2017 Annual Water Quality Report

Calumet
PWS ID: MI0004800
Also Includes
Village of Calumet
PWS ID: MI0001040
Village of Hubbell
PWS ID: MI0003270
Calumet Township
PWS ID: MI0001046
Village of Laurium
PWS ID: MI0003810

MICHIGAN AMERICAN WATER

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

A Message About Your Drinking Water

From your children's school to your local restaurants, the water quality in your community is backed with Michigan American Water's experience and technical expertise. Our reputation has earned us the privilege of being a valued resource in developing our country's water quality standards.

Our superior environmental compliance record and water expertise help to ensure clean water for today and in the future. High-quality water and dependable service—it's our commitment to you. Always has been. Always will be.

We also realize that educating our customers about the quality of their water is an important part of our business. We believe it's your right to know about the source and quality of your drinking water.

We hope you find this report both informative and useful. We always welcome your comments and questions. Call us anytime at (906) 337-3502.

What is a Water Quality Report?

To comply with state and U.S. Environmental Protection Agency (EPA) regulations, Michigan American Water issues a report annually describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect your drinking water sources. In 2017, we conducted tests for many contaminants, all of which were below state and federal maximum allowable levels. This report provides an overview of last year's (2017) water quality. It includes details about where your water comes from and what it contains. If you have any questions about this report or your drinking water, please call our office at (906) 337-3502.

Source Water Information

Michigan American Water is supplied by ground water from four wells. The company has been utilizing these wells since 1968. The water from this well supply is of excellent quality requiring only minimal treatment. The State performed an assessment of our source water in 2003 to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a seven-tiered scale from "very-low" to "very-high" based primarily on geologic sensitivity, water chemistry and contaminant sources. The susceptibility of our source is moderate.

If you would like to know more about the report, please contact Steve Dlubala, General Manager, at (906) 337-3502. You can also contact Mr. Dlubala by e-mail at Steven.Dlubala@Amwater.com.

Protecting Your Water Source

Michigan American Water has developed a Wellhead Protection Management Plan in cooperation with community volunteers to protect the valuable ground water resources serving your community. Please share your views with us if you are interested in environmental water quality issues by calling our designated contact person in this report.

Michigan American Water and Calumet Township completed their Wellhead Protection Plan during 2001. The plan determines the direction and flow of our source water and the 10-year time of travel zone for potential contaminants. The Wellhead Protection Ordinance was finalized and became effective during 2002. In addition, Michigan American Water and Calumet Township updated their Wellhead Protection Plan in 2015.

AT ABOUT A PENNY PER GALLON WATER IS A GREAT VALUE™

About American Water

Michigan American Water, a subsidiary of American Water (NYSE: AWK), provides high-quality and reliable water services to approximately 12,000 people.

With a history dating back to 1886, American Water is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs more than 6,900 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to an estimated 15 million people in 46 states and Ontario, Canada. American Water provides safe, clean, affordable and reliable water services to our customers to make sure we keep their lives flowing. For more information, visit amwater.com and follow American Water on Twitter, Facebook and LinkedIn.

Investing In Your Community's Future

Michigan American Water continually invests in improvements to the public water system. Michigan American Water believes in its role of good citizenship and proudly contributes a substantial amount in local taxes annually and is a valuable source of revenue to the local community and its services.

How to Contact Us

For more information about this report, or for any questions relating to your drinking water, please call Steve Dlubala, General Manager, at (906) 337-3502. You can also contact Mr. Dlubala by e-mail at Steven.Dlubala@Amwater.com.

For questions about your water bill or service issues, please call our office at (906) 337-3502.

To learn more about American Water, please visit our web site at www.amwater.com.

Water Information Sources

American Water
www.amwater.com

Michigan Department of Environmental Quality
www.mi.gov/deq

United States Environmental Protection Agency
www.epa.gov/safewater

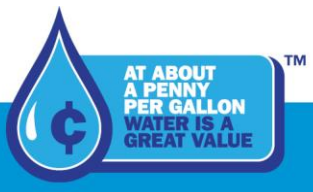
Safe Drinking Water Hotline: (800) 426-4791

Centers for Disease Control and Prevention
www.cdc.gov

American Water Works Association
www.awwa.org

Water Quality Association
www.wqa.org

National Library of Medicine/National Institute of Health
www.nlm.nih.gov/medlineplus



Substances Expected to be in Drinking Water

The source of drinking water (both tap water and bottled water) includes 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 may 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 may also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

Commonly Asked Questions & Answers

How hard is my water?
Hardness is a measure of the concentration of two minerals naturally present in water-calcium and magnesium. High hardness levels cause soap not to foam as easily as it would at lower levels. Hardness levels are 126 ppm, or 7.36 grains per gallon of water.

Does my water contain nitrates?
Michigan American Water's normal range of nitrate levels is below the MCL of 10 ppm. Nitrate enters the water supply from fertilizers used on farms and natural erosion of deposits in the watershed. Levels above 10 ppm are a health risk for infants under six months of age and can cause blue baby syndrome. Check with your physician if you have questions.

How much sodium is in my water?
The sodium level is approximately 5 ppm.

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. Michigan American Water 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 at (800) 426-4791 or at http://www.epa.gov/drink/info/lead.

Special Health Information

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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA and CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline at (800) 426-4791. For additional information regarding cryptosporidiosis (a gastrointestinal disease caused by *Cryptosporidium*) and how it may impact those with weakened immune systems, please contact our office at (906) 337-3502.

In order to ensure that tap water is of high quality, EPA prescribes regulations limiting the amount of certain substances in water provided by public water systems. U.S. 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 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 EPA's Safe Drinking Water Hotline at (800) 426-4791.

Radon

Radon is a radioactive gas that occurs naturally in some ground waters. It may pose a health risk when the gas in the drinking water is released from water into air, as occurs during showering, bathing, or washing dishes or clothes. Radon gas is released into homes and ground water from soil. Michigan American Water was tested for radon during 2008 and was found to be non-detectable. EPA is planning to regulate radon at a level of 300 pCi/L to 4,000 pCi/L. Inhalation of radon gas has been linked to lung cancer; however, the effects of radon ingested in drinking water are not yet clear. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information on how to have your home tested for radon, contact the Western Upper Peninsula Health Department at (906) 482-7382, the State of Michigan Indoor Radon Program at (800) RADON GAS, or the National Radon Hotline at (800) 767-7236.

Availability of Monitoring Data for Unregulated Contaminants

Monitoring was conducted during 2015 under the EPA Unregulated Contaminant Monitoring Rule 3 (UCMR3). The compound(s) detected under UCMR3 are noted in the table. For information concerning our results, please contact Steve Dlubala, General Manager, at (906) 337-3502. Data is also available on the EPA's website (www.epa.gov/safewater/data/ucmrgetdata.html).

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether regulation is warranted.

How to Read This Table

Michigan American Water conducts extensive monitoring to ensure that your water meets all water quality standards. The results of our monitoring are reported in the following tables. While most monitoring was conducted in 2017, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting this table, see the "Table Definitions" section.

Starting with a **Substance**, read across. **Year Sampled** is usually in 2017 or year prior. **MCLG** is the goal level for that substance (this may be lower than what is allowed). **MCL** shows the highest level of substance (contaminant) allowed. **Level Found** represents the measured amount (less is better). **Range of Detections** tells the highest and lowest amounts measured. A **Yes** under **Compliance Achieved** means the amount of the substance met government requirements. **Typical Source** tells where the substance usually originates. Unregulated substances are measured, but maximum allowed contaminant levels have not been established by the government.

Definitions of Terms Used in This Report

- **AL (Action Level):** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
- **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.
- **MRDL (Maximum Residual Disinfectant Level):** The highest level of disinfectant allowed in drinking water.
- **MRDLG (Maximum Residual Disinfectant Level Goal):** The level of drinking water disinfectant below which there is no known or expected risk to health.
- **NA:** Not applicable
- **ND:** Not detected
- **pCi/L (picocuries per liter):** Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).
- **mrem/year:** Millirems per year (a measure of radiation absorbed by the body).
- **ppm (parts per million):** One part substance per million parts water, or milligrams per liter.
- **ppb (parts per billion):** One part substance per billion parts water, or micrograms per liter.

Water Quality Statement

We are pleased to report that during the past year, the water delivered to your home met or surpassed, all state and federal drinking water requirements. For your information, we have compiled a list in the table below indicating what substances were detected in your drinking water during 2017. Although all of the substances listed in the table are under the Maximum Contaminant Level (MCL) set by EPA, we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

Water Quality Results

Michigan American Water Company serving the Township of Calumet, Villages of Calumet, Hubbell, Laurium and surrounding communities.

Regulated Substances (Measured on the Water Leaving the Treatment Facility)

Substance (units)	Year Sampled	MCLG	MCL	Level Found	Range of Detections	Compliance Achieved	Typical Source
Nitrate (ppm)	2017	10	10	0.51	NA	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Other Regulated Compounds (Measured in the Michigan American Water Distribution System)

Substance (units)	Year Sampled	MCLG	MCL	Level Found	Range Low-High	Compliance Achieved	Typical Source
Total Trihalomethanes (TTHM) (ppb)	2017	NA	80	23.3	NA	Yes	By-product of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	2017	NA	60	5.0	NA	Yes	By-product of drinking water chlorination
Substance (units)	**Year Sampled**	**MRDLG**	**MRDL**	**Level Found**	**Range of Detections (Low-High)**	**Compliance Achieved**	**Typical Source**
Chlorine (ppm)	2017	4	4	0.40	0.15 – 0.96	Yes	Water additive used to control microbes

Other Regulated Compounds (Measured in the Village Of Laurium Distribution System)

Substance (units)	Year Sampled	MCLG	MCL	Level Found	Range Low-High	Compliance Achieved	Typical Source
Total Trihalomethanes (TTHM) (ppb)	2017	NA	80	10.4	NA	Yes	By-product of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	2017	NA	60	1.4	NA	Yes	By-product of drinking water chlorination

Other Regulated Compounds (Measured in the Village Of Calumet Distribution System)

Substance (units)	Year Sampled	MCLG	MCL	Level Found	Range Low-High	Compliance Achieved	Typical Source
Total Trihalomethanes (TTHM) (ppb)	2017	NA	80	16.3	NA	Yes	By-product of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	2017	NA	60	3.6	NA	Yes	By-product of drinking water chlorination

Other Regulated Compounds (Measured in the Calumet Township Distribution System)

Substance (units)	Year Sampled	MCLG	MCL	Level Found	Range Low-High	Compliance Achieved	Typical Source
Total Trihalomethanes (TTHM) (ppb)	2017	NA	80	19.3	NA	Yes	By-product of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	2017	NA	60	ND	NA	Yes	By-product of drinking water chlorination

Other Regulated Compounds (Measured in the Village Of Hubbell Distribution System)

Substance (units)	Year Sampled	MCLG	MCL	Level Found	Range Low-High	Compliance Achieved	Typical Source
Total Trihalomethanes (TTHM) (ppb)	2017	NA	80	5.5	NA	Yes	By-product of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	2017	NA	60	4.0	NA	Yes	By-product of drinking water chlorination

Tap Water Samples: Lead and Copper Results

Substance (units)	Year Sampled	MCLG	Action Level	90th Percentile	Number of Samples	Number of Samples Above Action Level	Compliance Achieved	Typical Source
Copper (ppm)	2017	1.3	1.3	0.26	20	0	Yes	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2017	0	15	1	20	0	Yes	Corrosion of household plumbing systems; Erosion of natural deposits

Unregulated Substances (Measured on the Water Leaving the Treatment Facility)

Substance (units)	Year Sampled	Results	Range of Detections	Typical Source
Bromochloroacetic Acid (ppb)	2017	2.8	ND – 2.8	By-product of drinking water chlorination
Chloride (ppm)	2017	12.1	NA	Erosion of natural deposits
Sodium (ppm)	2017	5.2	NA	Naturally occurring
Chromium (ppb) [1]	2015	1.48	1.44 – 1.48	**Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation**
Strontium (ppb) [2]	2015	58.98	53.35 - 58.98	**Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions**
Vanadium (ppb) [2]	2015	5.613	5.496 – 5.613	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst
Sulfate (ppm)	2017	6.8	NA	Erosion of natural deposits
Hexavalent Chromium (ppb) [2]	2015	1.535	1.506 - 1.535	**Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation**

Unregulated Substances (Measured in the Distribution System)

Substance (units)	Year Sampled	Results	Range of Detections	Typical Source
Chromium (ppb) [1]	2015	0.266	NA	**Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation**
Strontium (ppb) [2]	2015	57.001	55.713 – 57.001	**Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions**
Vanadium (ppb) [2]	2015	4.178	2.92 - 4.178	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst
Hexavalent Chromium (ppb) [2]	2015	0.201	NA	**Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation**

[1] Monitored under UCMR3, Total Chromium itself is a regulated substance.

[2] Monitored under UCMR3, the EPA has not set drinking water standards for these contaminants.