

Mt. Pleasant

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2023 Annual Drinking Water Quality Report

Water is a necessity for every home and the City of Mt. Pleasant is dedicated to providing quality water to all residents. The City's water treatment plant utilizes six deep wells and a unique horizontal collector well which can gather, on average, 2,300 gallons of source water per minute.

Every year a Water Quality Report for the City of Mt. Pleasant water supply system is provided to federal and state regulatory agencies. A similar report is prepared for all City water customers. The City of Mt. Pleasant is once again pleased to share that the drinking water meets all federal and state requirements. Details are included in this report.

If you have any questions about this report or your water quality, please contact Jason Moore at (989) 779-5405. If you want to learn more about the operation of City government, please attend any of the regularly scheduled City Commission meetings which are held at 7 p.m. on the second and fourth Mondays of every month.

Drinking Water

The City of Mt. Pleasant Water Department routinely monitors for contaminants in the drinking water according to Federal and State laws and sampling directives. The Test Results Table featured in this report, show the results of monitoring during the period of January 1 - December 31, 2023. Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency (EPA's) **Safe Drinking Water Hotline at 1-800-426-4791.**

The sources of drinking water (both tap 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 and can take on minerals and, in some cases, radioactive material, as well as substances resulting from the presence of animals or from human activity.

Source Water

Our source water is groundwater under direct influence of surface water, drawn from six groundwater wells and a Ranney™ horizontal collector well. The groundwater wells are located south and southwest of Mt. Pleasant and range from 120' to 465' deep. The Ranney™ Collector is located southwest of Mt. Pleasant adjacent to the Chippewa River. Water from the wells and the collector is pumped to the

Water Treatment Plant where it is softened, filtered, disinfected and sent to the distribution system.

The State performed an assessment of the City's source water in 2003 to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a six-tier scale from "very low" to "very high" based primarily on geologic sensitivity, water chemistry, and contamination sources. The susceptibility of the groundwater wells ranges from very low to moderate. The susceptibility of the Ranney™ Collector to potential contamination is high. While there are no identifiable sources of contamination present, an effort has been made to protect our source water by implementing and updating a wellhead protection program.

Individuals with Special Health Needs

For those individuals with special health issues and concerns, the following information contains EPA water use guidelines which may be applicable. Some people may be more vulnerable to contaminants in drinking water than others. Immuno-compromised persons include those undergoing chemotherapy, those who have had an organ transplant, people with HIV/AIDS or other immune system disorders, the elderly, and infants. These individuals should seek advice about drinking water from their health care provider.

EPA/Centers for Disease Control (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 at 1-800-426-4791.**

Possible Contaminants Present in Source Water

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

Inorganic contaminants such as salts and metals, can be naturally occurring or result from urban storm water run-off, 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, urban storm water run-off, and residential uses.

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 run-off, and septic systems. Radioactive contaminants can be naturally occurring or be the result of oil and gas production and mining activities.

To ensure tap water is safe to drink, the EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems.

The U.S. Food and Drug Administration (FDA) establishes limits for contaminants in bottled water which must provide the same protection for public health.

Water Treatment and Distribution

The City utilizes an 8.24 million gallon per day capacity lime softening conventional treatment facility. This facility reduces hardness (calcium and magnesium) found in source water and provides high quality aesthetically pleasing drinking water for the community. Approximately 695,769,000 gallons were produced in 2023.

The distribution system is comprised of elevated storage tanks, ground storage reservoirs, a high service pump station, 93 miles of watermain ranging from four inch to 20 inch in diameter, 1,493 watermain valves, 948 hydrants, and 5,560 service line connections. This system provides reliable and abundant water for consumption and fire-fighting capabilities for the community.

Eleven full-time employees staff the City's Water Department. These individuals are responsible for operation and maintenance of the water treatment plant, water distribution system, and completing customer service-related work.

Funding for the Water Department is achieved through an enterprise fund, which is supported by water rates. Funding is used for annual operational and capital improvement plan budgets.

Glossary of Terms and Abbreviations

Non-Detect (ND): the constituent is not present.

NA: Not applicable.

Parts per million (ppm) or Milligrams per liter (mg/L): A measure of the concentration of a contaminant in water. One part per million is equivalent to one minute in two years, or one inch in sixteen miles.

Parts per billion (ppb) or Micrograms per liter (µg/L): A measure of the concentration of a contaminant in water. One part per billion is equivalent to one minute in 2,000 years, or one inch in sixteen thousand miles.

Parts per trillion (ppt) or Nanogram per liter (ng/L): A measure of the concentration of a contaminant in water. One part per trillion is equivalent to one drop of water in 20 Olympic-size swimming pools.

Nephelometric Turbidity Unit (NTU): Turbidity is a measure of the clarity of the water. We monitor turbidity because it is a good indicator of the effectiveness of our filtration system. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

Treatment Technique (TT): A treatment technique is

a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level (MCL): 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.

Maximum Contaminant Level Goal (MCLG): 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): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Running Annual Average (v): The average of analytical results for samples obtained during the calendar year.

Locational Running Annual Average (LRAA): The average of analytical results for samples obtained at a particular monitoring location during the previous four calendar quarters.

Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes/No	Typical Source of Contaminant
Turbidity (100% indicates full compliance)	TT	N/A	100% 0.9 (MAX)	N/A	2023 Daily	No	Naturally present in the environment, soil runoff. Measurement of suspended matter in water. Compliance is measured at the filter confluence point.
Fluoride (ppm)	4	4	0.60	0.2-0.80	2023 Daily	No	Erosion of natural deposits. Water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories.
Chlorine ¹ (ppm)	4	4	0.86	0.3-1.2	2023 Monthly	No	Water additive used to control microbes.
Combined radium (pCi/L)	4	4	<0.50	N/A	2020	No	Erosion of natural deposits.
Sodium ² (ppm)	N/A	N/A	36	N/A	2023	No	Erosion of natural deposits.
TTHM Total Trihalomethanes (ppb)	80	N/A	48.8	38-61	2023 Quarterly Samples	No	Byproduct of drinking water disinfection.
HAA5 ³ Haloacetic Acids (ppb)	60	N/A	10.8	6.4-11.5	2023 Quarterly Samples	No	Byproduct of drinking water disinfection.
Total Organic Carbon (TOC)	TT	N/A	53% removal (25% required)	42 %-74%	2023 Quarterly samples	No	Naturally present in the environment.
Inorganic Contaminant Subject to Action Levels (AL)	Action Level	MCLG	90th percentile (Your Water ⁴)	Range	Year Sampled	AL Exceedance	Typical Source of Contaminant
Lead (ppb)	15	0	1.1	0-5	2021	0	Lead service lines, corrosion of household plumbing including fittings and fixtures. Erosion of natural deposits.
Copper (ppm)	1.3	1.3	0.03	0-0.03	2021	0	Corrosion of household plumbing systems. Erosion of natural deposits.

¹ The chlorine "Level Detected" was calculated using a running annual average.

² Sodium is not a regulated contaminant.

³ TTHM and HAA5 "Level Detected" was calculated using a locational running annual average.

⁴ Ninety (90) percent of the samples collected were at or below the level reported for our water.

⁵ The turbidity numbers in this row are based off the bench top turbidimeter used at the WTP. The violation was recorded from an online instrument. Details of the violation are included in a separate paragraph later in this document.

No MCL Violations

As shown in the Test Results Table there are no MCL violations and the City's drinking water meets or exceeds all Federal and State requirements. More information about contaminants and potential health effects can be obtained by calling the **EPA's Safe Drinking Water Hotline at 1-800-426-4791**.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink two (2) liters of water every day, which is approximately eight – 8 ounce glasses of water, at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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 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 evaluated. 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 1-800-426-4791** or at www.epa.gov/safewater/lead.

Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced, or reduced. The City's water supply is softened, and this process has optimized corrosion control which keeps the amount of lead in the drinking water to a minimum.

Environment Great Lakes and Energy (EGLE) has recently provided further direction on how a water system can effectively identify a water service line. One service line was discovered to have a lead component in 2022 and was replaced shortly thereafter. Out of 5,560 service lines in the City, 5,400 are considered unknown by the latest guidance from EGLE. In the coming years,

the City will be conducting physical verification on a random set of service lines to comply with EGLE's guidelines, and the EPA's Lead and Copper Rule (LCR). The City will also record all service line materials during excavations and repairs.

Lead and Copper sampling takes place tri-annually per regulatory requirements of the EPA's LCR. The sampling was previously performed in 2021 and is scheduled to take place again in the summer of 2024.

Fluoride

Fluoridation is performed at the Water Treatment Plant for dental health purposes. The CDC has the following advice for parents of infants, *"The proper amount of fluoride from infancy through old age helps prevent and control tooth decay. Recent evidence suggests that mixing powdered or liquid infant formula concentrate with fluoridated water on a regular basis may increase the chance of a child developing the faint white markings of very mild or mild enamel fluorosis. Parents should follow the advice of the formula manufacturer and their child's doctor for the type of water appropriate for the formula they are using. Concerned parents and caregivers of infants fed primarily with formula from concentrate can lessen exposure by mixing formula with low fluoride water most or all of the time."*

www.cdc.gov/fluoridation/index.html

In 2015, the US Department of Health and Human Services determined 0.7 ppm (mg/L) of fluoride in water to be the optimal level.

Wellhead Protection Program

The City is in the process of establishing a wellhead protection program ensuring the safety and integrity of our water supply. This plan outlines measures aimed at safeguarding the area surrounding a wellhead from potential sources of contamination, such as industrial activities, agricultural runoff, or improper waste disposal. By implementing strategies like land-use regulation, monitoring, and education, we can mitigate the risk of pollutants infiltrating our groundwater and compromising the quality of our drinking water. This proactive approach not only protects public health but also fosters confidence among consumers in the reliability and safety of their water source.

The Cross Connection Control Program

The Cross Connection Control Program is designed to protect the City's water supply from any unwanted flow from residential, commercial, or industrial customers. A cross-connection is a point in a plumbing system where it is possible for a non-potable substance, such as a chemical, to come into contact with the potable (safe) drinking water supply. The water department oversees inspection and

testing of devices used to prevent cross connections throughout the community as required by federal and state requirements.

Cryptosporidium

To comply with the U.S. EPA Long Term 2 Enhanced Surface Water Treatment Rule (LT2) the City sampled raw (untreated) source water monthly for Cryptosporidium. Samples were analyzed by a certified contracted independent laboratory. Zero Cryptosporidium organisms were detected during the monitoring period (2016 through 2018).

PFAS

Per and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals that include PFOA, PFOS, GenX, and many other chemicals. PFAS compounds have been manufactured and used in a variety of industries in the United States since the 1940s.

Products that contain PFAS include fire-fighting foams, stain repellents, nonstick cookware, waterproof clothing, food wrappers, and many other household products.

EGLE, in collaboration with the Michigan PFAS Action Response Team (MPART), and contracted environmental engineering firm AECOM, monitored all 1,114 community water supplies during the Statewide Testing Initiative in 2018 and 2019. The US EPA has set a lifetime health advisory level (LHA) for PFOA and PFOS. The current LHA is 70 parts per trillion (ppt). EGLE has drafted regulations to add maximum contaminant levels (MCL) for seven specific PFAS compounds.

The City's 2023 1st quarter sampling resulted in finding PFBS during annual testing. This triggered subsequent testing during the 2nd and 3rd quarters that showed non-detect for any PFAS. The City has resumed testing annually.

Synthetic Organic Compounds

In 2022 as part of our required State of Michigan drinking water monitoring schedule, the City sampled for a range of synthetic organic compounds (SOCs). This included a list of pesticides, herbicides, and carbamates.

Results from this sampling showed non-detect levels of these contaminants in the City's drinking water.

Monitoring Violation

The City received a monitoring violation in the 4th quarter of 2023. On November 15th quarterly samples were collected and sent to the contracted laboratory for compliance monitoring. On November 28th, the City was notified that the lab had accidentally ruined the TTHM samples, and resampling was required. The replacement sample kit was shipped and the City recollected the TTHM samples on December 6th. Because this was

testing for a Disinfection By-Product, the City is required to collect the sample in the month of November, this outside lab mishap caused the monitoring violation.

To insure this does not happen again, the following changes have been implemented:

- Samples are now collected during the first week of the month. Therefore, if there is a laboratory complication, more time is available to remedy the situation and avoid any violation.
- The City is keeping spare Disinfection By-Products sample containers on hand, eliminating wait time for extra sample containers.

The Public Notice letter for this violation has been included at the end of this document.

US EPA UCMR

The US EPA Unregulated Contaminant Monitoring Rule (UCMR) samples systems nationwide to collect data for contaminants which are suspected to be present in drinking water and do not currently have health-based standards set under the Safe Drinking Water Act (SDWA). Thirty contaminants are monitored every five years.

In 2019, the City participated in UCMR 4 (4th monitoring period since the rule was implemented).

The 30 contaminants monitored during the UCMR 4 included: 10 cyanotoxins, 2 metals, 8 pesticides, 1 pesticide manufacturing byproduct, 3 brominated haloacetic acid groups, 3 alcohols, and 3 other semi-volatile chemicals.

If interested in receiving a copy of these results please contact **Jason Moore at (989) 779-5405** or by email at **jmoore@mt-pleasant.org**.

The next UCMR sampling will take place in 2025.

General Water Chemistry for 2023

Average Total Hardness: 121

Average Total Alkalinity: 48

Average pH: 9.08

Average Langelier Index: 0.39

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for the City of Mount Pleasant

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During November 1, 2023, to November 30, 2023, we did not correctly monitor for trihalomethanes (TTHM). Therefore, we cannot be sure of the quality of your drinking water during that time.

What should I do? There is nothing you need to do at this time. This is not an emergency. You do not need to boil water or use an alternative source of water at this time. Even though this is not an emergency, as our customers, you have a right to know what happened and what we are doing to correct the situation.

The table below lists the contaminants we did not properly test for, how often we are supposed to sample for these contaminants, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the dates we will collect follow-up samples.

Contaminant	Required sampling frequency	Number of samples taken	When all samples should have been collected	Date additional samples will be collected
TTHM	4 samples every 3 months	0	November 1, 2023 – November 30, 2023	February 1, 2024 – February 29, 2024

What happened? What is being done? We inadvertently collected samples during December 2023 instead of our required month of November 2023. We are making every effort to assure this does not happen again. We will be collecting follow-up samples.

For more information, please contact Jason Moore at 989-779-5405.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

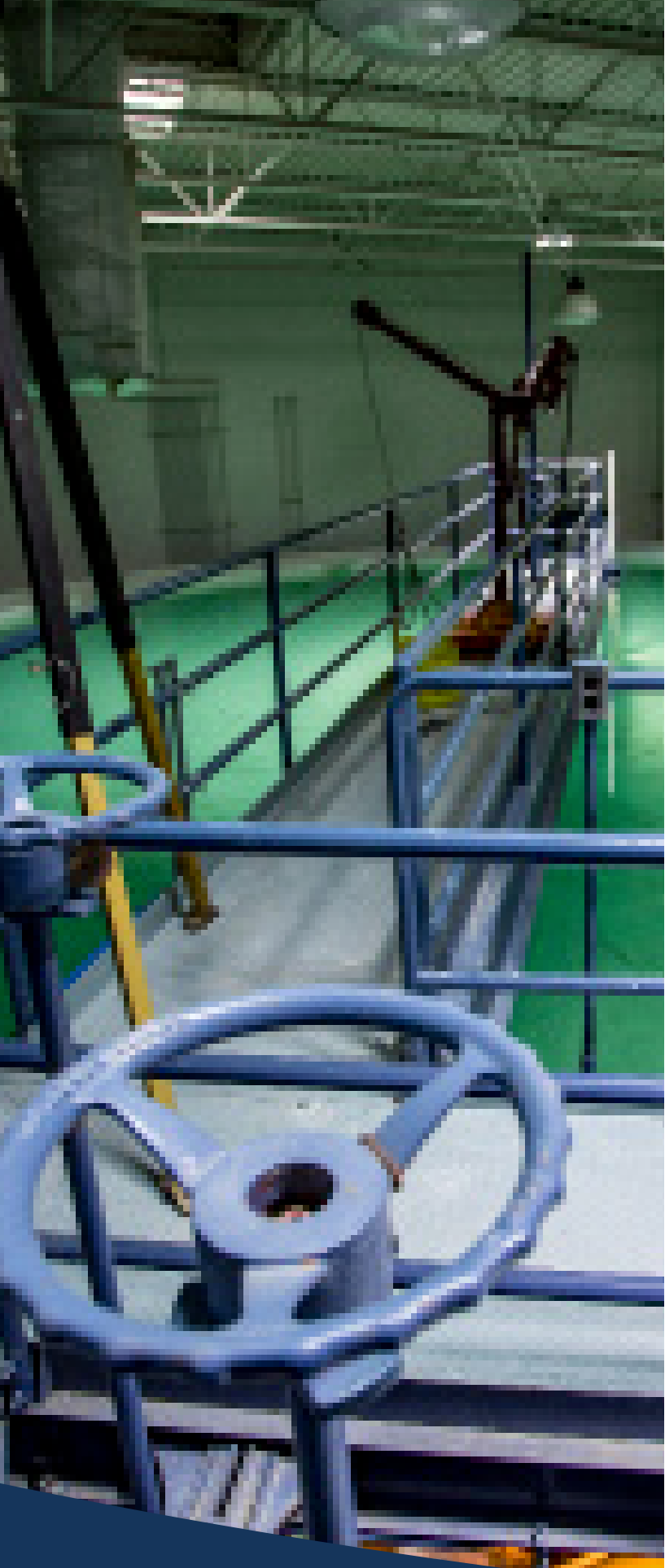
This notice is being sent to you by the City of Mount Pleasant

CERTIFICATION:

WSSN: 04530

I certify that this water supply has fully complied with the public notification regulations in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature: Jason DeFeyer Title: Operator in Charge Date Distributed: 6/15/2024



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