

2022 Annual Drinking Water Quality Report



The City of Oshkosh 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.

Dlaim 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.

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; this 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. Involved parties include: the EPA, states, tribes, drinking water utilities, communities, and citizens. These multiple barriers ensure that the tap water in the United States and territories is safe to drink. In most cases, EPA delegates responsibility for implementing drinking water standards to states and tribes.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was signed into law on December 16, 1974. The purpose of the law is to ensure water supply systems serving the nation's public meet minimum national standards for the protection of public health.



The SDWA covers all public water systems with piped water for human consumption with at least fifteen (15) service connections or a system that regularly serves at least twenty five (25) individuals. The SDWA directed the EPA to establish national drinking water standards. These standards limit the amount of certain contaminants provided by public water. Food and Drug Administration regulations establish limits for contaminants in bottled water. 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. 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 to the Wolf River area northwest of the City and the Fox River area to the southwest. The Wisconsin Department of Natural Resources (WDNR) has assessed the source of Oshkosh's drinking water. It was determined 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

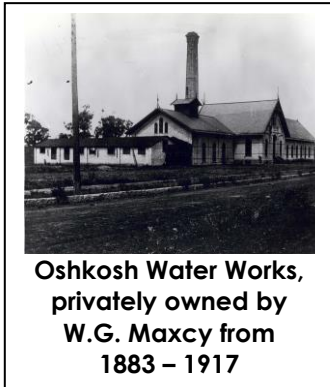


Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people include individuals with cancer undergoing chemotherapy, those who have undergone organ transplants, those with HIV/AIDS or other immune system disorders, some elderly people, and 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 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.ci.oshkosh.wi.us/PublicWorks/Documents/DNRLeadBrochure.pdf>.

Water Filtration Plant



**Oshkosh Water Works,
privately owned by
W.G. Maxcy from
1883 – 1917**

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 table in this report shows 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 2022. 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 0.1 NTU/0.3 NTU. It 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 0.072 NTU. All 2022 samples met the requirements.



**Oshkosh's current
water treatment facility
constructed in 1999**



**The "new" water
filtration plant which
was constructed in
1916**

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 US 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 US 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.

Detected Contaminants

Your water was tested for many contaminants last year. We are allowed to monitor for some contaminants less frequently than once a year. The following tables list only those contaminants which were detected in your water. If a contaminant was detected last year, it will appear in the following tables without a sample date. If the contaminant was not monitored last year, but was detected within the last 5 years, it will appear in the tables below along with the sample date.

There was a Corrosion Control Study (CCS) done to ensure 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. This study was just one of many efforts to continually improve the water we provide.

Disinfection Byproducts

Contaminant (units)	Site	MCL	MCLG	Level Found*	Range in 2022	Violation	Typical Source of Contaminant
HAA5 (ppb)	D-10	60	60	4.7	3.4 - 4.4	No	Byproduct of drinking water chlorination
TTHM (ppb)	D-10	80	0	10.0	1.0 - 1.2	No	Byproduct of drinking water chlorination
HAA5 (ppb)	D-12	60	60	6.0	4.5 - 7.6	No	Byproduct of drinking water chlorination
TTHM (ppb)	D-12	80	0	10.5	1.2 - 1.7	No	Byproduct of drinking water chlorination
HAA5 (ppb)	D-19	60	60	5.5	3.9 - 4.9	No	Byproduct of drinking water chlorination
TTHM (ppb)	D-19	80	0	11.1	1.6 - 1.6	No	Byproduct of drinking water chlorination
HAA5 (ppb)	D-2	60	60	5.4	3.4 - 9.5	No	Byproduct of drinking water chlorination
TTHM (ppb)	D-2	80	0	10.0	1.0 - 21.5	No	Byproduct of drinking water chlorination
HAA5 (ppb)	D-20	60	60	5.4	4.3 - 6.4	No	Byproduct of drinking water chlorination
TTHM (ppb)	D-20	80	0	10.6	1.7 - 21.3	No	Byproduct of drinking water chlorination
HAA5 (ppb)	D-26	60	60	6.0	4.6 - 6.8	No	Byproduct of drinking water chlorination
TTHM (ppb)	D-26	80	0	9.9	1.1 - 20.5	No	Byproduct of drinking water chlorination
HAA5 (ppb)	D-34	60	60	5.6	5.0 - 5.0	No	Byproduct of drinking water chlorination

TTHM (ppb)	D-34	80	0	11.0	1.7 - 2.2	No	Byproduct of drinking water chlorination
HAA5 (ppb)	D-49	60	60	5.9	5.1 – 7.4	No	Byproduct of drinking water chlorination
TTHM (ppb)	D-49	80	0	10.8	1.2 - 21.3	No	Byproduct of drinking water chlorination

* Level Found is determined on a rolling average and therefore may include results from 2021

Inorganic Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2022)	Violation	Typical Source of Contaminant
ARSENIC (ppb)	10	n/a	0	0	4/15/2020	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
BARIUM (ppm)	2	2	0.015	0.015	4/15/2020	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE (ppm)	4	4	0.6	0.6	4/15/2020	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NICKEL (ppb)	100		0.5700	0.5700	4/15/2020	No	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products
NITRATE (NO ₃ -N) (ppm)	10	10	1.10	1.10		No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
NITRITE (NO ₂ -N) (ppm)	1	1	0.041	0.041	4/15/2020	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SODIUM (ppm)	n/a	n/a	14.00	14.00		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 are no violations for 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)	450000	0.38	0.00 - 0.75
PFHXS (ppt)	40	0.27	0.00 - 0.53
PFHXA (ppt)	150000	0.65	0.00 - 1.30
PFNA (ppt)	30	0.17	0.00 - 0.34
PFOS (ppt)	20	1.48	1.40 - 1.55
PFOA (ppt)	20	0.55	0.00 - 1.10

Radioactive Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2022)	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	Sample Date (if prior to 2022)	Violation	Typical Source of Contaminant
ATRAZINE (ppb)	3	3	0.0	0.0 - 0.0	7/16/2020	No	Runoff from herbicide used on row crops

Lead and Copper

Contaminant (units)	Action Level	MCLG	90th Percentile Level Found	# of Results	Sample Date (if prior to 2022)	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 are no violations for 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 2022)	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	53.00	30.00 - 53.00	8/18/2020	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. A maximum contaminant level (MCL) for these substances has not been established by either state or federal regulations, nor has mandatory health effects language.

Contaminant (units)	Level Found	Range	Sample Date (if prior to 2022)	Violation
HAA5 (ppb)	7.28	4.8 - 11.0	4/16/2019 - 1/15/2020	No
HAA6Br (ppb)	1.8	1.0 - 2.9	4/16/2019 - 1/15/2020	No
HAA9 (ppb)	8.8	5.8 - 12.7	4/16/2019 - 1/15/2020	No
Manganese (ppb)	0.9	0.6 - 1.3	4/16/2019 - 1/15/2020	No

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,
or to request a source water assessment summary,
please contact the Water Filtration Plant Manager, Brad Rokus at (920) 236-5165.**

PWS ID: 47104574