

Annual Water Quality Report For 2023

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.

WATER SYSTEM INFORMATION

If you have questions about this report, please call one of our Water Quality professionals at (715) 732-5180.

The Marinette Water Utility is pleased to provide you with the **Annual Water Quality Report for 2023**. We hope this report will help keep you informed about the quality water and services we deliver to you every day. You can expect to receive a similar report prior to June 30th each year. If you have any suggestions as to how we can make these reports more understandable, or if you have any ideas for information you would like to see included, please let us know.

OPPORTUNITY FOR INPUT ON DECISIONS AFFECTING YOUR WATER QUALITY

We want our valued customers to be informed about their water utility, and involved in decisions concerning their water supply. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the third Monday of each month, at 1905 Hall Avenue. Meeting notices and agendas are posted online on the City of Marinette's Website www.marinette.wi.us and in the Marinette/Menominee Eagle Herald. They can also be found at City Hall and the Water Utility Office. Tours of the Wastewater and Water Utilities are available for groups or individuals. Please contact us at (715) 732-5180 to arrange a tour.

HEALTH INFORMATION

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 that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's safe drinking water hotline at (800) 426-4791.

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 systems disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Environmental Protection Agency's safe drinking water hotline (800) 426-4791.

Sources (s) of Water

Source ID	Source	Waterbody Name	Status
1,2,3	Surface Water	Lake Michigan	Active

To obtain a summary of the source water assessment please contact the **Marinette Water Utility at (715) 732-5180**

EDUCATION INFORMATION

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.

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.
HA	Health Advisory: An estimate of acceptable drinking water levels for a chemical substance based on health effects information; a Health Advisory is not a legally enforceable federal standard, but serves as technical guidance to assist federal, state and local officials.
HAL	Health Advisory Level: The concentration of a contaminant which, if exceeded, poses a health risk and may require a system to post a public notice.
LOD	Limit of Detection: As low as the instrument can detect.
LOQ	Limit of Quantitation: As low as the instrument can detect with 100% certainty.
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.
N/A	not applicable
NTU	Nephelometric Turbidity Units
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.
RPHGS	RPHGS: Recommended Public Health Groundwater Standards: Groundwater concentration of a contaminant which if exceeded, poses a health risk and may require a system to post a public notice.
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 (ng/L)

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. Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of “Less-Certain Quantitation”.

Inorganic Contaminants

Contaminant (Units)	MCL	MCLG	Level Found	Range	Sample Date	Violation	Typical Source of Contaminant
Barium (ppm)	2	2	0.016	0.016	2023	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	0.7	0.7	2023	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (NO ₃ -N) (ppm)	10	10	0.22	0.22	2023	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	N/A	N/A	9.10	9.10	2023	No	N/A

Disinfection Byproducts

Contaminant (Units)	Site	MCL	MCLG	Level Found	Range	Sample Date	Violation	Typical Source of Contaminant
HAA5 (ppb)	D-24	60	60	20	16 - 27	2023	No	By-product of drinking water chlorination
TTHM (ppb)	D-24	80	0	54.2	40.6 – 69.5	2023	No	By-product of drinking water chlorination
HAA5 (ppb)	D-64	60	60	24	22 - 28	2023	No	By-product of drinking water chlorination
TTHM(ppb)	D-64	80	0	49.2	32.0 – 62.2	2023	No	By-product of drinking water chlorination
HAA5 (ppb)	D-65	60	60	24	22 – 27	2023	No	By-product of drinking water chlorination
TTHM(ppb)	D-65	80	0	50.2	33.5 – 62.4	2023	No	By-product of drinking water chlorination
HAA5 (ppb)	D-66A	60	60	24	16 – 33	2023	No	By-Product of drinking water chlorination
TTHM (ppb)	D-66A	80	0	41.1	22.3 – 68.0	2023	No	By-Product of drinking water chlorination

Lead

Contaminant (Units)	Action Level	MCLG	90 th Percentile Level Found	# of Results	Sample Date	Violation	Typical Source of Contaminant
Lead (ppb)	AL=15.0	0	0.93	1 of 30 results were above the action level	2023	No	Corrosion of household plumbing systems; Erosion of natural deposits

Copper

Contaminant (Units)	Action Level	MCLG	90 th Percentile Level Found	# of Results	Sample Date	Violation	Typical Source of Contaminant
Copper (ppm)	AL=1.3	1.3	0.4000	0 of 30 results were above the action level	2023	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

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.

Contaminant (Units)	Level Found	Range	Sample Date	Typical Source of Contaminant
HAA5 (ppb)	33.51	23.98 – 43.04	2019 - 2020	By-product of drinking water chlorination
HAA6Br (ppb)	5.68	4.57 – 6.78	2019 - 2020	By-product of drinking water chlorination
HAA9 (ppb)	38.92	30.22 – 47.61	2019 - 2020	By-product of drinking water chlorination
HAA5 (ppb)	23.28	20.04 – 26.51	2019 - 2020	By-product of drinking water chlorination
HAA6Br (ppb)	5.14	4.62 – 5.65	2019 - 2020	By-product of drinking water chlorination
HAA9 (ppb)	28.41	25.69 – 31.13	2019 - 2020	By-product of drinking water chlorination
HAA5 (ppb)	29.95	25.29 – 34.60	2019 - 2020	By-product of drinking water chlorination
HAA6Br (ppb)	4.86	3.8 – 5.92	2019 - 2020	By-product of drinking water chlorination
HAA9 (ppb)	34.61	30.82 – 38.40	2019 - 2020	By-product of drinking water chlorination
HAA5 (ppb)	43.86	34.59 – 53.12	2019 - 2020	By-product of drinking water chlorination
HAA6Br (ppb)	5.66	4.23 – 7.09	2019 - 2020	By-product of drinking water chlorination
HAA9 (ppb)	49.26	41.16 – 57.36	2019 - 2020	By-product of drinking water chlorination
Manganese (ppb)	15.41	6.84 – 23.98	2019 - 2020	Naturally-occurring element; used in steel production, fertilizer, batteries and fireworks

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. The following table list PFAS contaminants which were detected in your water and that have a Recommended Public Health Groundwater Standard (RPHGS) or Health Advisory Level (HAL). There are no violations for detections of contaminants that exceed the RPHGS or HAL. The RPHGS 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.

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of “Less-Certain Quantitation”.

More information and the latest test results of perfluorinated compounds can be found on the City’s website at <https://www.marquette.wi.us/361/PFOA-and-PFOS-Investigation>

Contaminant (Units)	Site	RPHGS or HAL (PPT)	Level Found	Range	Sample Date	Typical Source of Contaminant
Perfluorooctanoic Acid (ppt) (PFOA)	Entry Point	20	[1.23]	[1.10] – [1.40]	2023	<i>Drinking water is one way that people can be exposed to PFAS. In Wisconsin, two-thirds of people use groundwater as their drinking water source. PFAS can get in groundwater from places that make or use PFAS and releases from certain types of waste in landfills.</i>
Perfluorooctane Sulfonic Acid (ppt) (PFOS)	Entry Point	20	[0.89]	[0.59] – [1.10]	2023	<i>Drinking water is one way that people can be exposed to PFAS. In Wisconsin, two-thirds of people use groundwater as their drinking water source. PFAS can get in groundwater from places that make or use PFAS and releases from certain types of waste in landfills.</i>
Perfluoroheptanoic Acid (ppt) (PFHpA)	Entry Point	N/A	[0.85]	[0.68] – [0.94]	2023	<i>Drinking water is one way that people can be exposed to PFAS. In Wisconsin, two-thirds of people use groundwater as their drinking water source. PFAS can get in groundwater from places that make or use PFAS and releases from certain types of waste in landfills.</i>
Perfluorohexanoic Acid (ppt) (PFHxA)	Entry Point	150,000	[1.43]	[1.20] – 1.60	2023	<i>Drinking water is one way that people can be exposed to PFAS. In Wisconsin, two-thirds of people use groundwater as their drinking water source. PFAS can get in groundwater from places that make or use PFAS and releases from certain types of waste in landfills.</i>
Perfluorohexanesulfonic Acid (ppt) (PFHxS)	Entry Point	40	[0.29]	[0.00] – 0.[40]	2023	<i>Drinking water is one way that people can be exposed to PFAS. In Wisconsin, two-thirds of people use groundwater as their drinking water source. PFAS can get in groundwater from places that make or use PFAS and releases from certain types of waste in landfills.</i>

PFAS Contaminants with a Recommended Health Advisory Level (cont.)

Contaminant (Units)	Site	RPHGS or HAL (PPT)	Level Found	Range	Sample Date	Typical Source of Contaminant
Perfluorobutane Sulfonic Acid (PFBS)	Entry Point	N/A	[0.18]	0.00 – [0.39]	2023	<i>Drinking water is one way that people can be exposed to PFAS. In Wisconsin, two-thirds of people use groundwater as their drinking water source. PFAS can get in groundwater from places that make or use PFAS and releases from certain types of waste in landfills.</i>
PFOA and PFOS Total	Entry Point	20	2.12	1.69 – 2.50	2023	<i>Drinking water is one way that people can be exposed to PFAS. In Wisconsin, two-thirds of people use groundwater as their drinking water source. PFAS can get in groundwater from places that make or use PFAS and releases from certain types of waste in landfills.</i>

Radioactive Contaminants

Contaminant (Units)	Site	MCL	MCLG	Level Found	Range	Sample Date	Violation	Typical Source of Contaminant
Radium, (226 +228) (pCi/l)	Entry Point	5	0	0.5	0.5	2020	No	Erosion of natural deposits

Contaminants with a Health Advisory Level or a Secondary Maximum Contaminant Level

The following tables list contaminants which were detected in your water and that have either a Health Advisory Level (HAL) or a Secondary Maximum Contaminant Level (SMCL), or both. There are no violations for detections of contaminants that exceed Health Advisory Levels, Groundwater Standards or 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. Health Advisory Levels are levels at which concentrations of the contaminant present a health risk.

Contaminant (Units)	Site	SMCL	HAL	Level Found	Range	Sample Date	Typical Source of Contaminant
Sulfate (ppm)	Entry Point	250	N/A	18.00	17.00	2023	Runoff/leaching from natural deposits, industrial wastes

Additional Health Information

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. Marinette Waterworks 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 30 seconds to 2 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 or at www.epa.gov/safewater/lead.

Other Compliance

Turbidity Monitoring

In accordance with s. NR 810.29, Wisconsin Administrative Code, the treated surface water is monitored for turbidity to confirm that the filtered water is less than 0.1 NTU. Turbidity is a measure of the cloudiness of water. We monitor for it because it is a good indicator of the effectiveness of our filtration system. During the year, the highest single entry point turbidity measurement was 0.07 NTU.

Monitoring Violations

Description	Contaminant Group	Sample Location	Compliance Period Beginning	Compliance Period Ending
DBP Monitoring/Reporting	DBP	Distribution System	2/8/2024	2/18/2024

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 the contaminants noted, and therefore cannot be sure of the quality of your drinking water during that time.

Staff appropriately collected the sample and sent it to a certified lab for analysis. Unfortunately, the lab had an issue with their equipment and the results could not be reported to the DNR because quality assurance standards were not met. Because the sampling period is only 10 days, there was no time to resample. However, once we were aware of the issue, we voluntarily collected another sample to verify that the DBPs continue to remain below all DNR and EPA standards.

Distribution System Flushing

The Marinette Water Utility is implementing a common and routine utility maintenance procedure called **unidirectional flushing**. It involves opening fire hydrants and closing valves under controlled conditions to improve distribution pipes. The scouring process helps to remove built up mineral products, improves water quality and restore capacity. Customers in the immediate vicinity of flushing may notice temporarily discolored water and lower than normal water pressure. The discoloration does not pose a health risk. However, avoid using tap water or running the washing machine or dishwasher until flushing is complete.

If you experience some discoloration in your water from nearby flushing, run the cold water at one tap for 5 minutes to see if it clears. If it does not clear up, wait an hour and try again. When the water runs clear, flush any taps where discolored water was present. If not clear after one-hour call the Water Utility, **(715) 732 - 5180**. We thank you for your cooperation.