

2017 Annual Drinking Water Report

The City of Marquette is pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality of the water and services we deliver to you every day. Our water source is Lake Superior. This surface water source has provided Marquette residents with excellent drinking water for over 140 years. There is a Source Water Assessment available at the Municipal Utilities Director's office at 906-225-4055. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and are pleased to inform you that our drinking water is safe and meets all state and federal drinking water standards.

The Marquette Water Utility routinely monitors for contaminants in your drinking water according to Federal and State laws. For the most part, the tables in this report show the results of our monitoring for the period of January 1 to December 31, 2017. However, the Michigan Department of Environmental Quality and the US-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, is more than one year old. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. 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.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The tables below list all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels.

In the following tables, you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

Unit Descriptions	
Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
MCLG	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.
MCL	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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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.
MRDL	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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

Water Quality Data Tables

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Chlorine (as Cl ₂) (ppm)	4	4	.67*	.17	.99	2017	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	10.5*	8	15	2017	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	24.3*	16.1	33.1	2017	No	By-product of drinking water disinfection
								* Highest running annual average
Inorganic Contaminants								
Fluoride (ppm)	4	4	.79	.43	.79	2017	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Sodium (optional) (ppm)	NA		6	NA	NA	2017	No	Erosion of natural deposits; Leaching
Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source	
Inorganic Contaminants								
Copper - action level at consumer taps (ppm)	1.3	1.3	.11	2017	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	
Inorganic Contaminants								
Lead - action level at consumer taps (ppb)	0	15	11	2017	3	No	Corrosion of household plumbing systems; Erosion of natural deposits	

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 Marquette 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 <http://www.epa.gov/safewater/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 disabilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

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 microbiological contaminants are available from the EPA's Safe Drinking Water Hotline 1-800-426-4791.

Contaminant	Susceptible Vulnerable Sub-Population	Level of Concern
Fecal Coliform/ E. Coli	Infants, young children, and people with Severely compromised immune systems	Confirmed presence (any Confirmed detect)
Lead	Infants and children	15.0 ppb
Copper	People with Wilson's Disease	1300 ppb
Fluoride	Children	4.0 ppm
Nitrate	Infants below the age of 6 months	10.0 ppm
Nitrite	Infants below the age of 6 months	1.0 ppm

If you have any questions about this report, the source water assessment, or concerning your water utility, please contact Curt Goodman, Municipal Utilities Director at 906-225-4055. This 2017 Annual Water Quality Report is also posted on the City of Marquette web site, www.mqtcty.org.