

2017 Annual Drinking Water Quality Report
City of Marlette Municipal Water System
June 1st, 2018

We're pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the quality of the water and services we deliver to you every day. 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. Our water source consists of three (3) active wells drawing from the Marshall Sandstone Aquifer; Wells are at a depth of 263 feet.

We're also pleased to report that our drinking water meets federal and state requirements, if you have any questions about this report or concerning your water utility, please contact Manuel Navarro at 989-635-7448. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled City Council meetings, they are held on the first Monday of the month, 7:00 PM at the Marlette City Hall, 6436 Morris Street.

The City of Marlette Municipal Water System routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2017. 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. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Association (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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:

Microbial contaminants such as; viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

- 1.) 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.
- 2.) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- 3.) 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.
- 4.) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Average (Avg) - A running average of all samples collected during the reporting period.

Maximum (Max) - The maximum value of all samples used to calculate the Average. This is the upper part of the range of sample values.

Minimum (Min) - The minimum value of all samples used to calculate the Average. This is the lower part of the range of sample values.

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

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

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

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

Maximum Contaminant Level (MCL) - The "Maximum Allowed" is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's 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. MCLG's allow for a margin of safety.

TEST RESULTS						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Inorganic Regulated Chemicals						
1. Arsenic Most recent analysis performed 7/11/2016	N	ND to 0.005	ppm	0	0.010	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
2. Barium Most recent analysis performed 4/19/12	N	0.02	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
3. Fluoride Most recent analysis 4/11/2017	N	0.86-0.97	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth
4. Lead 90 th Percentile Most recent 9/2/15	N	1	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Un-Regulated Chemicals						
9. Sulfate Most recent 4/11/2017	N	ND - 28	ppm			Natural occurring element in water supply.
10. Chloride Most recent 4/11/2017	N	19 - 89	ppm			Natural occurring element in water supply.
11. Sodium Most recent 4/11/2017	N	43 - 78	ppm			Natural occurring element in water supply.
12. Iron (automated) Most recent 4/11/2017	N	0.1 - 0.4	ppm	MRDLG = 4	MRDL = 4	Natural occurring in water supply
13. Hardness as CaCO3 Most recent 4/11/2017	N	209 - 213	ppm			Natural Occuring element in water supply

Note: Lead and Copper samples tested did not exceed the regulated Action Levels for the 90th Percentile.

Public Notice: We had to change labs and sampling point for Tritium in 2016 because the Lab was running the wrong test method. We changed Labs and resampled on 11/29/2016 and samples came back good, no violation.

Note: Bacteriological samples taken each month have come back from the Lab as negative (absent) samples, showing there is a zero (0) reported reading. Bacteriological samples, not a health threat in itself, are used to indicate whether other potentially harmful bacteria may be present, and none were.

Note: You will notice that some samples were not taken for some of the contaminants in 2017. This is because those samples are required to be done once every three years or more, depending on the schedule given to us by the Michigan Department of Environmental Quality (MDEQ).

"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 Marlette is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components in households. 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>."

The State of Michigan has performed a Source Water Assessment for the City's Wells in 2004. This Assessment reports the susceptibility of our water supply sources to contamination. The susceptibility score is broken down into seven (7) categories. Very Low, Low, Moderately Low, Moderate, Moderately High, High and Very High. The score given by the State, for Well # 1 and Well # 2 was High, Well # 3 was a Moderate Susceptibility. Please contact the city at 989-635-7448 if you would like a copy of the susceptibility report or have questions about it.

What does this report mean?

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or manmade. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All 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 the 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 1-800-426-4791.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, 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 having 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 (800-426-4791).

Please call our office, at 989-635-7448, if you have questions or wish to receive a copy of this report. Copies of this report results will also be made available at the Marlette City Hall. The staff of the City of Marlette work very hard each and every day of the year to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.