

## 2019 ANNUAL DRINKING WATER QUALITY REPORT

# THE CITY OF MT. MORRIS IS PLEASED TO REPORT THAT OUR DRINKING WATER MEETS ALL STATE AND FEDERAL REQUIREMENTS

### **How to obtain additional information.**

If you have questions about this report or concerning the City of Mt. Morris Water System, please contact:

- Vicki Flshell  
City Manager  
810-686-2160
- Paul Zumbach,  
DPW Superintendent  
810-686-8380

If you need information on billing practices, rates, etc., please contact:

- April Smith  
Water Clerk  
810-686-2160

The City wants our valued customers to be informed about their water utility. If you want to learn more about the Mt. Morris water system or express an opinion on the system, please attend any of our regularly scheduled City Council meetings. The meetings are normally held at 7:15 p.m. each second and fourth Monday of the month at City Hall, 11649 N. Saginaw, Mt. Morris, MI 48458.

The City of Mt. Morris is proud to present to the citizens our 2019 Water Quality Report. In complying with recent legislation, the City developed this report to provide you with valuable information about your drinking water. From this report, you will realize what the City has always known— *your water supply meets all state and federal requirements*. The City of Mt. Morris purchased its water from the Genesee County Water and Waste System. Your source water for GCDC-WWS is the Lake Huron watershed. The watershed includes numerous short, seasonal streams that drain to Lake Huron. The MDEQ in partnership with the U.S. Geological Survey, the Detroit Water and Sewage Department, and the Michigan Public Health Institute performed a source water assessment in 2004 to determine the susceptibility of potential contamination. The susceptibility rating is a seven-tiered scale ranging from “very low” to “very high” based primarily on geologic sensitivity, water chemistry, and contaminant sources. The Genesee County/Lake Huron source water treatment plant has historically provided satisfactory treatment of the source water to meet drinking water standards.

### **What is in the water?**

The City is pleased to report that during the past year, the water delivered to your home or business complied with, or did better than, all state and federal drinking water requirements. For your information, the GCDC-WWS has compiled the lists of substances detected in the water supply. Although all of the substances listed below are under the Maximum Containment Level (MCL) set by the U.S.EPA, and therefore not expected to cause any health risks, we feel it is important that you know exactly what

was detected and how much of the substance was present in the water.

### **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.
- 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 byproducts of industrial processes and petroleum production and may 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.

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

# Substances expected to be in Drinking Water

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.

Substances that may be present in source water include microbial contaminants, such as viruses and bacteria; inorganic contaminants,

such as salts and metals; pesticides and herbicides; organic chemical contaminants; and, radioactive contaminants. 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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)**.

## How will I know if there is a problem with the water?

We are committed to providing you safe, reliable and healthy water. We will update this report annually, and will also keep you informed of any problems that may occur throughout the year, as they happen. State and Federal drinking water regulations require us to notify you within 72 hours in situations with significant potential to have serious adverse effects on human health as a result of short-term exposure. The U.S. EPA is considering decreasing that time frame to 24 hours.

## 2019 Regulated Detected Contaminant Tables

Inorganic Chemicals - Monitoring at the Plant Finished Water Tap								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation Yes/No	Major Sources in Drinking Water
Fluoride	2019 Quarterly	ppm	4	4	0.61	0.59 - 0.61	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.

Disinfection By-Products - Monitoring in Distribution System, Stage 2 Disinfection By-Products								
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest LRAA	Range of Detection	Violation Yes/No	Major Sources in Drinking Water
Total Trihalomethanes (TTHM)	2018	ppb	n/a	80	0.0250	0.0249- 0.0250	No	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	2019	Ug/l	n/a	60	2.8	22.6	No	By-product of drinking water disinfection.

Disinfection Residuals - Monitoring in Distribution System								
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Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest RAA	Range of Detection	Violation Yes/No	Major Sources in Drinking Water
Total Chlorine Residual	Jan-Dec 2018	ppm	4	4	1.31	0.23-1.31	no	Water additive used to control microbes

### 2019 Turbidity - Monitored every 4 hours at Plant Finished Water

Highest Single Measurement Cannot exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)	Violation yes/no	Major Sources in Drinking Water
0.10 NTU	98.9%	no	Soil Runoff

Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

### 2019 Lead and Cooper Monitoring at Customer Tap

Regulated Contaminant	Unit	Health Goal MCLG	Action Level AL	90th Percentile Value*	Number of Samples over AL	Violation yes/no	Major Sources in Drinking Water
Lead (Jan-June)	ppb	0	15	5ppb	0	no	Corrosion of household plumbing system; Erosion of natural deposits
Lead (July-Dec)	ppb	0	7	4ppb	0	no	See above.
Copper (Jan-June)	ppm	0	0.18	0.10ppm	0	no	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives.
Copper (July-Dec)	ppm	0	0.12	0.10ppm	0	no	See above.

\*The 90th percentile value means 90 percent of the home tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is about the AL additional requirements must be met.

**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 City of Mt. Morris 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 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your 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>.

Regulator Contaminant	Treatment Technique	Typical Source of Contaminant
Total Organic Carbon (ppm)	The total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each quarter and because the level was low there is no TOC removal required.	Lead service lines, corrosion of household plumbing including fittings and fixtures; erosion of natural deposits

### Radionuclides 2019

Regulated Contaminant	Test date	Unit	Health Goal MCLG	Allowed Level	Level detected	Violation yes/no	Major Sources in Drinking water
Combined Radium 226 and 228	02/13/2019	pCi/L	0	5	1.0 ± 0.50	no	Erosion of natural deposits
Gross Alpha	02/13/2019	pCi/L	0	15	2.0 ± 1.0	no	Erosion of natural deposits

Unregulated Parameters	Unit	Average	Range Detected	Source of Contamination
<b>Sodium (ppm)</b>	ppm	<b>8.5</b>	<b>8-9</b>	Erosion of Natural Deposits
<b>Nickels</b>	ppb	<b>0.33</b>	<b>ND to 0.66</b>	Erosion of Natural Deposits

#### Unregulated Contaminants;

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations is warranted. Before EPA regulates a contaminant, it considers adverse health effects, the occurrence of the monitoring for Unregulated contaminants in 2013. The following tables list the unregulated substances detected during the 2019 calendar year.

#### 2019 Unregulated Contaminants - Monitored at the Primary Source (AM1: metals, pesticides, alcohols, SVOCs)

Contaminant	Units	Result	Source
Bromide	ppm	23.2	<b>Naturally present in fossil fuels, coal, and shale.</b>
Total Organic Carbon	ppm	2.4	<b>Erosion of natural deposits.</b>

#### 2019 Unregulated Contaminants - Monitored in the distribution system (Am1, TP and entry Point)

Contaminant	Units	Range	Source
Chlorpyrifos	ug/l	ND	<b>Disinfection byproducts group</b>
Dimethipin	ug/l	ND	<b>Disinfection byproducts group</b>
Ethoprop	ug/l	ND	<b>Disinfection byproducts group</b>
Alpha-HCH (alpha-BHC)	ug/l	ND	<b>Disinfection byproducts group</b>
Oxyfluorfen	ug/l	ND	<b>Disinfection byproducts group</b>
Permethrin, Total	ug/l	ND	<b>Disinfection byproducts group</b>
Profenophos	ug/l	ND	<b>Disinfection byproducts group</b>
Tebuconazole	ug/l	ND	<b>Disinfection byproducts group</b>
Tribufos	ug/l	ND	<b>Disinfection byproducts group</b>

#### Metals

Germanium, Total	ug/l	ND	<b>Disinfection byproducts group</b>
Manganese, Total	ug/l	2.1 – 10.6	<b>Naturally present in the environment</b>

#### 2019 Unregulated Contaminants - HAA's Monitored in the distribution system (AM2: DB 1 thru 8)

Contaminant	Units	Range	Source
Monochloroacetic acid (MCAA)	ug/l	<2	<b>By-product of drinking water disinfection.</b>
Monobromoacetic Acid (MBAA)	ug/l	<0.3	<b>By-product of drinking water disinfection.</b>
Dichloroacetic acid (DCAA)	ug/l	1.2 – 13.2	<b>By-product of drinking water disinfection.</b>
Trichloroacetic acid (TCAA)	ug/l	1.6 – 16.5	<b>By-product of drinking water disinfection.</b>
Bromochloroacetic acid (BCAA)	ug/l	0.3 – 3.9	<b>By-product of drinking water disinfection.</b>
Bromodichloroacetic acid (BDCAA)	ug/l	ND – 3.1	<b>By-product of drinking water disinfection.</b>
Dibromoacetic acid (DBAA)	ug/l	ND – 0.8	<b>By-product of drinking water disinfection.</b>
Chlorodibromoacetic (CDBAA)	ug/l	ND – 0.6	<b>By-product of drinking water disinfection.</b>
Tribromoacetic Acid (TBAA)	ug/l	ND	<b>By-product of drinking water disinfection.</b>
HAA5 Group	ug/l	2.8 – 22.6	<b>By-product of drinking water disinfection.</b>
HAA5Br Group	ug/l	0.6 – 8.1	<b>By-product of drinking water disinfection.</b>
HAA9 Group	ug/l	3.7 – 29.9	<b>By-product of drinking water disinfection.</b>

## How do I read this chart?

It's easy! Our water is tested to assure that it is safe and healthy. These tables are based on tests conducted by Genesee County Drain Commissioner – Division of Water & Waste Services (GCDC-WWS) within the last five (5) calendar years. We conduct many tests throughout the year, however, only tests that show the presence of a contaminant are shown here. The table on this page is a key to the terms used in the following table. Sources of Contaminants show where this substance usually originates.

Key to Detected Contaminants Table		
Symbol	Abbreviation	Definition/Explanation
AL	Action Level	The concentration of a contaminant, which, if exceeded, triggers treatment of other requirements which a water system must follow.
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.
LRAA	Locational Running Annual Average	The average of analytical results for samples at a particular monitoring location during the previous four quarters.
MCL	Maximum Contaminant Level	The highest level of a contaminant that is allowed in drinking water. MCLs are set close to the MCLGs as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal	The level of contaminant in drinking water below which there is no known or expected risk to health.
MRDL	Maximum Residual Disinfectant Level	The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum Residual Disinfectant Level Goal	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRLDG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
n/a	not applicable	Does not apply.
ND	Not detected	Zero or result below the laboratory level.
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
pCi/L	Picocuries Per Liter	A measure of radioactivity.
ppb	Parts per billion (one in one billion)	The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram
ug/L	Micrograms per liter	A microgram = 1/1000 milligrams. 1 microgram per liter is equal to 1 part per billion (ppb).
ppm	Parts per million (one in one million)	The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.
RAA	Running Annual Average	The average of analytical results for all samples taken during the previous twelve months.
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromochloromethane and bromoform. Compliance is based on the total.
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.
>	Greater than	

# For the Monitoring Period Calendar Year 2019, There were No Contaminants Above the MCL Detected in the Mt. Morris Water Supply

Drinking water, including bottled water, may be reasonably 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 (800-426-4781).**

## Drinking Water Improvement Projects

The City of Mt. Morris has a continuing program of improving its water system. The City Council is studying the reports on the water system and considering which projects should be implemented from the water master plan.

## Working hard for you.

Under the Safe Drinking Water Act (SDWA), EPA is responsible for setting national limits for hundreds of substances in drinking water and also specifies various treatments that water systems must use to remove these substances. Similarly, FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Each system continually monitors for these substances and reports directly to the EPA if they were detected in the drinking water. The EPA uses this data to ensure that consumers are receiving clean water and verifying that states are enforcing the laws that regulate drinking water. The publication of this report conforms to the new federal regulation under

SDWA requiring water utilities to provide detailed water quality information to their customers annually. Individual copies of this report will not be mailed but if you would like a copy of this report they can be obtained from the Mt. Morris City Hall, 11649 N. Saginaw, Mt. Morris, MI 48458.

We are committed to providing you with this information about your water supply, because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

## CITY OF MT. MORRIS

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