead-free drinking water, but cannot control the variety of materials used in customer's plumbing components. Customers can reduce the risk of lead exposure by:

- Flushing taps for thirty seconds to two minutes before using water for drinking or cooking.
- Using cold filtered water for drinking, cooking, and preparing infant formula.
- Cleaning faucet's screen or aerator on a regular basis.

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 <http://www.epa.gov/safewater/lead>.



# By the Numbers: Milwaukie Water Quality Data

The table below shows the results of the city's most recent water quality analyses. Staff examine Milwaukie's water at each of the city's wells and entry points, which are points where treated water enters the drinking water system. The city doesn't test for every contaminant each year. Some pose greater risks than others and are, therefore, tested more frequently. Others are less harmful and tested for sporadically. Each regulated contaminant, no matter how small the trace, is listed in this table. The name of each substance, highest level allowed by regulation, ideal goal for public health, amount detected and usual sources for contamination are presented in this data table.

REGULATED SUBSTANCES							
Contaminant	Year Sampled	Highest Level Allowed (MCL)	Ideal Goal (EPA MCLG)	Highest Result	Range of Test Results	Violation	Typical Source
Chlorine (ppm)	2023	4	4	0.30	0.18 - 0.30	No	Disinfection chemical used in drinking water.
Total Trihalomethanes (TTHMs) (ppb)	2023	80	N/A	11.600	2.9 - 11.6	No	By-product of the disinfection process when organic matter is present in the raw water.
Nitrate (ppm)	2023	10	10	2.85	0.146 - 2.85	No	Nitrate is a major part of animal manure, human sewage waste and commercial fertilizers.

BACTERIA IN TAP WATER					
Contaminant	Highest Level Allowed (MCLG)	Ideal Goal (EPA'S MCLG)	Highest Monthly Percentage of Samples with Total Coliform Present	Violation	Typical Source
Total Coliform	5% of Monthly samples are positive	0	5%	No	Naturally present in the environment

LEAD & COPPER							
Substance	Year Sampled	EPA Action Level (AL)	Ideal Goal (EPA MCLG)	90% of the Test Levels Were Less Than	# Tests with Levels Above EPA's Action Level	Violation	Typical Source
Copper (ppm)	2022	90% of homes less than 1.3 ppm	1.3	0	0/31	No	Corrosion of household plumbing systems
Lead (ppb)	2022	90% of homes less than 15 ppb	0	2	0/31	No	Corrosion of household plumbing systems

UNREGULATED SUBSTANCES							
Substances	Year Sampled	Highest Level Allowed (MCL)	Ideal Goal (EPA MCLG)	Highest Result	Range of Test Results	Violation	Typical Sources
Sodium (ppm)	2022	N/A	N/A	7.3	N/A	N/A	Erosion of Natural Deposits

## How to Read the Water Quality Data Table

EPA Establishes the safe drinking water regulations that limit the amount of contaminant allowed in drinking water. The Table shows the concentration of detected substances in comparison to regulatory limits. Substances not detected are not included in the table.	
<b>Maximum Contaminant Level (MCL)</b>	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.
<b>Maximum Contaminant Level Goal (MCLG)</b>	The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
<b>Action Level (AL)</b>	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a system must follow.
<b>Units in the Table</b>	ppm is parts per million, ppb is parts per billion, ppt is parts per trillion.

# Understanding PFAS

On April 10<sup>th</sup>, 2024, the Environmental Protection Agency (EPA) adopted new drinking water rules concerning per- and polyfluoroalkyl substances (PFAS). PFAS are a group of chemicals that have been in production since the 1940s and have been widely used in common items like nonstick cookware and stain-resistant fabrics, as well as in firefighting foams and products. These compounds break down slowly and can therefore persist in the environment. There is evidence that continued exposure to PFAS can cause adverse health effects. new EPA rule establish the maximum contaminant level (MCL) of 4.0 ppt for the most common PFAS chemicals (PFOA and PFOS) and a hazard index-based method for four additional PFAS compounds.

Milwaukie first sampled for PFAS in 2013 as part of the EPA's Unregulated Contaminant Monitoring Rule, which EPA uses to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act (SDWA). In 2013, Milwaukie did not have detections of any PFAS chemicals. Analytical methods have improved considerably since then.

In 2013, the laboratory analysis could detect PFAS chemical concentrations of 0.01 ppb or greater; detection limits are now as low as 0.002 ppb. Moreover, the number of individual chemicals the labs can test for has increased substantially. In other words, more advanced analytical methods are now able to detect a greater variety of chemicals and at incredibly low levels.

In June of 2023, in response to new revelations about PFAS contamination in other parts of the country, Milwaukie sampled water from a monitoring well to determine if PFAS were present. This sample indicated the presence of PFAS in the monitoring well. In January 2024, the city took additional samples and expanded the locations of sampling to additional monitoring wells. These samples also detected the presence of PFAS. These wells were installed to monitor potential sources of contamination from previous industrial activities. In 2021, the State of Oregon established a combined health advisory limit (HAL) for PFOS, PFOA, PFNA, and PFHxS of 30 parts per trillion (ppt).

At the time of sampling, none of the samples taken from the monitoring wells exceeded Oregon Health Authority (OHA) HAL of 30 ppt. The samples do exceed the new lower EPA MCL of 4.0 ppt.

# Ways to Reduce Exposure

The Oregon Health Authority recommends the following:

- Learn about PFAS and steps you can take to reduce your exposure at [epa.gov/pfas/meaningful-and-achievable-steps-you-can-take-to-reduce-your-risk](https://epa.gov/pfas/meaningful-and-achievable-steps-you-can-take-to-reduce-your-risk).
- If you are pregnant, breastfeeding or mixing infant formula with tap water, use an alternative source for drinking or mixing infant formula or install home water treatment that is certified to lower the levels of PFAS in your water.
- Boiling your water will not reduce PFAS levels.
- If you are concerned about potential health effects from exposure to PFAS, please contact your doctor or health care professional.

**For additional information on PFAS or potential ways to reduce PFAS levels at home please refer to the following links.**

[www.milwaukieoregon.gov/publicworks/pfas](https://www.milwaukieoregon.gov/publicworks/pfas)

[https://www.epa.gov/system/files/documents/2024-04/pfas-npdwr\\_fact-sheet\\_general\\_4.9.24v1.pdf](https://www.epa.gov/system/files/documents/2024-04/pfas-npdwr_fact-sheet_general_4.9.24v1.pdf)

<https://www.epa.gov/system/files/documents/2024-04/water-filter-fact-sheet.pdf>

The EPA's fifth Unregulated Contaminant Monitoring Rule requires monitoring for 29 PFAS compounds. Milwaukie took samples for this in February 2024 and detected the presence of results in two of the samples, that slightly exceeded the April 2024 adopted standard. These results are included in this report.

The new rules will require the city to conduct initial monitoring within the first three years after April 2024 at all entry points to the distribution system. This monitoring will be conducted on a quarterly basis during a 12-month period. Compliance with the rule will be based on the annual running average of the sample results.







## PER-AND POLYFLUOROALKYL SUBSTANCES (PFAS) FEBRUARY 2024

Substance	Unit	Oregon Health Advisory Level (HAL)	Adopted New EPA Maximum Contaminant Level (MCL)	Upper Treatment Plant	Lower Treatment Plant	Stanley Well 6
Perfluorooctanoic acid (PFOA)	ppt	30 ppt	4 ppt	None Detected	None Detected	None Detected
Perfluorooctanesulfonic acid (PFOS)	ppt	30 ppt	4 ppt	4.5	6.3	None Detected



PFAS continued...

## City Actions to Protect Water Quality

-  Testing the water supply: Staff will test and monitor water quality in compliance with state and federal requirements to ensure a safe water supply.
-  Evaluating treatment options: Staff will work with water quality engineers to evaluate cost effective treatment options to remove PFAS from the water.
-  Finding long-term solutions: the City is working with consultants to investigate potential sources of PFAS and the extent of PFAS in the local groundwater supply.
-  Planning for the future: Future costs for PFAS treatment are included in the City's long-range capital plan.
-  Reducing costs: The City is pursuing federal and state grants and loans to reduce the impact to ratepayers.
-  Sharing information: Up-to-date information on PFAS and test results are being shared with all customers and the public so you can make informed decisions.



We highly encourage everyone to sign up for our emergency alert system. You can learn more about Clackamas County Emergency Notification System, #ClackCo Public Alerts, at the City of Milwaukie web site at <https://www.milwaukieoregon.gov/police/codered-emergency-notification-system> or sign up directly by going to <https://www.clackamas.us/dm/publicalerts>.

## Potential Health Impacts

Scientists and public agencies are still studying how PFAS affect people's health and health advice is updated as new science becomes available. Some people who drink water containing PFOA or PFOS in excess of healthy levels over many years may experience problems with their cholesterol, liver, thyroid or immune system; have high blood pressure during pregnancy; have babies with lower birthweights; and be at higher risk of getting certain types of cancers.

## Upcoming Water Projects

As drinking water systems age and require more upkeep, Milwaukie Public Works is planning for and completing the necessary improvements to maintain and improve upon a fully functioning drinking water system. The Stanley Reservoir has undergone several very high-level inspections, and some deficiencies were noted. Most prevalent was the exterior coating failure, improvement to the mixing of water in the tank to provide the freshest water possible and seismic resiliency improvements. It is expected that this project will cost \$2.8 million dollars. We expect the contracts to be finalized and work to begin this summer and is expected to be complete by March 2024.

The city is in the process of making major upgrades to its automated control system for the water system. Commonly referred to as SCADA, this system is being replaced in whole with upgrades made to the communications systems, field automation, and cyber security components. This \$2.3 million project began in September 2023, and it is to be completed by June of 2024.

Upcoming projects also include improvements to Milwaukie's two treatment facilities that will include electrical, pumping, heating/cooling and treatment upgrades and if necessary, will include upgrades to treat for PFAS.

Milwaukie's quality of life and economic health depend on clean, safe water. Thank you for the opportunity to serve you and our thriving community.

## View the City Water Sampling Reports Anytime Online

Milwaukie residents are welcome to view all our water sampling results anytime at the State of Oregon Drinking Water Program website. Simply go to <https://yourwater.oregon.gov/namelook.php> and type in Milwaukie. Here you will be able to browse through water sampling results of not only the City of Milwaukie but any other water system in the state of Oregon.

For more information or questions about the reports, contact Jamie Clark, Lead Water Treatment Operator, at **503-786-7622** or [clarkj@milwaukieoregon.gov](mailto:clarkj@milwaukieoregon.gov).



## Cross-Contamination & Backflow Assemblies

Cross-contamination is the leading cause of waterborne disease. Cross-contamination occurs whenever the water contacts anything that is contaminated or objectionable. Wherever this can occur is called a "cross-connection." As the water purveyor, we are mandated by State of Oregon Drinking Water rules (OAR 333-061-0020, 0070 through 0074) to eliminate or control all actual and potential cross-connections.

A cross-connection is any actual or potential connection between drinking water piping and any other substance. Examples of cross-connections include residential irrigation, fire sprinkler systems, commercial beverage dispensers, boilers, and garden hose spray attachments. Most times a backflow assembly can be installed to prevent a cross connection. If you would like to know if your home or commercial building is safe, please call our specialist at **503-786-7637** for a free safety survey.

If you know of any backflow assemblies at your property, please be sure to have them tested annually by a certified tester, it's the law.



## Drinking Water Information from the EPA

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. 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. For example, trace amounts of copper are required for proper organ functioning, but excessive copper can lead to gastrointestinal complications and disease. For more information about contaminants and potential health effects, contact 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 the appropriate ways to reduce the risk of infection by microbiological contaminants are available at [www.epa.gov/safewater](http://www.epa.gov/safewater) or from the EPA's Safe Drinking Water Hotline at **1-800-426-4791**.

Check out the cross-connection related videos such as this one [https://www.youtube.com/watch?v=1GwE\\_nVMD6M](https://www.youtube.com/watch?v=1GwE_nVMD6M) at the Milwaukie website along with others.

The Drinking Water Program (DWP) provides a current public list of OHA-certified Backflow Assembly testers at <https://yourwater.oregon.gov/backflow.php?county=Clackamas>. You can use this list to contact a tester that is currently certified and has indicated availability and appropriately licensed to test assemblies for compensation. Only Oregon OHA-certified Testers can test assemblies in Oregon.

Certified public Backflow Assembly Testers on this list must also obtain licensing through the Oregon Construction Contractors Board (CCB) <https://www.ccb.state.or.us/search/> or Landscape Contractor's Board (LCB) <http://www.oregonlcb.com/contractorsearch.aspx>. DWP does not verify CCB or LCB licensing for individuals on this list of public testers. Customers should always verify the licensing of any contractor they hire by using the above links or by calling the CCB at **503-378-4621** or the LCB at **503-967-6291**.

## We Like to Hear From You!

If you notice any of the following changes, please contact the Water Department at [PublicWorks@milwaukieoregon.gov](mailto:PublicWorks@milwaukieoregon.gov) or **503-786-7615** and let us know.

- Water is pooling or the lawn is unseasonably green near the water meter. There may be a leak for us to repair.
- The water pressure decreases or increases unexpectedly. There may be constriction or leak in your plumbing.
- The water from the faucet has a color to it. There may be debris in the mains to be flushed.
- A fire hydrant is being used and no City of Milwaukie personnel are around. This may be a case of water theft or vandalism, and the Water Department prosecutes offenders.

## Get Involved!

The City of Milwaukie has many ways for citizens to engage with us. Check out our website and city calendar online for information on public engagement opportunities in addition to the meetings below. Many meetings are held virtually or hybrid virtual and in person at City Hall. Meeting schedules and locations are subject to change, see the online calendar for up-to-date information on city meetings and events.

- City Council: Meets 1st and 3rd Tuesdays of every month at 6 pm.



**CITY OF MILWAUKIE**  
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 503.786.7622 • clarkj@milwaukieoregon.gov

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**Water Treatment Operator • Jamie Clark**  
 503.786.7622 or clarkj@milwaukieoregon.gov

**Utility Billing**  
 503.786.7525 or utilitybilling@milwaukieoregon.gov

**Public Works**  
 503.786.7600 or publicworks@milwaukieoregon.gov

**Public Works • 24-Hour Emergency Dispatch**  
 503.786.7500

**City Hall**  
 503.786.7555

**Johnson Creek Watershed Council**  
 503.652.7477 or www.jcwc.org

**North Clackamas Urban Watersheds Council**  
 503.550.9282 or www.ncurbanwatershed.wordpress.com

**Regional Water Providers Consortium**  
 503.823.7528 or www.conserveh2o.org



**CITY OF MILWAUKIE**

### Public Works

**6101 SE Johnson Creek Blvd  
 Milwaukie, OR 97206**

**milwaukieoregon.gov**

**Water Environment Services**  
 503.742.4567 or www.clackamas.us/wes

**Oregon Health Authority • Drinking Water Services**  
 503.731.4010 or www.oregon.gov/oha

**United States Environmental Protection Agency**  
 1.800.426.4791 or www.epa.gov