

Key to the Detected Contaminants Table

Symbol	Abbreviation	Definition/Explanation
>	Greater than	
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.
AL	Action Level	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, di-bromoacetic, dichloroacetic, and trichloroacetic acids. Compliance is based on the total.
Level 1	Level 1 Assessment	A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our 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. MCLGs allow a margin of safety.
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. MRDLG'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 all analytical results for all samples during the previous four quarters.
SMCL	Secondary Maximum Contaminant Level	
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

Lead and Copper

IN 2023 HARPER WOODS EXCEEDED THE ACTION LEVEL FOR LEAD. Lead can cause serious health and development problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water. 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 GLWA 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 the water for drinking or cooking. If you have a lead service line it is recommended that you run your water for 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 1-800-462-4791 or at <http://www.epa.gov/safewater/lead>.

Your source water comes from the Detroit River, situated within the Lake St. Clair, Clinton River, Detroit River, Rouge River, Ecorse River, watersheds in the U.S. and parts of the Thames River, Little River, Turkey Creek and Sydenham watersheds in Canada. The Michigan Department of Environmental Quality 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 GLWA's Detroit River source water for potential contamination. The susceptibility rating is based on a seven-tiered scale and ranges from very low to very high determined primarily using geologic sensitivity, water chemistry, and potential contaminant sources. The report described GLWA's Detroit river intakes as highly susceptible to potential contamination. However, all four GLWA water treatment plants that service the city of Detroit and draw water from the Detroit River have historically provided satisfactory treatment and meet drinking water standards.

GLWA 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 Belle Isle Intake. The plan has seven elements that include: 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).

What Happened? What is Being Done?

Harper Woods conducts testing of tap water in homes for lead and copper.

In 2023, we collected samples from 30 homes. 4 homes had results above the Action Level for lead.

Harper Woods has lead in some of its service lines. However, lead can enter drinking water when it is in contact with pipes, solder, home/building interior plumbing, fittings and fixtures that contain lead. Harper Woods receives water from the Great Lakes Water Authority. The Great Lakes Water Authority uses an orthophosphate product for the purposes of corrosion control.

If you are a Harper Woods water customer and would like your service line inspected or would like to have your drinking water tested for lead, contact the Harper Woods DPW at (313) 343-2570.

We will be collecting 60 samples every six months and reviewing the results to determine if corrective actions are necessary to reduce corrosion in household plumbing.

For More Information

Call us at (313) 343-2570 or visit our website at <https://harperwoods.citizenlab.co/en>. Additional information available at Michigan.gov/MiLeadSafe or Michigan.gov/EGLEleadpublicadvisory. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at Epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your healthcare provider.

2023 Northeast Tap Water Mineral Analysis

Parameter	Units	Max.	Min.	Avg.	Parameter	Units	Max.	Min.	Avg.
Turbidity	NTU	3.00	0.03	0.30	Phosphorus	ppm	0.66	0.36	0.47
Total Solids	ppm	157	113	133	Free Carbon Dioxide	ppm	16.4	6.7	10.0
Total Dissolved Solids	ppm	159	101	129	Total Hardness	ppm	138	98	113
Aluminum	ppm	0.071	0.018	0.038	Total Alkalinity	ppm	94	68	81
Iron	ppm	0.4	0.2	0.3	Carbonate Alkalinity	ppm	ND	ND	ND
Copper	ppm	0.003	0.001	0.001	Bi-Carbonate Alkalinity	ppm	94	68	80
Magnesium	ppm	8.3	6.7	7.7	Non-Carbonate Hardness	ppm	48	8	32
Calcium	ppm	28.6	24.9	26.6	Chemical Oxygen Demand	ppm	9.2	ND	4.6
Sodium	ppm	7.3	4.6	5.4	Dissolved Oxygen	ppm	13.5	7.3	10.2
Potassium	ppm	1.3	0.9	1.0	Nitrite Nitrogen	ppm	ND	ND	0.0
Manganese	ppm	ND	ND	ND	Nitrate Nitrogen	ppm	0.64	0.30	0.38
Lead	ppm	ND	ND	ND	Fluoride	ppm	0.86	0.50	0.63
Zinc	ppm	0.003	ND	ND	pH		7.35	7.03	7.21
Silica	ppm	2.8	1.6	2.1	Specific Conductance @ 25 °C.	µmhos	262	177	213
Sulfate	ppm	34.9	22.3	25.8	Temperature	°C	23.2	6.7	15.0
Chloride	ppm	14.0	7.5	10.4					



CITY OF HARPER WOODS WATER DEPARTMENT
19600 E 8 Mile Rd, Harper Woods, MI 48225

2023 CONSUMER'S ANNUAL REPORT ON DRINKING WATER QUALITY

This is an important Report on Your Drinking Water Quality

The City of Harper Woods wants you to know that your tap water meets or exceeds all federal and state standards for quality and safety.

Warning about the vulnerability of some populations to contaminants in drinking water.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as person 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).

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. City of Harper Woods 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 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 at 1 800 426 4791 or at <http://www.epa.gov/safewater/lead>.

Infants and children who drink water containing lead could experience delays in their physical and 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 your home has a lead service line or piping that has lead soldered joints you can take the following precautions to minimize your exposure to lead that may have leached into your drinking water from your pipes:

- Run your water for 30 seconds to 2 minutes, or until it feels cold. This practice would be followed anytime your water has not been used for more than 6 hours.

- Always use cold water for drinking, cooking or making baby formula.

- Everyone can consider using a filter to reduce lead in drinking water. MDHHS recommends every household use a certified lead filter to reduce lead from their drinking water, especially households with a child, or a child frequently visits the home, pregnant person, or individual with high blood pressure, or people residing in houses built before 1987.

- Look for filters that are tested and certified to NSF/ANSI Standard 53 for lead reduction and NSF/ANSI Standard 42 for particulate reduction (Class I). Some filter options include a pour-through pitcher or faucet-mount systems. If the label does not specifically mention lead reduction, check the Performance Data Sheet included with the device. Be sure to maintain and replace the filter device in accordance with the manufacturer's instructions to protect water quality.

- Identify older plumbing fixtures that likely contain lead. Older faucets, fittings, and valves sold before 2014 may contain higher levels of lead, even if marked "lead-free." Faucets, fittings, and valves sold after January 2014 are required to meet a more restrictive "lead-free" definition but may still contain up to 0.25 percent lead. When purchasing new plumbing materials, it is important to look for materials that are certified to meet NSF standard 61. The EPA prepared a brochure that explains the various markings that can indicate that materials meet the new "lead free" definition: <https://nepis.epa.gov/Exec/ZyPDF.cgi?Dockey=P100LVYK.txt>.

Clean your aerator. The aerator on the end of your faucet is a screen that will catch debris. This debris could include particulate lead. The aerator should be removed at least every six months to rinse out any debris.

We welcome your comments and opinions regarding this report. We will be happy to answer any questions you may have. Please direct your comments or questions to the Department of Public Works at 313.343.2570 or the City Manager's Office at 313.343.2505.

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Postal Customer
Harper Woods, MI 48225

LCR Info

During our continued inspections, in 2023 we identified the following:

Out of 5671 service lines -

105 lead services lines

2400 unknown materials - still need identification.

We will continue to identify lead service lines in 2024 at various locations throughout the City.

Monitoring and Reporting Requirement:

The State and EPA require us to test our water on a regular basis to ensure its safety.

In an ongoing effort to provide safe clean drinking water to all our customers, homeowners should be aware that cross connections in their homes could be putting themselves and their neighbors at risk.

A cross connection is any physical connection (plumbing), direct or indirect, which provides a potential opportunity for contaminants to enter your plumbing and drinking water. You may already have little brass backflow prevention devices on your laundry tubs and outdoor faucets. There are other potential sources of backflow. They are typically found on inground lawn irrigation (sprinklers), boilers, and hot tubs. These devices are there for the benefit of and to protect the homeowner as well as the rest of the public water system.

The homeowner would be responsible for having an approved device tester conduct a test on any backflow preventers and the cost of the testing. Based on the city's cross connection program, frequency would be determined by the city and depend of the degree of hazard found during the first inspection. Backflow prevention devices on your laundry tubs or outdoor faucets do not need to be inspected.

Dear Residents and Customers of the City of Harper Woods Water Department:

The United States Environmental Protection Agency (EPA) issued new federal regulations requiring water utilities to annually issue a “Consumer Confidence Report” to all of its customers. This report is provided to customers of the Harper Woods water system. Future reports will be issued in July of each year.

As you likely know, the City of Harper Woods purchases its water from the City of Detroit for distribution to all of our homes and businesses. Detroit provides water to approximately 4.2 million people (nearly one-half of Michigan’s population) in 126 Michigan communities. The system uses water drawn from two intakes in the Detroit River, one to the north near the mouth of Lake St. Clair and one to the south near Lake Erie. The water is directed to four large water treatment plants for processing, one of which services Harper Woods; the Northeast Treatment Plant.

The City of Detroit’s treatment facilities operate 24 hours a day, seven days a week. They are staffed by licensed operators and technicians. In addition to a carefully controlled and monitored treatment process, the water is tested for a variety of substances before treatment, during various stages of treatment and throughout the distribution system including Harper Woods.

The City of Detroit routinely takes samples of water from our system. These samples are tested in their certified laboratories by highly qualified, trained staff.

They are required to follow guidelines set forth by the EPA and EGLE - Environment, Great Lakes and Energy.

Test results of water samples taken in Harper Woods are provided to us on a regular basis. Detroit water not only meets or exceeds all safety and health standards, but also ranks among the top ten systems in the country for quality and value.

The rest of what follows in this report is language that is mandated by the U.S. Environmental Protection Agency. As well, the chart included with this report is required information that show contaminant rest results for the Northeast Water Treatment Plant. You will note that there are no violations at the treatment facility.

Contaminants reasonably expected to be found in drinking water.

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 Environmental Protection Agency’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 can dissolve naturally occurring minerals and, in some cases, radioactive materials, 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 discharge, 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 by-products 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 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 the water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for human health.

GLWA voluntarily monitors for Cryptosporidium and Giardia in our source water monthly. The untreated water samples collected from our Belle Isle Intake indicated the presence of one Giardia cyst in December 2023 and one Cryptosporidium oocyst in March 2023. All other samples collected from the Bell Isle Intake in 2023 were absent for the presence of Cryptosporidium and Giardia. Systems using surface water like GLWA must provide treatment so that 99.9 percent of Giardia lamblia and Cryptosporidium is removed or inactivated. GLWA’s drinking water treatment process is designed to remove and inactivate these protozoans.

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

2023 Northeast Regulated Detected Contaminants Table

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	04-11-2023	ppm	4	4	0.65	n/a	no	Erosion of natural deposit; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	04-11-2023	ppm	10	10	0.64	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Lead and Copper Monitoring at the Customer’s Tap in 2023								
Regulated Contaminant	Unit	Year Sampled	Health Goal MCLG	Action Level AL	90 th Percentile Value*	Range of Individual Samples Results	Number of Samples Over AL	Major Sources in Drinking Water
Lead	ppb	2023	0	15	47 ppb	0-83 ppb	4	Lead services lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits.
Copper	ppm	2023	1.3	1.3	0.1 ppm	0-0.1 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
Chlorine Residual	2023	ppm	4	4	0.69	0.55-0.76	no	Water additive used to control microbes

2023 Disinfection By-Products - Stage 2 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
(TTHM) Total Trihalomethanes	2023	ppb	n/a	80	46	20-46	no	By-product of drinking water chlorination
(HAA5) Haloacetic Acids	2023	ppb	n/a	60	6.5	5.0-6.5	no	By-product of drinking water chlorination

VIOLATION NOTICE - Reporting for Public Education Distribution Certification

The PE distribution documentation requirements were outlined in the Action Level Exceedance letter sent to the Harper Woods dated October 27, 2023. EGLE records show Harper Woods distributed the PE materials by the due date of November 29, 2023

(60 days after the end of the monitoring period), but did not turn in the PE distribution certification form by the due date of December 9, 2023.

EGLE’s investigation is considered complete. This issue began on December 10, 2023, and continued until the form was received on December 12, 2023.

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
0.11 NTU	100%	no	Soil Runoff

Turbidity is a measure of the cloudiness of the 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

2023 Special Monitoring						
Contaminant	Test Date	Unit	MCLG	MCL	Highest Level Detected	Source of Contaminant
Sodium	04-11-2023	ppm	n/a	n/a	7.3	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.

About Unregulated Contaminant Monitoring

Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where these contaminants occur and whether it needs to regulate those contaminants.

UCMR table

Unregulated Contaminant	Average Level Detected	Range	Year Sampled	Comments
Lithium ppm	ND		2023	
PFAS 533 ppm PFAS 537.1 ppm	ND		2023	

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER TOC Removal Requirements Not Met

The Great Lakes Water Authority (GLWA) Water Works Park Treatment Plant was recently cited for a treatment technique violation for inadequate removal of Total Organic Carbon (TOC). GLWA routinely monitors our source water from the Detroit River for TOC, the amount of carbon found in natural organic compounds. TOC removal is calculated as the ratio between the actual TOC removal and the TOC removal requirements. Our TOC removal ratio during the third quarter of 2023 was 0.46, less than the standard Safe Drinking Water Act requirement of 1.00.

The TOC levels in source water and treated water are monitored quarterly to measure TOC levels and the removal efficiency of the treatment process. Historically, TOC levels in the source water have been low enough that the determination of TOC removal efficiency has not been necessary. However, in the past year, TOC levels in the Detroit River have increased, triggering removal requirements. Normal treatment processes were not able to meet the TOC removal requirements in the third quarter of 2023.

What does this mean?

This is not an emergency. This notice is required to be distributed to all customers within 30 days of the violation being identified. If a situation arises where the water is not safe to drink, you will be quickly notified within 24 hours.

TOG has no health effects; however, TOG provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the Maximum Contaminant Level (MCL) may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

All drinking water standards for disinfection byproducts in the water delivered to our customers have been met. The water is safe for drinking and all other uses, and no alternative water sources are needed.

What is being done?

We are investigating the reason for the increased TOC in our source water and are taking steps to improve the removal efficiency of our treatment process. This will include increased monitoring at our compliance points. We expect to make necessary improvements to prevent future violations. You will be notified if a future violation occurs.

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.

For more information, please contact:

Patrick Williford, GLWA Water Quality Manager - 313.926.8127, waterquality@glwater.org

This notice is being sent to you by Great Lakes Water Authority.

CERTIFICATION: 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. WSSN: 02838

Signature:  Patrick Williford
2023.12.13 14:34:22 -05'00'

Title: Water Quality Manager.

Date Distributed: 12/13/2023