Your Annual Drinking Water Quality Report for
City of Wixom Municipal Water
For January 1, 2023 to December 31, 2023

Dear Water Utility Customer,

We are pleased to present to you this year's Annual Drinking Water Quality 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 wholly committed to ensuring the quality of your water.

Where does my water come from?

Your source water comes from the lower Lake Huron watershed. The watershed includes numerous short, seasonal streams that drain to Lake Huron. The Michigan Department of Environment, Great Lakes, and Energy (EGLE) in partnership with the U.S. Geological Survey, the Detroit Water and Sewerage 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 Lake Huron source water intake is categorized as having a moderately low susceptibility to potential contaminant sources. The Lake Huron water treatment plant has historically provided satisfactory treatment of this source water to meet drinking water standards.

GLWA (Great Lakes Water Authority) has initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction program. GLWA participates in the National Pollutant Discharge Elimination System permit discharge program and has an emergency response management plan. GLWA has a Surface Water Intake Protection plan for the Lake Huron water intake. The plan has seven elements: roles and duties of government units and water supply agencies, delineation of a source water protection areas, identification of potential sources of contamination, management approaches for protection, contingency plans, siting of new water sources, public participation, and public education activities If you would like to know more information about the Source Water Assessment Report. Please, contact GLWA at (313) 926-8127.

The City of Wixom also maintains one standby groundwater well in case the supply from GLWA is interrupted. This well draws water from the Huron River and Rouge River watersheds and is approximately 100 feet in depth. This well was not used to supply water to the City of Wixom in 2023. However, the city is required to sample it in case it ever needs to be used.

The City of Wixom wants their customers to be informed about their water quality and will be glad to answer any questions pertaining to your water supply. If you as a customer are confused or feel misinformed, give your utility the opportunity to clarify things.

We routinely monitor your drinking water for contaminants according to federal and state laws. The following tables included with this report show the results of our monitoring for the period of January 1 to December 31, 2023. Sample results that are more than five years old are not included in the report, even if it is the last available data for the supply (e.g., some metals are collected on a nine-year frequency).

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 Safe Drinking Water Hot Line at 1-800-426-4791.

The State of Michigan and the U.S, EPA require us to test our water on a regular basis to ensure its safety. We have learned from our monitoring and testing that some contaminants have been **detected but are well within the standards**. The EPA has determined that your water is safe at these levels.

Information for people with special health concerns

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. 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 Hot Line (800-426-4791).

The sources of all 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 include:

- **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 can 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 in mining activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limits the number 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.

There is nothing more important to our community than quality drinking water. We will continue to work around the clock 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

The following tables list the drinking water contaminants that were detected during the 2023 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2023. 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 the data is representative of the water quality, but some are more than one year old.

If you have questions concerning the contents of this report or the water utility, contact **F&V Operations and Resource Management, Inc. at 248-960-0870.**

GREAT LAKES WATER AUTHORITY – LAKE HURON WATER TREATMENT PLANT

2023 Inorganic Chemicals - Annual Monitoring at Plant Finished Tap

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level Detected	Range of Detection	Violation	Major Sources in Drinking Water
Fluoride	4-11-2023	ppm	4	4	**0.70**	**n/a**	**no**	Erosion of natural deposit; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	4-11-2023	ppm	10	10	**0.38**	**n/a**	**no**	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Barium	05-16-2017	ppm	2	2	**0.01**	**n/a**	**no**	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.

2023 Turbidity - Monitored Every 4 Hours at the Plant Finished Water Tap

Highest Single Measurement Cannot Exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)	Violation	Major Sources in Drinking Water
0.14 NTU	**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.

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 is measured each quarter and because the level is low, there is no requirement for TOC removal.	Erosion of natural deposits

Radionuclides - Monitored at the Plant Finished Tap in 2014

Regulated Contaminant	Test Date	Unit	MCLG	MCL	Level Detected	Violation	Major Sources in Drinking Water
Combined Radium Radium 226 and 228	**5/13/14**	**PCI/L**	**0**	**5**	**0.86 ± 0.55**	NO	Erosion of natural deposits

2023 Special Monitoring

Contaminant	Test Date	Unit	MCLG	MCL	Highest Level Detected	Source of Contaminant
Sodium	**4/11/23**	ppm	n/a	n/a	**4.8**	Erosion of natural deposits

These tables are based on tests conducted by GLWA in the year 2023 or the most recent testing done within the last five calendar years. GLWA conducts tests throughout the year only tests that show the presence of a substance or require special monitoring are presented in these 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. The data is representative of the water quality, but some are more than one year old.

CITY OF WIXOM – DISTRIBUTION SYSTEM

Lead and Copper - Monitoring at Customer Taps 2023

Regulated Contaminant	Year Sampled	Unit	Health Goal MCLG	Action Level AL	90th Percentile Value*	Range of Individual Samples Results	Number of Samples Over AL	Major Sources in Drinking Water
Lead	2023	ppb	0	15	0 ppb	0 ppb – 0 ppb	0	Lead services lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits.
Copper	2023	ppm	1.3	1.3	0.1 ppm	0.0 ppm – 0.2 ppm	0	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.

2023 Disinfection Residual - Monitoring in the Distribution System

Regulated Contaminant	Test Date	Unit	Health Goal MRDLG	Allowed Level MRDL	Highest Level RAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
Total Chlorine Residual	2023	ppm	4	4	0.76	0.68 – 0.84	No	Water additive used to control microbes

2023 Disinfection By-Products - Monitoring in the Distribution System

Regulated Contaminant	Test Date	Unit	Health Goal MCLG	Allowed Level MCL	Highest Level LRAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
Total Trihalomethanes (TTHM)	2023	ppb	n/a	80	35.00	32.50 – 35.00	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	2023	ppb	n/a	60	13.75	11.75 – 13.75	No	By-product of drinking water chlorination

CITY OF WIXOM – STANDBY WELL

Water Quality Parameters	Year Sampled	MCLG	MCL	Average Result	Range of all Results	Violation	Likely source
Nitrate as N (ppm)	2023	10	10	ND	ND	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite as N (ppm)	2022	1	1	ND	ND	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride (ppm)	2023	4.0	4.0	0.13	ND-0.13	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories

CITY OF WIXOM – STANDBY WELL

Water Quality Parameters	Year Sampled	MCLG	MCL	Average Result	Range of all Results	Violation	Likely source
Chloride (ppm)	2021	N/A	N/A	165.8	9.4 – 420	No	Erosion of natural deposits
Total Sodium (ppm)	2023	N/A	N/A	97	24 – 170	No	Erosion of natural deposits
Total Iron (ppm)	2021	N/A	N/A	5.45	4.9 – 6.0	No	Naturally occurring mineral
Hardness as $CaCO_3$ (ppm)	2021	N/A	N/A	270.8	80 – 560	No	Naturally occurring mineral
Sulfate (ppm)	2021	N/A	N/A	31.8	17 – 50	No	Naturally occurring mineral
Water Quality Parameters	**Year Sampled**	**MCLG**	**MCL**	**Highest Result**	**Range of all Results**	**Violation**	**Likely source**
Gross Alpha – Radiological (pCi/L)	2022	0	15	4.6 ± 1.4	3.2 ± 0.5 – 10.9 ± 0.8	No	Erosion of natural deposits
Radium 226 & Radium 228 (pCi/L)	2022	0	5	4.6 ± 0.7	3.8 ± 0.6 – 4.5 ± 0.6	No	Erosion of natural deposits

CITY OF WIXOM – STANDBY WELL

Per- and polyfluoroalkyl substances (PFAS)

Regulated Contaminant	MCL	MCLG	Level Detected	Range	Year Sampled	Violation	Typical Source of Contaminant
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ppt)	370	N/A	ND	N/A	2023	No	Discharge and waste from industrial facilities utilizing the Gen X chemical process
Perfluorobutane sulfonic acid (PFBS) (ppt)	420	N/A	ND	N/A	2023	No	Discharge and waste from industrial facilities; Stain-resistant treatments
Perfluorohexane sulfonic acid (PFHxS) (ppt)	51	N/A	ND	N/A	2023	No	Firefighting foam; Discharge and waste from industrial facilities
Perfluorohexanoic acid (PFHxA) (ppt)	400,000	N/A	ND	N/A	2023	No	Firefighting foam; Discharge and waste from industrial facilities
Perfluorononanoic acid (PFNA) (ppt)	6	N/A	ND	N/A	2023	No	Discharge and waste from industrial facilities; Breakdown of precursor compounds
Perfluorooctane sulfonic acid (PFOS) (ppt)	16	N/A	ND	N/A	2023	No	Firefighting foam; Discharge from electroplating facilities; Discharge and waste from industrial facilities
Perfluorooctanoic acid (PFOA) (ppt)	8	N/A	ND	N/A	2023	No	Discharge and waste from industrial facilities; Stain-resistant treatments

IMPORTANT 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 services lines and home plumbing. The City of Wixom 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 your 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. Infants and children who drink water containing lead could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. 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 (800-426-4791) or at http://www.epa.gov/safewater/lead.

HEALTH EFFECTS OF RADIOLOGICAL CONTAMINANTS

Radium 226 and Radium 228 were detected above the MCL in the standby wells. However, these wells were not used to supply water to the City of Wixom during 2022. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters or Radium 226 and 228 in excess of the MCL over many years may have an increased risk of getting cancer.

The City of Wixom has 3,439 active service lines. There are 3,439 service lines that are of unknown composition.

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

Symbol	Abbreviation	Definition/Explanation
AL	Action Level	The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.
>	Greater than	
EPA	Environmental Protection Agency	
FDA	Food and Drug Administration Agency	
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, Dibromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.
Level 1	Level 1 Assessment	A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in the water system.
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.
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.

Symbol	Abbreviation	Definition/Explanation
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	
ND	Not Detected	
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.
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 during the previous four quarters.
SMCL	Secondary Maximum Contaminant Level	An MCL which involves a biological, chemical or physical characteristic of water that may adversely affect the taste, odor, color or appearance (aesthetics), which may thereby affect public confidence or acceptance of the drinking water.
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.
µmhos	Micromhos	Measure of electrical conductance of water

Opportunities for Public Participation:

We believe that informed citizens can be strong allies of water systems as they take action on pressing problems. The following is a listing of meeting dates and locations where your elected officials may discuss water system issues.

City Council	Regular Meeting Schedule	Location / Contact
City of Wixom	**2nd Tuesday at 7:00 pm** **4th Tuesday at 7:00 pm** **Monthly**	**City Hall - Council Chambers** **49045 Pontiac Trail** **Wixom, MI 48939** **cityofwixom@wixomgov.org**

.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for the City of Wixom

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 January 1, 2023, to September 30, 2023, we did not complete all monitoring for, per- and polyfluoroalkyl substances (PFAS) at one of the City's standby wells, and therefore, cannot be sure of the quality of the water in that well.

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 did 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 date we will collect follow-up samples.

Contaminants	Required sampling frequency	Number of samples taken	When all samples should have been taken	Date sample was collected
PFAS[1]	Every Year	0	Jan. 1, 2023 – Sept. 30, 2023	Nov. 13, 2023

What happened? What is being done? We collected our annual standby wellhouse PFAS samples on time and submitted them for analysis to a nationally recognized analytical laboratory. A standby well is one that is not used to routinely supply water to the distribution system and is not automatically activated by system controls and is for emergency service. Although no water from the standby wells entered the city's distribution system, they were still required to be sampled.

All sample results were ND (Non-Detect) for PFAS. However, the sample results were not accepted by EGLE because the samples were subcontracted to a laboratory that is not certified in Michigan for PFAS testing. When we were notified of this issue, we were unable to resample one of the two standby wells because it had been taken offline. An offline well is one that cannot provide water to the distribution system without prior mechanical or electrical work.

Our staff is making every effort to assure this does not happen again. We did a follow-up sample on November 13, 2023, which showed results well below the health standards.

For more information, please contact Ruben John, Operator-In-Charge, at 248-514-9468.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly. 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 Wixom.

[1] PFAS are tested by collecting one sample and analyzing that sample for all of the PFAS chemicals. The group of regulated PFAS contaminants includes hexafluoropropylene oxide dimer acid (HFPO-DA), perfluorobutane sulfonic acid (PFBS), perfluorohexane sulfonic acid (PFHxS), perfluorohexanoic acid (PFHxA), perfluorononanoic acid (PFNA), perfluorooctane sulfonic acid (PFOS), and perfluorooctanoic acid (PFOA).