

Village of Cass City, Michigan

Annual Drinking Water Quality Report for 2022

In 1996, Congress amended the Safe Drinking Water Act. This legislation added a provision requiring all community water systems deliver to their customers a brief Annual Water Quality Report.

The Village of Cass City is pleased to provide you with this year's Annual Drinking Water Quality Report. We want to keep you informed about the water quality and services we have delivered to you over the past year. Our goal is, and always has been, to provide a safe and dependable supply of drinking water. The Village of Cass City obtains its water from three different municipal wells. All three wells are in the Village Park, at the east end of town. Wells No. 1 and No. 2, located just east of the tennis courts, were installed in 1946. They are 290 feet and 240 feet deep respectively. Well No. 3 is located on the west side of the volleyball courts. Well No. 3 was installed in 1998 and extends to a depth of 311 feet. All three municipal wells are drilled into the bedrock of the Michigan Formation. The Village now has the capacity to pump 1,656,000 gallons of water per day.

On January 23, 2006, the EPA (Environmental Protection Agency) lowered the MCL (Maximum Contaminant Level) for arsenic from 50 ppb to 10ppb. The Village of Cass City did not meet the new Arsenic standard. An arsenic removal plant was constructed by the village to meet the new standard. On April 18, 2007 the Village started supplying water that is following the new standard of 10ppb. The arsenic was reduced from a high of 29ppb to less than 5ppb.

The State of Michigan has produced a Source Water Assessment for each of the Village's wells. This Assessment reports the susceptibility of our water supply sources to contamination. The susceptibility score is broken down into 7 categories. Very Low, Low, Moderately Low, Moderate, Moderately High, High, or Very High. The score, given by the State, for all three of the Village wells, is **Moderately High**. The susceptibility rating is based primarily on geologic sensitivity, water chemistry and contaminant sources. The complete Source Water Assessment is available by contacting the Village office.

This report shows our water quality and what it means to you, our customers. Copies of the report are not mailed directly to each individual customer. Customers may request a paper copy from the village office at 6506 Main Street, Cass City, Mi., 48726 or by calling 989-872-2911. Also, a copy is available on the village website: www.casscity.org.

If you have any questions concerning this report, or about your water, or your water utility please contact RJ Klaus, Monday thru Friday, 8:00 a.m. thru 3:30 p.m., 989-872-2911. The Village also has regularly scheduled Village Council Meetings the last Monday of each month at 6:00 p.m. at the Village Hall, 6506 Main Street, Cass City Michigan. The public is welcome at all meetings of the Village Council.

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate the water poses a health risk. 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. More information about contaminants and potential health effects can be obtained by calling the United States Environmental Protection Agency's (EPA) "Safe Drinking Water Hotline: at 1-800-426-4791.

The Village of Cass City routinely monitors for contaminants in your drinking water according to Federal and State laws. The Village has conducted tests for over 150 different contaminants, at the water treatment plant and throughout the village. The following table shows the results of the most recent monitoring for 2022.

VILLAGE OF CASS CITY MICHIGAN DRINKING WATER TEST ANALYSIS

TERMS AND ABBREVIATIONS USED IN TABLE BELOW

Non-Detects - (ND) - laboratory analysis indicates that the contaminant is not present.

Parts Per Million - (ppm) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts Per Billion - (ppb) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Maximum Contaminant Level - (MCL) is the highest level of a contaminant that is allowed in drinking water. MCL are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal - (MCLG) 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 - (MRDL) is the highest level of free chlorine allowed in the distribution system.

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

Picocuries per liter - (pCi/l) picocuries per liter is a measure of the radioactivity in water.

PFAS-

The State of Michigan allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All the data is representative of our water quality, but some are more than one year old. The tables below represent the most current testing information available.

Contaminants Regulated by The State of Michigan

ARSENIC						
Samples taken Monthly from arsenic treatment plant tap in 2022						
Contaminant	Highest Level Detected in our Water	Range detected in our water	Violation Yes/No	MCL	MCLG	Likely Source of Contamination
Arsenic	9 ppb	4 ppb To 9 ppb	No	10 ppb	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes

CHLORINE RESIDUALS					
From the Distribution System in 2021 and 2022					
Contaminant	Date of Most Recent Testing	Highest Level Detected in our Water in 2022	Lowest Level Detected in our Water in 2022	Highest running Annual average for 2021 and 2022	Likely Source of Contamination
Free Chlorine Residuals	2 samples taken each month throughout the system	0.54 ppm	0.13 ppm	0.32	Water additive used to control microbes

BYPRODUCTS FROM CHLORINE DISINFECTANTS							
Detected in the Distribution System in 2022							
Contaminant	Date of Most Recent Testing	Level Detected in our Water	Range detected in our water	Violation Yes/No	MCL	MCLG	Likely Source of Contamination
Total Trihalomethanes	7/6/2022	6.2 ppb	Only 1 sample taken. There is no range of detection.	No	80 ppb	No MCLG	By-product of drinking water chlorination
Total Haloacetic Acids	7/6/2022	ND	Only 1 sample taken. There is no range of detection.	No	60 ppb	No MCLG	By-product of drinking water chlorination

LEAD AND COPPER							
Detected in the Distribution System							
Contaminant	Date of Most Recent Testing	Number of sites Tested	90th Percentile	Number of sites over Action Level	Violation Yes/No	MCL	Likely Source of Contamination
Lead	6/1/2020 through 9/30/2020	11	0 ppb	0	No	15 ppb	Corrosion of household plumbing
Copper	6/1/2020 through 9/30/2020	11	200 ppb	0	No	1300 ppb	Corrosion of household plumbing; Erosion of natural deposits

Information about lead: 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 Village of Cass City 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 have a lead service line it is recommended that you run your water for at least 5 minutes to flush water from both your home plumbing and the lead service line. 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>.

Our water supply has 49 lead service lines and 700 service lines of unknown material out of a total of 1101 service lines.

Monitoring and Reporting to the Department of Environment, Great Lakes, and Energy (EGLE)

Requirements: The State of Michigan and the U.S. EPA require us to test our water on a regular basis to ensure its safety. We met all the monitoring and reporting requirements for 2022.

INORGANIC CONTAMINANTS							
Samples were taken from water treatment plant tap							
Contaminant	Date of Most Recent Testing	Highest Level Detected in our Water	Range detected in our water	Violation Yes/No	MCL	MCLG	Likely Source of Contamination
Barium	6/15/2021	.12 ppm	Only 1 sample taken. There is no range of detection.	No	2 ppm	2 ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	6/15/2021	0.71 ppm	Only 1 sample taken. There is no range of detection.	No	4 ppm	4 ppm	Erosion of natural deposits; water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories

POTENTIAL HEALTH CONCERNS FOR CONTAMINANTS LISTED IN TABLES ABOVE

Arsenic - Some people who drink water containing arsenic more than the MCL over many years could experience skin damage or problems with their circulatory system and may have an increased risk of getting cancer.

Barium - Some people who drink water containing barium more than the MCL, over many years could experience an increase in their blood pressure.

Chlorine - Some people who use water containing chlorine well more than the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well more than the MRDL could experience stomach discomfort.

Copper - Copper is an essential nutrient, but some people who drink water containing copper more than the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper more than the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Fluoride - Some people who drink water containing fluoride more than the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

Lead - 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 Village of Cass City 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: 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Total Trihalomethanes - Some people who drink water containing trihalomethanes more than the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Contaminants Not Regulated by The State of Michigan

Unregulated Contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where these contaminants occur and whether it needs to regulate those contaminants. Potential health concerns are not listed for these contaminants.

Contaminant	Date of Most Recent Testing	Level Detected in Distribution System	MCL	Likely Source of Contaminant
Sodium	6/15/2021	19 ppm	No MCL	Erosion of natural deposits
Sulfate	6/15/2021	32 ppm	No MCL	Erosion of natural deposits

RADIOLOGICAL CONTAMINANTS Samples taken from all 3 Village Wells

Contaminant	Date of Most Recent Testing	Level detected in our water	Violation Yes/No	MCL	MCLG	Likely Source of Contamination
Gross Alpha	4-2-2015	-0.28 ± 1.32 pCi/L	No	15 pCi/L	0	Erosion of natural deposits
Radium 226	4-2-2015	.90 ± 0.55 pCi/L	No	5 pCi/L	0	Erosion of natural deposits

POTENTIAL HEALTH CONCERNS FOR RADIOLOGICAL CONTAMINANTS LISTED IN TABLE ABOVE

Gross Alpha - Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters more than the MCL over many years may have an increased risk of getting cancer.

Radium 226/228 - Some people who drink water containing radium 226 or 228 more than the MCL over many years may have an increased risk of getting cancer.

PFAS/PFOS

In 2018 the MDEQ decided to sample for PFAS at all community water supplies that have their own drinking water. Perfluoroalkyl and Polyfluoroalkyl substances (PFAS/PFOS) have been classified by the EPA as an emerging contaminant. This means that PFAS present potential unacceptable human health risks and were not monitored by the MDEQ. PFAS are chemicals used throughout the industrial, food, and textile industries. PFAS has been used in firefighting foams, food packaging, and cleaning products. MDEQ contracted AECOM, an environmental firm, to do the sampling. Our water plant was tested on **8/15/2022**.

The results were as follows:

Date collected	Sample Location	PFOS + PFOA (ppt)	LHA (ppt) PFOS+PFOA	TOTAL TESTED PFAS (ppt)
8/15/2022	TP001	ND	70	ND

**LHA- Lifetime Health Advisory ND- Non-detect
Ppt-Parts per Trillion**

Our sample was found to be Non-detect (ND), this means no (PFAS) was detected. If the MDEQ requires any more testing of PFAS/PFOS in the future, we will test our water supply as required

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man-made. These substances can be:

Microbial Contaminants, such as viruses and bacteria, 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 may come from a variety of sources such as agriculture and residential uses.

Radioactive contaminants are naturally occurring or can be the result of oil and gas production and mining activities.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, can also come from gas stations, urban storm water runoff, and septic systems.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the number of certain contaminants in water provided by public systems. The FDA regulates contaminants in bottled water which must provide the same protection for public health.

MCL's (Maximum Contaminant Levels) are set at very stringent standards. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime, to have a "one-in-a-million chance" of experiencing the described health effect.

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 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 Safe Drinking Water Hotline at: (1-800-426-4791).

Please call the Village Office if you have any questions or would like to see the reports for all the tests the Village has conducted. The contact person for this information is RJ Klaus, telephone: (989) 872-2911.