

2023 Water Quality Report

City of Flushing
WSSN 02340

This report presents an overview of the drinking water quality in the City of Flushing throughout the 2023 calendar year. It provides insights into the composition of the water supplied, its origin, constituents, and compliance with standards set by the United States Environmental Protection Agency (USEPA) and state regulations. The City of Flushing sources its drinking water from Genesee County Water, which extracts and treats water from Lake Huron.

We test our water, to ensure safety and health. You can participate in decisions about drinking water quality by attending City Council meetings or calling Flushing City Hall at 810-659-5665. For details about your water or this report, contact Jeffrey Clark at the same number. Learn more about safe drinking water from the U.S. EPA at <http://www.epa.gov/safewater>.

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 (800-426-4791).

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.

- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or 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 can also come from gas stations, urban stormwater 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

Vulnerability of sub-populations:

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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Monitoring and Reporting to the Department of Environment, Great Lakes, and Energy (EGLE) Requirements:

The State of Michigan and the U.S. EPA require us to test our water on a regular basis to ensure its safety. All the monitoring and reporting requirements have been met for 2023. We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. Copies of this report are available at Flushing City Hall 725 E. Main St Flushing Michigan 48433. You may also view this report at www.flushingcity.com



Key to Detected Contaminants Tables

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 the City of Flushing 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	Non-Abbreviated Symbol or Term	Definition/Explanation
AL	Action Level	The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.
HAA5	Halo acetic Acids	HAA5 is the total of bromoacetic, chloroacetic, dibromo acetic, 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 as 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. <i>MCLG's allows for a margin of safety.</i>
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	Result is not detectable at or below the laboratory detection 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	Mathematical symbol that denotes a value "greater than" another value.
	90 th Percentile Value	The concentration of lead or copper in tap water exceeded by 10 percent of the sites sampled during a monitoring period.

2023 Regulated Detected Contaminant Tables

The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some are more than one year old.

Inorganic Chemicals – Monitoring at the Plant Finished Water Tap									
Regulated Contaminant	Test Date	Unit	MCLG, or MRDLG	MCL, TT, or MRDL	Highest Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water	
Fluoride	Daily	ppm	4	4	0.88	0.33 – 0.88	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.	
Barium	2023	ppm	2	2	0.014	0.012 – 0.014	no	Erosion of natural deposits; discharge of metal refineries; discharge of drilling wastes.	
Arsenic	2023	ppb	0	10	0.54	ND – 0.54	no	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	
Nitrate (as Nitrogen)	2023	ppm	10	10	0.5	ND – 0.5	no	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Disinfection By-Products – Monitoring in Distribution System, Stage 2 Disinfection By-Products									
Regulated Contaminant	Test Date	Unit	MCLG, or MRDLG	MCL, TT, or MRDL	Highest LRAA	Range of Detection	Violation yes/no	Major Sources in Drinking Water	
Total Trihalomethanes (TTHM)	2023	ppb	n/a	80	.032	.021-.0545	no	By-product of drinking water disinfection	
Haloacetic Acids (HAA5)	2023	ppb	n/a	60	.011	.009-.016	no	By-product of drinking water disinfection	
Disinfectant Residuals – Monitoring in Distribution System									
Regulated Contaminant	Test Date	Unit	MCLG, or MRDLG	MCL, TT, or MRDL	Highest RAA	Quarterly Range of Detection	Violation yes/no	Major Sources in Drinking Water	
Total Chlorine Residual	2023	ppm	4	4	.40	.06-.83	no	Water additive used to control microbes	
2023 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	
0.09		100%					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.									
2023 Microbiological Contaminants – Monthly Monitoring in Distribution System									
Regulated Contaminant	MCLG	MCL				Highest Number Detected	Violation yes/no	Major Sources in Drinking Water	
Total Coliform Bacteria	0	>1 Positive monthly sample, or Presence of Coliform bacteria > 5% of monthly samples				0	no	Naturally present in the environment	
E. coli Bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or E.coli positive.				0	no	Human waste and animal fecal waste.	
2023 Lead and Copper Monitoring at Customer Tap									
Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Action Level AL	Range	90 th Percentile Value*	Number of Samples over AL	Violation yes/no	Major Sources in Drinking Water
Lead (June 1-September 31)	2023	ppb	0	15	ND	0	0	no	Lead service lines; corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits.

2023 Regulated Detected Contaminant Tables (continued)

Copper (June 1-September 31)	2023	ppm	1.3	1.3	0-0.1	.06	0	no	Corrosion of household plumbing systems; Erosion of natural deposits
	*The 90th percentile value means 90 percent of the homes tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is above 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 Flushing 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 have a lead service line it is recommended that you run your water for at least 5 minutes to flush water from both your home plumbing and the lead service line. 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. Our water supply has zero lead service lines, including 1,913 service lines of unknown material “that likely do not contain lead” out of a total of 3,297 service lines, as in accordance with EGLE guidelines for service line determination.								
Regulated 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 month and because the level was low, there is no TOC removal requirement					Erosion of natural deposits	
Radionuclides 2019									
Regulated contaminant		Test date	Unit	MCLG, or MRDLG	Allowed Level	Level detected	Violation Yes/no	Major Sources in Drinking water	
Combined Radium 226 and 228		2/13/19	pCi/L	0	5	1.1 ± 0.50	no	Erosion of natural deposits	
Gross Alpha		2/13/19	pCi/L	0	15	2.0 ± 1.0	no	Erosion of natural deposits	

2023 Unregulated Detected Contaminant

Contaminant	MCLG	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	11.0	Erosion of natural deposits
Magnesium	n/a	n/a	8.1	Erosion of natural deposits
Sulfate	n/a	n/a	25	Runoff/leaching from natural deposits

