FERNDALE

2024 Consumers' Annual Report on Water Quality

DELIVERY OF SAFE WATER IS OUR PRIMARY MISSION

The City of Ferndale ad the Great Lakes Water Authority (GLWA) are committed to meeting state and Federal water quality standards including the Lead and Copper Rule. With the Great Lakes as our water source and proven treatment technologies, the GLWA consistently delivers safe drinking water to our community. Ferndale operates the system of water mains that carry water to your home's service line. This year's Water Quality Report highlights the performance of GLWA and Ferndale Water Department professionals in delivering some of the nation's best drinking water. Together, we remain committed to protecting public health and maintaining open communications with the public about our drinking water. Drinking water quality is important to our community and the region.

Our Essential Commodity...Water

The City of Ferndale Water Department wants you to know that your tap water meets or surpasses all federal and state standards for quality and safety. We are pleased to show you ow we have surpassed water quality standards mandated by the Environmental Protection Agency (EPA) and the State of Michigan Department of Environment, Great Lakes and Energy (EGLE).

The 2024 Annual Consumers' Report of Water Quality was compiled by your Department of Public Works and distributed to the community. This report is an unfunded mandate, requirement by the U.S. Environmental Protection Agency and the State of Michigan Department of Environment, Great Lakes & Energy. All water distributors are required to distribute an annual Water Quality Report.

The City of Ferndale and the Great Lakes Water Authority (GLWA) are proud of the fine drinking water they supply and are pleased to provide this informational report to you. The 2024 Consumers' Annual Report on Water Quality shows the sources of our water, lists the results of water quality tests, and contains important information about water and health. We will notify you immediately if there is ever any reason for concern about our water.

Ferndale and the Great Lakes Water Authority are committed to safeguarding our water supply and delivering the highest quality drinking water to protect public health. Please contact us at 248-546-2519 with any questions or concerns about your water.

How Do We Get It

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 State of Michigan Department of Environment, Great Lakes and Energy 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. GLWA's Northeast plant that draws water from the Detroit River has 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.

How It Works

The Great Lakes Water Authority (GLWA) water treatment and transmission facilities operate twenty-four hours a day, seven days a week.

The treatment process begins with disinfecting the source water with chlorine to kill harmful microorganisms that can cause illness. Next, a chemical called Alum is mixed with the water to remove the fine particles that make the water cloudy or turbid. Alum causes the particles to clump together and settle.

The water then flows through fine sand filters called beds. These filters remove even more particles and certain microorganisms that are resistant to chlorine.

Finally, a small amount of phosphoric acid, flouride and chlorine are added to the treated water before it leaves the treatment plant. The phosphoric acid helps control the lead that may dissolve in water from household plumbing systems. Fluoride is added to protect teeth from cavities and decay. The chlorine keeps the water disinfected as it travels through the distribution system to your home.

In addition to this 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.

The GLWA, the third largest water and sewer utility in the country, provides water that not only meets safety and health standards, but also ranks among the top ten in the country for quality and value.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for human health.

Lead and Copper

Safe drinking water is a shared responsibility. The water that GLWA delivers to our community does not contain lead. Lead can leach into drinking water through home plumbing fixtures, and in some cases, customer service lines. Corrosion control reduces the risk of lead and copper from leaching into your water. *Ortho*-phosphates are added during the treatment process as a corrosion control method to create a protective coating in service pipes throughout the system, including in your home or business. The City of Ferndale performs required lead and copper sampling and testing in our community. Water consumers also have a responsibility to maintain the plumbing in their homes and businesses, and can take steps to limit their exposure to lead.

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed}, and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. The City Of Ferndale is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time.

You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly.

Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes, You can do this by running your tap, taking a shower, doing laundry, or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for at least 5 minutes to flush water from both your home plumbing and the lead service line. 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 and wish to have your water tested, contact Ferndale Public Works Department, 248-546-2519, for available resources. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at **https://www.epa.gov/safewater/lead/.**

There is no safe level of lead in drinking water. Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of persons who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

NORTHEAST WATER TREATMENT PLANT
2024 REGULATED DETECTED CONTAMINANTS TABLES

2024 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	2/13/2024	ppm	4	4	0.47	n/a	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	2/13/2024	ppm	10	10	0.32	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 2024

Regulated Contaminant	Unit	Year Sampled	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	ppb	2024	0	15	7	0-17	1	Lead service lines, corrosion of household plumbing including fittings and fixtures; erosion of natural deposits.
Copper	ppm	2024	1.3	1.3	0.1	0-0.5	0	Corrosion of household plumbing systems, emersion 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 perentile value is above the AL additional requirements must be met.

2024 Disinfectant Residuals – Monitoring in the Distribution System

Regulated Contaminant	Test Date	Unit	Health Goal MRDLG	Allowed Level MDRL	Highest Level RAA	Range of Quarterly Results	Violation	Major Sources in Drinking Water
Chlorine Residual	2024	ppm	4	4	0.77	0.68-0.82	No	Water additive,used to control microbes.

2024 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) Trihalomethanes	2024	ppb	n/a	80	0.0263	0.0150		NoBy-product of drinking water cholorination
Haloacetic Acids (HAA5)	2024	ppb	n/a	60	0.0145	0.0100		NoBy-product of drinking water disinfection

Some people who drink trihalomethanes (TTHM) in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

2024 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
0.28 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. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

2024 SPECIAL MONITORING

Contaminant	Test Date	Unit	MCLG	MCL	Highest Level Detected	Source of Contamination
Northeast	2/13/24	ppm	n/a	n/a	5.3	Erosion of nautural deposits

Regulated Contaminant	TREATMENT TECHNIQUES	Typical Source of Contaminants
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 requirement for TOC removal.	Erosion of natural deposits

These tables are based on tests conducted by GLWA in the year 2024 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.

Water Service Connections by Service Line Material

Year	Number of Lead Service Lines	Number of Service Lines of Unknown Material	Total Number of Service Lines
2024	673	5,384	10,138
2023	388	6,159	10,138

In 2022, the City of Ferndale replaced a total of 611 lead service lines and 145 copper lines.
The City of Ferndale has replaced 501 lead service lines since 2023.
516 is the total number of Lead Service Lines replaced in 2024.

KEY TO DETECTED CONTAMINANTS TABLE		
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	Celcius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.
>	Greater Than	
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 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 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. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal	The level of contaminate in drinking water below which there is no known or expected risk to health. MCLG's allow a margin of safety.
MRDL	Maximum Residual Disinfectant Level	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.
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 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 total.
µmhos	Micromhos	Measure of electrical conductance of water

Contaminants That Might Be There

- **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 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 runoff, and residential uses.
- **Organic chemical** contaminants, including synthetic and volatile organics products of industrial processes and petroleum 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 occuring 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.

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.

Unregulated Contaminants

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

Some other unregulated but monitored contaminants are: arsenic, coliform, e.coli, fluoride, nitrate, cryptosporidium giardia. and radon. Giardia is a tiny germ that lives in poop and can contaminate water, food or surfaces. If found, assessment(s) are made to correct the problem. Your concerns about these contaminants and their potential health effects can be addressed by calling the EPA's Safe Drinking number, 1-800-426-4791.

Unregulated Contaminants Voluntarily Monitored

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.

Radon is a naturally occurring gas present in some ground water. It poses a lung cancer risk when the radon gas is released from water into air (as occurs during showering, bathing, or washing dishes or clothes), and a stomach cancer risk when you drinking water containing radon. Radon gas released from drinking water is a relatively small part of the total radon in air. Other sources of radon gas are soils which enter homes through foundations, and radon inhaled directly while smoking cigarettes. Experts are not sure exactly what the cancer risk is from a given level of radon in your drinking water. If you are concerned about radon in your home, tests are available to determine the total exposure level. For additional information on how to have your home tested contact [insert name of health department or local phone number to obtain test kits.

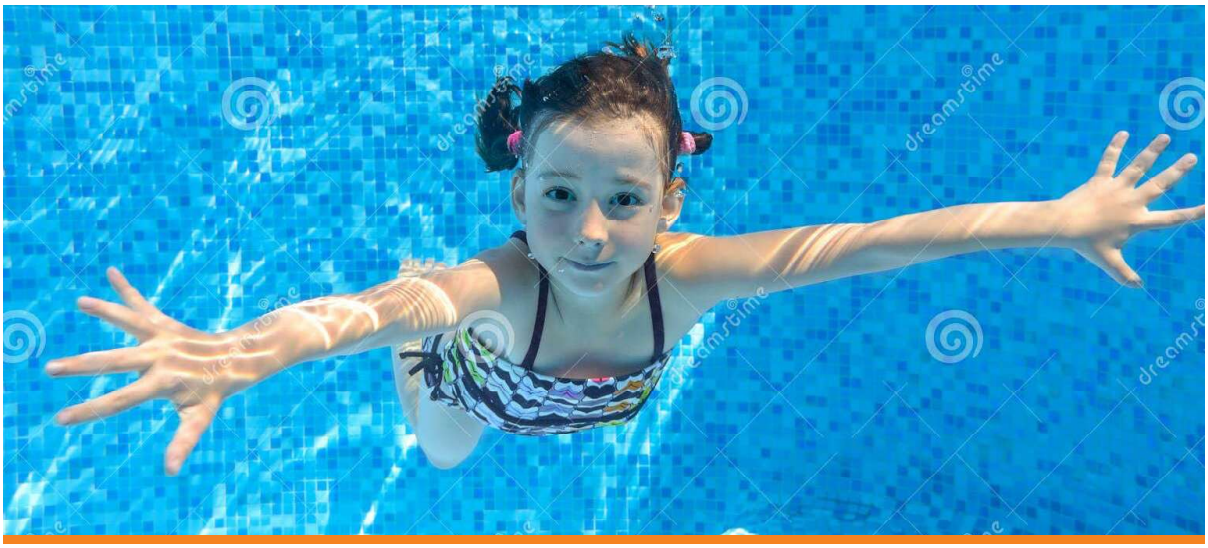
Arsenic: While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct the problems that were found during these assessments.

Fluoride: Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than 9 years old. Mottling, also known as dental fluorosis, may include brown staining or pitting of the teeth, or both, and occurs only in developing teeth before they erupt from the gums.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.

Nitrate: Infants below the age of 6 months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome. *Rev. 01/2025*



Your 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 Administration's Safe Drinking Water Hotline at 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 occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Keeping You Healthy

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immune-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).

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than other homes in the community as a result of materials used in your home's plumbing.

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. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Spanish-Speaking Individuals

"El informe contiene informacion importante sobre la calidad del agua en su comunidad. Traduzcalo o hable con alquien que lo entienda bien."

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Ferndale, MI 48220

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If you would like more information about this report, please contact the Department of Public Works Water Department at 248-546-2519.

DEPARTMENT OF PUBLIC WORKS

248-546-2519

Mon-Thurs, 7:30 a.m.– 4:00 p.m.
Friday 7:30 a.m.–11:30 a.m.

IMPORTANT NUMBERS

Water Billing Department | 248-546-2374
Water billing, water meter issues or questions (high bills, leaks, etc.)
Mon-Thurs, 8:00 a.m.-5:30 p.m.

Ferndale Police Department non-emergency | 248-541-3650
Water or Sewer emergencies (such as water main breaks, sewer backups and sink holes)

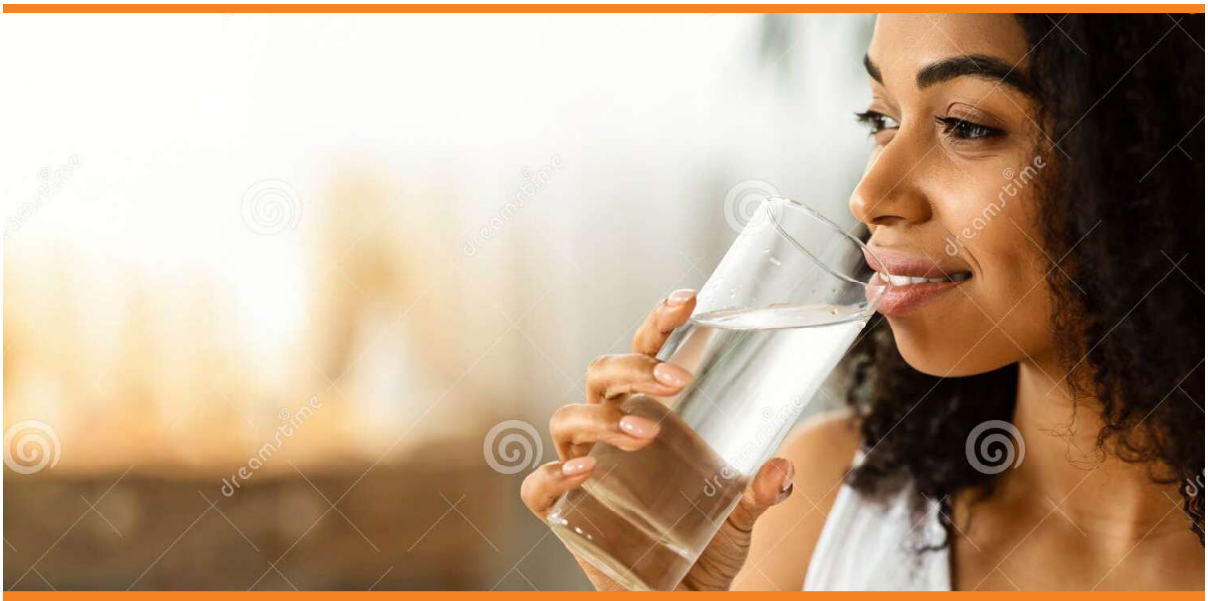
US Environmental Protection Agency | 800-426-4791

PUBLIC PARTICIPATION IS ALWAYS WELCOME!

Ferndale City Council meets at 7:00 p.m. on the second and fourth Monday of each month. Meeting agendas are posted outside City Hall, located at 300 E. Nine Mile Road, and online at **www.ferndalemi.gov/council-meetings.**

The **Great Lakes Water Authority (GLWA)** meets the fourth (4th) Wednesday of each month.

Call **844-455-4592** for information.



We welcome your comments and feedback about this report and are happy to answer any questions you may have; please call us at 248-546-2519. This Water Quality Report describing the source and quality of your water is available on our city website, Facebook and Twitter.