

2023 Annual Drinking Water Quality Report

The City of Oshkosh (Public Water System ID: 47104574) is pleased to provide you with the Annual Water Quality Report. This report is designed to inform you about the quality of the Oshkosh municipal water supply. Our goal is to provide you with a safe and dependable supply of drinking water every day. We want to help you to understand the continual effort put forth to improve the water treatment process for protection of the citizens and visitors to the City of Oshkosh.



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

Claim ntawv tshaabzu nuav muaj lug tseemceeb heev nyob rua huv kws has txug cov dlej mej haus. Kuas ib tug paab txhais rua koj, los nrug ib tug kws paub lug thaam.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources.



Drinking water standards are regulations the United States Environmental Protection Agency (EPA) sets to control the level of contaminants in the nation's drinking water. These standards are part of the Safe Drinking Water Act's "multiple barrier" approach to drinking water protection and limit the amounts of certain contaminants present in water provided to consumers by public water systems. This approach includes assessing and protecting drinking water sources, protecting wells and collection systems, making sure water is treated by qualified operators, ensuring the integrity of distribution systems, and making information available

to the public regarding the quality of their drinking water. These multiple barriers ensure the tap water in the United States and its territories is safe to drink. Partners in this pursuit include: the EPA, states, tribes, drinking water utilities, communities, and citizens.

All 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 the water poses a health risk. In most cases, the EPA delegates responsibility for implementing drinking water standards to state and tribal regulators. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at (800) 426-4791.

Source Water

Oshkosh receives its water from Lake Winnebago, which is supplied by a five thousand seven hundred (5,700) square mile watershed extending from the Wolf River area northwest of the City and from the Fox River area to the southwest. The Wisconsin Department of Natural Resources (WDNR) has assessed the source of Oshkosh's drinking water and determined it to be of good quality normally, but regularly degraded as a result of various events (such as heavy precipitation and spring thawing). These events cause contaminants to drain into the Wolf and Upper Fox Rivers and enter Lake Winnebago.



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, this includes radioactive material. Traveling water 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; these may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals; these can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides; these may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

- Organic chemical contaminants, including synthetic and volatile organic chemicals; these are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants; these can be naturally occurring or be the result of oil and gas production and mining activities.

Health Information



Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people include individuals with cancer undergoing chemotherapy, those who have undergone organ transplants, those with HIV/AIDS or other immune system disorders, some elderly people, and infants. People who qualify as immuno-compromised can be particularly at risk from infections and should seek advice about drinking water from their health care providers. EPA/CDC

(Center for Disease Control) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the EPA Safe Drinking Water Hotline at (800) 426-4791.

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 Oshkosh Water Utility (Utility) 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 two or three minutes, or until it gets as cold as it will get, before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Please see the following resources for more information on lead in drinking water, testing methods, and steps you can take to minimize lead exposure: the Safe Drinking Water Hotline listed in the previous section, the EPA Lead website at www.epa.gov/safewater/lead, and the DNR's Lead in Drinking Water Brochure featured on the City of Oshkosh's website under Government / Departments / Public Works / Water Utility:

<https://www.oshkoshwi.gov/PublicWorks/Documents/DNRLeadBrochure.pdf>.

Water Filtration Plant



Oshkosh's Water Filtration Plant constructed in 1999

The Water Filtration Plant incorporates the latest technology in drinking water treatment. This includes dual-media filtration, ozonation, and treatment with granular-activated carbon. Filtration removes the suspended solids while ozone breaks down dissolved materials and provides disinfection. The granular-activated carbon removes tastes, odors, and dissolved organics. The addition of chlorine is the final disinfection process completed prior to water leaving the plant. The treatment capacity of the Water Filtration Plant is sixteen (16) million gallons per day with an average daily pumping rate of approximately six (6) million gallons per day. The Utility also has four (4) elevated storage tanks (towers) and a booster station to meet water usage demands and pressure requirements.

Monitoring Water Quality

The drinking water quality is monitored daily at the Water Filtration Plant by our certified drinking-water laboratory to ensure its safety for consumption. The tables in this report reflect the quality of Oshkosh water compared with the State of Wisconsin and EPA standards.

Monitoring of most constituents is required annually; and if no date is indicated, the test was completed in 2023. However, monitoring of some constituents is required once every two (2) or three (3) years and the date in the table will reflect when those water quality samples were taken.



Turbidity Monitoring

Turbidity is a measure of the cloudiness of water. In accordance with Wisconsin Administrative Code **s. NR810.29**, the treated surface water is monitored

for turbidity to confirm the filtered water is less than or equal to 0.3NTU in 95% of all samples, and always less than 1.0NTU. Turbidity is a good indicator of the effectiveness of our filtration system. During the year, all of the turbidity measurements were below 0.1 NTU, with the highest daily measurement of 0.049 NTU. All 2023 samples were within required limits.

Definitions

Term	Definition
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
CCS	Corrosion Control Study.
HA	Health Advisory: An estimate of acceptable drinking water levels for a chemical substance based on health effects information. Health Advisories are determined by EPA.
HAL	Health Advisory Level: A concentration of a contaminant which, if exceeded, poses a health risk and may require a system to post a public notice. Health Advisory Levels are determined by EPA.
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.
NTU	Nephelometric Turbidity Units.
ppm	parts per million, or milligrams per liter (mg/l).
ppb	parts per billion, or micrograms per liter (ug/l).
ppt	parts per trillion, or nanograms per liter.
SMCL	Secondary drinking water standards or Secondary Maximum Contaminant Levels for contaminants that affect taste, odor, or appearance of the drinking water. The SMCLs do not represent health standards.
UCMR5	Unregulated Contaminant Monitoring Rule 5: Required drinking water testing for several PFAS compounds, as well as lithium.

Detected Contaminants

Your water was tested for many contaminants. The following tables list only those contaminants which were detected in your water. Not all tests are required to be performed with the same frequency. If a contaminant was detected last year, it will appear in the tables without a sample date. If the contaminant was not monitored last year, but was detected within the last five (5) years, it will appear in the tables along with the sample date.

The Water Utility recently completed a Corrosion Control Study (CCS) to ensure our corrosion control treatment practices were optimized. The CCS collected water samples from different locations around the City and analyzed them for multiple indicators of corrosion and water quality. All sample results came back within safe ranges for contaminants already included in this document. While the results of this study reinforced the safety of our water, it also highlighted steps that could be taken to improve how we treat our water to control corrosion in the distribution system. We have recently completed treatment upgrades at our facility to maximize our corrosion control practices. This study, and subsequent upgrades, are examples of the many efforts we make to continually improve the quality and safety of the water we provide.

Disinfection Byproducts

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Violation	Typical Source of Contaminant
BROMATE (ppb)		10	10	1	0 - 2	No	By-product of drinking water disinfection
HAA5 (ppb)	D-2	60	60	6	4 - 6	No	By-product of drinking water chlorination
TTHM (ppb)	D-2	80	0	11.6	1.5 - 21.5	No	By-product of drinking water chlorination
HAA5 (ppb)	D-20	60	60	6	5 - 7	No	By-product of drinking water chlorination
TTHM (ppb)	D-20	80	0	12.6	1.5 - 23.1	No	By-product of drinking water chlorination
HAA5 (ppb)	D-26	60	60	5	5 - 5	No	By-product of drinking water chlorination
TTHM (ppb)	D-26	80	0	11.6	1.7 - 18.8	No	By-product of drinking water chlorination
HAA5 (ppb)	D-49	60	60	6	6 - 7	No	By-product of drinking water chlorination
TTHM (ppb)	D-49	80	0	12.8	3.3 - 20.9	No	By-product of drinking water chlorination

Inorganic Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Violation	Typical Source of Contaminant
BARIUM (ppm)	2	2	0.017	0.017	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE (ppm)	4	4	0.6	0.6	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NITRATE (NO3-N) (ppm)	10	10	0.98	0.98	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
NITRITE (NO2-N) (ppm)	1	1	0.049	0.049	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SODIUM (ppm)	n/a	n/a	15.00	15.00	No	n/a

PFAS Contaminants with a Recommended Health Advisory Level

Perfluoroalkyl and polyfluoroalkyl substances (PFAS) are a large group of human-made chemicals that have been used in industry and consumer products worldwide since the 1950's. The following table lists PFAS contaminants which were detected and have a Health Advisory Level (HAL). There were no detections of contaminants that exceed the HAL. The HALs are levels at which concentrations of the contaminant present a health risk and are based on guidance provided by the Wisconsin Department of Health Services.

Contaminant (units)	HAL (PPT)	Level Found	Range
PFBS (ppt)	450,000	0.67	0.67
PFHXS (ppt)	40	0.47	0.47
PFHXA (ppt)	150,000	1.10	1.10
PFOS (ppt)	20	1.00	1.00
PFOA (ppt)	20	0.97	0.97
PFOA AND PFOS TOTAL (ppt)	20	1.97	1.97

Radioactive Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2023)	Violation	Typical Source of Contaminant
COMBINED URANIUM (ug/l)	30	0	1.0	1.0	4/15/2020	No	Erosion of natural deposits

Synthetic Organic Contaminants including Pesticides and Herbicides

Contaminant (units)	MCL	MCLG	Level Found	Range	Violation	Typical Source of Contaminant
ATRAZINE (ppb)	3	3	0.0	0.0 - 0.0	No	Runoff from herbicide used on row crops

Lead and Copper

Contaminant (units)	Action Level	MCL G	90th Percentile Level Found	# of Results	Sample Date (if prior to 2023)	Violation	Typical Source of Contaminant
COPPER (ppm)	AL=1.3	1.3	0.1400	0 of 30 results were above the action level	7/21/2020	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD (ppb)	AL=15	0	11.00	1 of 30 results were above the action level	7/21/2020	No	Corrosion of household plumbing systems; Erosion of natural deposits

Contaminants with a Secondary Maximum Contaminant Level

The following table lists contaminants which were detected and have a Secondary Maximum Contaminant Level (SMCL). There were no detections of contaminants that exceed Secondary Maximum Contaminant Levels. Secondary Maximum Contaminant Levels are levels that do not present health concerns but may pose aesthetic problems such as objectionable taste, odor, or color.

Contaminant (units)	SMCL (ppm)	Level Found	Range	Sample Date (if prior to 2023)	Typical Source of Contaminant
CHLORIDE (ppm)	250	20.00	20.00	8/18/2020	Runoff/leaching from natural deposits, road salt, water softeners
IRON (ppm)	0.3	0.01	0.01	8/18/2020	Runoff/leaching from natural deposits, industrial wastes
SULFATE (ppm)	250	37.00	37.00		Runoff/leaching from natural deposits, industrial wastes

Unregulated Contaminants

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. EPA required us to participate in this monitoring. All contaminants that were being tested for were at such low concentrations that they were not able to be detected using the EPA lab methods.

Monitoring Violations

Description	Contaminant Group	Sample Location	Compliance Period Beginning	Compliance Period Ending
Chem M/R - Reg - No Regular samples	Bromate	81	9/1/2023	10/31/2023

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the compliance period noted in the above table, we did not complete all monitoring or testing for bromate, and therefore cannot be sure of the quality of your drinking water during that time.

What was the cause of the missed monitoring requirements?

All samples were collected and submitted by Water Utility staff to our contracted lab in compliance with the regulations. Due to an error with a subcontracted third-party lab, the samples were not analyzed within the required timeframe, rendering those samples non-compliant. Although the samples were classified as noncompliant, they were still analyzed, and their results were within the acceptable range. The Water Utility was not notified by the lab of the issue in a timely manner, not allowing for a re-sample within the compliance timeframe.

Actions Taken

When notified, Water Utility staff immediately re-sampled and submitted the required samples. The Water Utility also began submitting redundant samples to a second lab for analysis as a back-up until the third-party lab improves their track record for compliance.

Opportunity for Input on Decisions Affecting Your Water Quality

City Common Council meetings are held on the 2nd and 4th Tuesdays each month at 6:00 pm in Room 406 of City Hall at 215 Church Avenue.

If you have any questions about this report or your water please contact the Water Filtration Plant Manager, Brad Rokus at (920) 236-5165.