

Charter Township of Marquette

2022 Annual Drinking Water Quality Report



Marquette Township is pleased to present this 2022 annual Water Quality Report summarizing the quality of the drinking water provided to you during the past year. This Consumer Confidence Report (CCR), required by the Safe Drinking Water Act (SDWA), tells you where your tap water comes from, what our tests show about it, and other things you may wish to know about drinking water.

We encourage public interest and participation in our community's decisions affecting drinking water. If you have any questions about this report or your water utility, please contact Leonard Bodenus, Superintendent of Public Works, at 906-228-6220 ext. 106 or lbodenus@marquettetownship.org. If you want to learn more about the water utility, you may attend any of our regularly scheduled Marquette Township Board meetings. They are held on the first and third Wednesday of each month at 5:30 p.m. at the Marquette Township Center, located at 1000 Commerce Drive and are open to the public.

The Bottom Line

During 2022 your drinking water from Marquette Township met or exceeded all quality standards issued by the U.S. Environmental Protection Agency (EPA) and the Michigan Department of Environment, Great Lakes and Energy (EGLE).

Water Sources

The Marquette Township water supply currently receives water from two sources. The source of our surface water supply is Lake Superior, which has provided Marquette area residents with excellent drinking water for over 140 years. This water is treated using a state-of-the-art microfiltration membrane system at the Marquette Water Filtration Plant located on Lakeshore Boulevard at Ridge Street. Treated water is purchased by Marquette Township. The source of our groundwater supply is an aquifer in the Western Creek watershed, south of Grove Street. The wells were developed to more efficiently serve our expanding service area and to provide increased reliability with multiple water sources. Marquette Township owns the property surrounding the wells and has an on-going wellhead protection program. The wells have been in operation for 17 years and they provide Marquette Township residents with excellent drinking water. The water requires no treatment except chlorination and fluoridation. The water from both surface and groundwater sources is delivered to your home or business through a system of pipes, pumps and water reservoirs.

How To Read These Tables

Marquette Township routinely monitors for contaminants in your drinking water according to Federal and State laws. For the most part, the table in this report shows the results of our monitoring for the period of January 1 to December 31, 2022. However, EGLE and the Environmental Protection Agency (EPA) allow us to monitor for some contaminants less than once per year because the concentrations do not change frequently. Some of our data, though representative, may be more than one year old.

The following tables show the results of our water quality tests. Every regulated contaminant we detected in the water, even in the smallest traces, is listed here. The tables contain the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement.

Parts per million (ppm) or Milligrams per liter (mg/l) – one part per million corresponds to one gallon per million gallons, or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (ug/L) – one part per billion corresponds to one gallon per billion gallons, or a single penny in \$10,000,000.

Parts per trillion (ppt) or Nanograms per liter (ng/L) – one part per trillion corresponds to one gallon per trillion gallons, or a single penny in \$10,000,000,000.

Action Level (AL) – the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

Treatment Technique (TT) – A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level (MCL) – The “Maximum Allowed” is 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.

Maximum Contaminant Level Goal (MCLG) - The “Goal” is 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.

Maximum Residual Disinfectant Level Goal (MRDLG) - 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.

ND - Not detected in sample.

Well District - Areas serviced by township well water (west of Commerce Drive and south of US41).

Surface Water District – Areas serviced by water purchased from the City of Marquette. Trowbridge (east of Commerce and north of US41).

Substances Measured In Drinking Water

Disinfectants and Disinfection By-Products

Regulated Contaminant	MCL, TT or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes or No	Typical Source of Contaminant
Chlorine (ppm) Well District	4	4	.31 ¹	.18-.54	2022	No	Water additive used to control Microbes
Chlorine (ppm) Surface Water District	4	4	.54 ²	.20-.80	2022	No	Water additive used to control Microbes
HAA5 (Haloacetic Acids) in ppb Well District	60	NA	1.7	NA	2022	No	Byproduct of drinking water Disinfection
HAA5 (Haloacetic Acids) Surface Water District in ppb	60	NA	21.4	NA	2022	No	Byproduct of drinking water Disinfection
TTHM (Trihalomethanes) in ppb Well District	80	NA	5.71	NA	2022	No	Byproduct of drinking water Disinfection
TTHM (Trihalomethanes) Surface Water District in ppb	80	NA	32.99	NA	2022	No	Byproduct of drinking water Disinfection
Total Coliform (total number or % of positive samples/month) Surface Water District	TT	N/A	N/A	N/A	2021	No	Naturally present in the environment
<i>E. coli</i> in the distribution system (positive samples) Surface Water District	See <i>E. coli</i> note ³	0	0	N/A	2021	No	Human and animal fecal waste

¹ The Chlorine "Level Detected" was calculated using an average from residuals obtained during bacteriological sample collection.

² Surface Water District: Chlorine "Level Detect" calculated using an average from residuals obtained during bacteriological sample collection.

³ *E. coli* MCL violation occurs if: (1) routine and repeat samples are total coliform-positive and either is *E. coli*-positive, or (2) the supply fails to take all required repeat samples following *E. coli*-positive routine sample, or (3) the supply fails to analyze total coliform-positive repeat sample for *E. coli*.

Inorganic Contaminants

Regulated Contaminant	MCL, TT or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes or No	Typical Source of Contaminant
Fluoride (ppm) Well District	4	4	0.7 ²	0.6-1.0	2022	No	Water additive which promotes strong teeth. Erosion of natural deposits, discharge from fertilizer and aluminum factories.
Fluoride (ppm) Surface Water District	4	4	0.58	0.4-0.78	2021	No	Water additive which promotes strong teeth. Erosion of natural deposits, discharge from fertilizer and aluminum factories.
Iron Well District	NA	NA	ND	NA	2019	No	Erosion of natural deposits
Nitrate (ppm) Well District	10	10	0.10	NA	2022	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrate (ppm) Surface Water District	10	10	0.02	0.00-0.4	2021	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm) Well District	ND	ND	ND	NA	2022	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm) Surface Water District	1	1	0.02	0-0.4	2021	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm) Well District	NA	NA	1.5	NA	2020	No	Erosion of natural deposits
Sodium (ppm) Surface Water District	NA	NA	7.52 ³	6.80-9.30	2021	No	Erosion of natural deposits
Sulfate (ppm) Surface Water District	NA	NA	3.7 ¹	3.5-4.0	2022	No	Erosion of natural deposits
Chloride (ppm) Surface Water District	NA	NA	7.8 ¹	7.0-8.7	2022	No	Erosion of natural deposits
PFAS Measured in ppt			ND		2022	No	Contamination from a once common manufacturing chemical

¹ Average of the 8 samples taken from 2 sample sites (quarterly)

² Average of daily samples for 2022

³ Sodium is not a regulated contaminant

Inorganic Contaminant Subject to ALs	AL	MCLG	Your Water 90th %	Year Sampled	#Samples above action limit	Range of Individual Results	Typical Source of Contaminant
Lead in ppb	15	0	1 ppb	2022	0	0 ppb – 1 ppb	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits.
Copper in ppm	1.3	1.3	0.1 ppm	2022	0	0.0 ppm – 0.1 ppm	Corrosion of household plumbing and erosion of natural deposits.

The Township was required to take 10 lead/copper samples in 2022. All samples were found to contain concentrations well below established MCLs. To continue fulfilling our mandated requirements, the Township is required to take another 10 lead/copper samples by September of 2023.

General Health Information Provided by EPA

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. Marquette Township 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 drinking 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 (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

In order to ensure that tap water is safe to drink, EPA prescribes regulations, which limit the amounts of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800-426-4791).

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 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 storm water 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 storm water 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 storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune 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, 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 Safe Drinking Water Hotline (800-426-4791).

Marquette Source Water Assessment

In order to help protect Public Water Supplies, Congress amended the Safe Drinking Water Act in 1996 and provided resources for state agencies to conduct Source Water Assessments (SWA). The SWA's analyze the sensitivity of the surface water source to natural conditions, conduct contaminant source inventories and determine the susceptibility of the source to potential contamination. Sensitivity is determined from the natural setting of the source water, and indicates natural protection afforded the source water. Susceptibility identifies factors within the community's source water area that may pose a risk to the water supply. The Source Water Assessments were completed for every surface water supply source in Michigan. It is a requirement of EGLE that the findings of the SWA be published. The Marquette SWA was completed in 2003.

You can view the assessment at the City of Marquette website, www.mqtcty.org. If you have any questions concerning the SWA, contact the Water Filtration Plant at 228-0488.

A Final Word

Water is a valuable natural resource. Safe, reliable, good tasting drinking water is collected, treated, tested and delivered to your home and business 24 hours a day. Use it wisely and with confidence.

For more information about our water quality, please contact Marquette Township Superintendent of Public Works Leonard Bodenus at (906) 228-6220 ext. 106 or lbodenus@marquettetownship.org. This report is also posted at www.marquettetownship.org. and the Marquette Township Office Complex at 1000 Commerce Drive.

For more information about safe drinking water, visit the U.S. Environmental Protection Agency (EPA) at WWW.EPA.GOV/SAFEWATER/.



Charter Township of Marquette
1000 Commerce Drive
Marquette, Michigan 49855

PRSR STD
U.S. POSTAGE
PAID
PERMIT #157
MARQUETTE, MI
49855

Charter Township of Marquette

2022 Annual Drinking Water Quality Report

