**City of Mt. Morris** July, 2019

# 2018 Annual Drinking Water Quality Report

# **The City of Mt. Morris is pleased to report that our drinking water meets all state and federal requirements**

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| ***How to obtain additional information.***If you have questions about this report or concerning the City of Mt. Morris Water System, please contact:* Vicki FIshell

City Manager810-686-2160* Paul Zumbach,

DPW Superintendent810-686-8380If you need information on billing practices, rates, etc., please contact:* April Smith

Water Clerk810-686-2160 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 2018 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 contami-

nants , 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 im-mune 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 fram to 24 hours.

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|  | 2018 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** | 2018 Quarterly | ppm | **4** | **4** | **0.79** | **0.53 - 0.79** | No | Erosion of natural deposits; Water additive, which promotes strong teeth; Dischange from fertilizer and aluminum factories. |
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| **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 drinknig water chlorination. |
| **Haloacetic Acids (HAA5)** | 2017 | **ppb** | n/a | **60** | **0.013** | **0.013** | No | By-probuct of drinking water disinfection. |
| **Disinfection Residuals - Monitoring in Distribution System** |   |   |
| **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 |
| **2018 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** |
| **0.7 NTU** | **95%** | 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. |

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| **2018 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 | 2 | 0 | no | Corrosion of household plumbing system; Erosion of natural deposits |
| **Lead** (July-Dec) | **ppb** | 0 | 15 | 5 | 0 | no | See above. |
| **Copper** (Jan-June) | **ppm** | **1.3** | **1.3** | 0.1 | 0 | no | Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatices. |
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| **Copper** (July-Dec) | **ppm** | **1.3** | **1.3** | 0.06 | 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 requiements 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**.

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| **Regulater 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. | Erosion of natural deposits |

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| **Radionuclides 2018** |  |   |   |   |   |   |   |
| **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** | 2018 Quarterly | pCi/L | 0 | 5 | **ND to 1.68 +0.68** | no | Erosion of natural deposits |
| **Gross Alpha** | 2018 Quarterly | pCi/L | 0 | 15 | **0.07+1.41 2.2 + 1.2** | no | Erosion of natural deposits |
| **Unregulated Parameters** | **Unit** | **Average** | **Range Detected** | **Source of Contamination** |
| **Sodium (ppm)** | ppm | **7** | **5-9** | Erosion of Natural Deposits |
| **Nickels** | ppb | **0.36** | **ND to 0.47** | 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 fetermining the occurrence of unregulated contaminants in drinking water and whether future regulations is warranted. Before EPA regulates a contaminant, it considers adverse health effacts, the occurrent of the monitoring for Unregulated contaminants in 2013. The following tables list the unregulated substances detected during the 2018 calender year.

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| **2018 Unregulated Contaminants - Monitored at the Primary Source (AM1: metals, pesticides, alcohols, SVOCs)** |
| Contaminant | Units | Result | Source |
| Bromide | ug/l | 19.8 | **Naturally present in fossil fuels, coal, and shale.** |
| Total Organic Carbon | ug/l | 2.2 | **Erosion of natural deposits.** |
| **2018 Unregulated Contaminants - Monitored in the distribution system (Am1, TP and entry Point)** |
| **Contaminant** | **Units** | **Range** | **Source** |
| Chlorpyrifos | ug/l | ND | **Disinfection byproducts group** |
| Dimethipin | ug/l | ND | **Disinfection byproducts group** |
| Ethoprop | ug/l | ND | **Disinfection byproducts group** |
| Alpha-HCH (alpha-BHC) | ug/l | ND | **Disinfection byproducts group** |
| Oxyfluorfen | ug/l | ND | **Disinfection byproducts group** |
| Permethrin, Total | ug/l | ND | **Disinfection byproducts group** |
| Profenophos | ug/l | ND | **Disinfection byproducts group** |
| Tebuconazole | ug/l | ND | **Disinfection byproducts group** |
| Tribufos | ug/l | ND | **Disinfection byproducts group** |
| **Metals** |  |  |  |
| Germanium, Total | ug/l | ND | **Disinfection byproducts group** |
| Manganese, Total | ug/l | 1.1 | **Disinfection byproducts group** |
| **2018 Unregulated Contaminants - HAA's Monitored in the distribution system (AM2: DB 1 thru 8)** |
| **Contaminant** | **Units** | **Range** | **Source** |
| Monochloroacetic acid (MCAA) | ug/l | <2 | **By-product of drinking water disinfection.** |
| Monobromoacetic Acid (MBAA) | ug/l | <0.3 | **By-product of drinking water disinfection.** |
| Dichloroacetic acid (DCAA) | ug/l | 0.6 - 5.4 | **By-product of drinking water disinfection.** |
| Trichloroacetic acid (TCAA) | ug/l | 0.5 - 7.2 | **By-product of drinking water disinfection.** |
| Bromochloroacetic acid (BCAA) | ug/l | <0.3 - 3.0 | **By-product of drinking water disinfection.** |
| Bromocdichloroacetic acid (BDCAA) | ug/l | <0.5 - 4.0 | **By-product of drinking water disinfection.** |
| Dibromoacetic acid (DBAA) | ug/l | <0.3 - 0.8 | **By-product of drinking water disinfection.** |
| Chlorodibromoacetic (CDBAA) | ug/l | <0.3 - 1 | **By-product of drinking water disinfection.** |
| Tribromoacetic Acid (TBAA) | ug/l | <2 | **By-product of drinking water disinfection.** |
| HAA5 Group | ug/l | 1.1 - 11.5 | **By-product of drinking water disinfection.** |
| HAA5Br Group | ug/l | <0.3 - 7.7 | **By-product of drinking water disinfection.** |
| HAA9 Group | ug/l | 1.1 - 18.5 | **By-product of drinking water disinfection.** |

**How do I read this chart?**

**It’s wasy! Our water is tested to assure that it is safe and healthy. These tables are based on tests conducted by Genesee County Drain Commisioner – 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 ariginates.**

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|   |  **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** | Maximuim 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 micograms 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 2018, 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.

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| **CITY OF MT. MORRIS**11649 N. Saginaw StreetMt. Morris, MI 48458-2092Phone: 810-686-2160Fax: 810-686-7330 |
|  *Duane K. Dunckel, Mayor**Jeff Roth, Mayor Pro-Tem**Jim Freeman, Council Member**Sara Black, Council Member**Josh Thayer, Council Member**Mac Irwin, Council Member**Steve Sorensen, Council Member* |