2020 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 and we want 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.

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, which 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. With involvement of 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, (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 WDNR recently assessed the source of Oshkosh's drinking water. It was determined to normally be of good quality, 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. To obtain a summary of the source water assessment, please contact Brad Rokus at (920)236-5165.

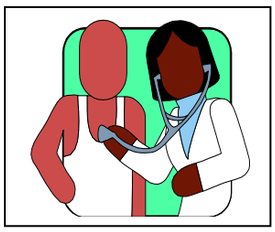
The sources of drinking water, both tap water and bottled water, include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick 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, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which shall provide the same protection for public health.

Health Information



Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as individuals with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people, and infants, can be particularly at risk from infections. These people 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 micro-biological contaminants are available from the EPA Safe Drinking Water Hotline, (800)426-4791.

Lead, if present at elevated levels, 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 private plumbing components. When your drinking water has been sitting for several hours, you can reduce your potential for lead exposure by running your water for two (2) or three (3) minutes, or until it gets as cold as it will get, before you drink it or use it for cooking. The utility also has an ongoing treatment program to reduce potential lead levels in water from private piping and plumbing fixtures.

If you are concerned about lead in your water, you may wish to have your water tested. Information on drinking water testing methods to detect lead and steps you can take to minimize exposure is available from the EPA Safe Drinking Water Hotline, (800)426-4791, the WDNR website at **http://dnr.wi.gov/topic/drinkingwater/lead.html**, and on the City of Oshkosh's website under Government / Departments / Public Works / Water Utility / DNR's Lead in Drinking Water Brochure: **https://www.ci.oshkosh.wi.us/PublicWorks/Documents/DNRLeadBrochure.pdf**.

Health Effects for Any Contaminants with MCL Violations/Action Level Exceedances

Contaminant	Health Effects
LEAD	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

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, including dual media filtration, ozonation, and treatment with granular, activated carbon. Filtration removes the suspended solids. Ozone breaks down dissolved materials and provides disinfection. The granular, activated carbon removes tastes, odors, and dissolved organics. An additional disinfection process, the addition of chlorine, is done prior to water leaving the plant. The treatment capacity of the water filtration plant is 16 million gallons per day with an average daily pumping rate of approximately 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.

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

Monitoring Water Quality

Oshkosh's current water treatment facility constructed in 1999

The drinking water quality is monitored daily at the Water Filtration Plant by our certified drinking-water laboratory to ensure its safety for your 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 2020. 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 **s. NR810.29**, Wisconsin Administrative Code, 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 0.049 NTU. All 2020 samples met the requirements.

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, 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.

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.
Level 1 Assessment	A Level 1 Assessment is a study of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.
Level 2 Assessment	A Level 2 Assessment is a very detailed study of the water system to identify potential problems and determine, if possible, why an E. coli MCL violation has occurred or why total coliform bacteria have been found in our water system, or both, on multiple occasions.
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.
MFL	Million Fibers per Liter.
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.
mrem/year	Millirems per Year (a measure of radiation absorbed by the body).
NTU	Nephelometric Turbidity Units.
pCi/l	Picocuries per Liter (a measure of radioactivity).
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.
ppq	Parts per Quadrillion, or Picograms per Liter.
TCR	Total Coliform Rule.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

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 five (5) years, it will appear in the tables below along with the sample date.

Disinfection By-Products

Contaminant (units)	MCL	MCLG	Level Found	Range	Violation	Typical Source of Contaminant
BROMATE (ppb)	10	10	0	0	No	
HAA5 (ppb)	60	60	9	6 - 10	No	By-product of drinking water chlorination
TTHM (ppb)	80	0	9.4	1.8 - 20.5	No	By-product of drinking water chlorination
HAA5 (ppb)	60	60	8	4 - 11	No	By-product of drinking water chlorination
TTHM (ppb)	80	0	10.2	2.0 - 21.5	No	By-product of drinking water chlorination
HAA5 (ppb)	60	60	8	6 - 10	No	By-product of drinking water chlorination
TTHM (ppb)	80	0	10.6	2.4 - 21.5	No	By-product of drinking water chlorination
HAA5 (ppb)	60	60	7	5 - 8	No	By-product of drinking water chlorination
TTHM (ppb)	80	0	9.2	1.0 - 21.5	No	By-product of drinking water chlorination
HAA5 (ppb)	60	60	9	6 - 10	No	By-product of drinking water chlorination
TTHM (ppb)	80	0	10.5	2.0 - 21.5	No	By-product of drinking water chlorination
HAA5 (ppb)	60	60	8	5 - 10	No	By-product of drinking water chlorination
TTHM (ppb)	80	0	10.0	1.7 - 20.5	No	By-product of drinking water chlorination
HAA5 (ppb)	60	60	8	7 - 10	No	By-product of drinking water chlorination
TTHM (ppb)	80	0	10.6	2.2 - 21.5	No	By-product of drinking water chlorination
HAA5 (ppb)	60	60	9	6 - 10	No	By-product of drinking water chlorination
TTHM (ppb)	80	0	10.3	1.3 - 21.5	No	By-product of drinking water chlorination

Inorganic Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2020)	Violation	Typical Source of Contaminant
ARSENIC (ppb)	10	n/a	0	0		No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
BARIUM (ppm)	2	2	0.015	0.015		No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
CYANIDE (ppb)	200	200	0	1		No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.
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.
NICKEL (ppb)	100		0.5700	0.5700		No	Nickel occurs naturally in soils, groundwater, and surface waters; and is often used in electroplating, stainless steel, and alloy products.
NITRATE (N03-N) (ppm)	10	10	1.0	1.0		No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
NITRITE (N02-N) (ppm)	1	1	0.041	0.041		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

Contaminant (units)	Action Level	MCLG	90th Percentile Level Found	# of Results	Sample Date (if prior to 2020)	Violation	Typical Source of Contaminant
COPPER (ppm)	AL=1.3	1.3	0.1400	0 of 30 results were above the action level.		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.		No	Corrosion of household plumbing systems; Erosion of natural deposits.

Radioactive Contaminants

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

Synthetic Organic Contaminants Including Pesticides and Herbicides

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

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. The EPA required us to participate in this monitoring.

Contaminant (units)	Level Found	Range	Sample Date (if prior to 2020)
SULFATE (ppm)	41.50	30.00-53.00	