

2024 Water Quality Report for the Village of Baroda



Water Supply Serial Number: 00420

This report covers the drinking water quality for the Village of Baroda for the 2024 calendar year. This information is a snapshot of the quality of the water that we provided to you in 2024. Included are details about where your water comes from, what it contains, and how it compares to United States Environmental Protection Agency (U.S. EPA) and state standards.

Where does my water come from?

Your water is provided by the Lake Charter Township Water Treatment Plant (LCTWTP). Source water is pumped from Lake Michigan.

Source water assessment and its availability.

Your water comes from Lake Michigan. The Michigan Rural Water Association performed an assessment in 2021 to determine the susceptibility or the potential of contamination. Sensitivity/susceptibility ratings use a six-tiered scale from "very-low" to "high," based primarily on geologic sensitivity, water chemistry, and contaminant sources. Using the Great Lakes Protocol for assessing the intake sensitivity and susceptibility, LCTWS's intake sensitivity is Moderate, and the susceptibility is Moderately High.

Contaminants and their presence in 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 U.S. EPA's Safe Drinking Water Hotline (800-426-4791).

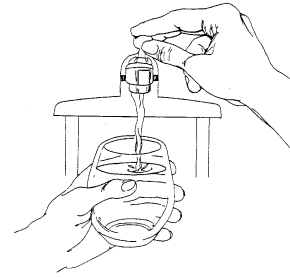
Vulnerability of sub-populations: Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune systems 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. U.S. EPA/Center for Disease Control 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).

Sources of drinking water: The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water comes from 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 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 and residential uses.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.
- **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.



In order to ensure that tap water is safe to drink, the U.S. EPA prescribes regulations that limit the levels of certain contaminants in water provided by public water systems. Federal Food and Drug Administration regulations establish limits for contaminants in bottled water which provide the same protection for public health.

Description of water treatment process.

Your water is treated at the Lake Charter Township water treatment plant in a “treatment train” (a series of processes applied in a sequence) that includes coagulation, flocculation, sedimentation, filtration, and disinfection. Coagulation removes dirt and other particles suspended in the source water by adding chemicals (coagulants) to form tiny sticky particles called “floc,” which attract the dirt particles. Flocculation (the formation of larger flocs from smaller flocs) is achieved using gentle, constant mixing. The heavy particles settle naturally out of the water in a sedimentation basin. The clear water then moves to the filtration process where the water passes through sand, gravel, charcoal, or other filters that remove even smaller particles. A small amount of chlorine or other disinfection method is used to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water before the water is stored and distributed to home and businesses in the community. The water quality is continuously monitored and ensured by hundreds of tests performed each day.

Water Quality Data

The table below lists all the drinking water contaminants that we detected during the 2024 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, 2024. 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.

Terms and abbreviations used below:

- 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 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 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.
- Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
- N/A: Not applicable
- ND: not detectable at testing limit
- ppm: parts per million or milligrams per liter
- ppb: parts per billion or micrograms per liter
- ppt: parts per trillion or nanograms per liter
- pCi/l: picocuries per liter (a measure of radioactivity)
- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- Level 1 Assessment: A study of the water supply to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- Level 2 Assessment: A very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Baroda's water distribution system

Once the drinking water is pumped from the Lake Township water plant to our distribution system, it is tested for chlorine residual and possible bacteriological contamination, as well as other contaminants.

VILLAGE OF BARODA WATER DISTRIBUTION SYSTEM							
Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes/No	Typical Source of Contaminant
TTHM Total Trihalomethanes (ppb)	80	N/A	57	43-75	2024	NO	Byproduct of drinking water disinfection
HAA5 Haloacetic Acids (ppb)	60	N/A	33.13	28-44	2024	NO	Byproduct of drinking water disinfection
Chlorine ¹ (ppm)	4	4	1.32	.63 – 1.65	2024	No	Water additive used to control microbes
Inorganic Contaminant Subject to Action Levels (AL)	Action Level	MCLG	Your Water ²	Range of Results	Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	0	2.3	0 - 2.3	2024	0	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper (ppm)	1.3	1.3	0.1	0 - 0.10	2024	0	Corrosion of household plumbing systems; Erosion of natural deposits

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

² Ninety (90) percent of the samples collected were at or below the level reported for your water.

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 Village of Baroda 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 0 lead service lines and 66 service lines of unknown material out of a total of 470 service lines.

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. We met all the monitoring and reporting requirements for 2024.

We will update this report annually and will keep you informed of any problems that may occur throughout the year, as they happen. Copies are available at the Village of Baroda Municipal Building, 9091 First St. and will also be available on our website at www.barodavillage.org.

We invite public participation in decisions that affect drinking water quality. Village Council Meetings are held at 6:30 p.m. on the first Monday of each month at the Baroda Municipal Building. For more information about your water, or the contents of this report, contact the village hall. For more information about safe drinking water, visit the U.S. EPA at <http://www.epa.gov/safewater>.

LAKE CHARTER TOWNSHIP WATER SYSTEM

8351 Red Arrow Highway Bridgman, MI 49106



2024 WATER QUALITY REPORT



CONTACTS

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ASST SUPERINTENDENT.....	Toby Riley
WATER PLANT OPERATORS	Jeff McKinley, Dan Vollrath, Lyndsey Arny, John Miller
MAINTENANCE	Wally Miel
DISTRIBUTION OPERATORS	Dan Scheer, Eric Zelmer, Alex Mead, Dan Rudolph
WATER PLANT	269-465-3850
BILLING COORDINATOR	Tracy Dettman 269-465-6601

Greetings

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). If you have any questions or would like to tour the water plant, please feel free to contact me at jburkhardtwater@lake-township.org.

Please visit our website at:
www.lakechartertownshipwater.org

- Jeff Burkhard, Water Plant Superintendent

How to read this report

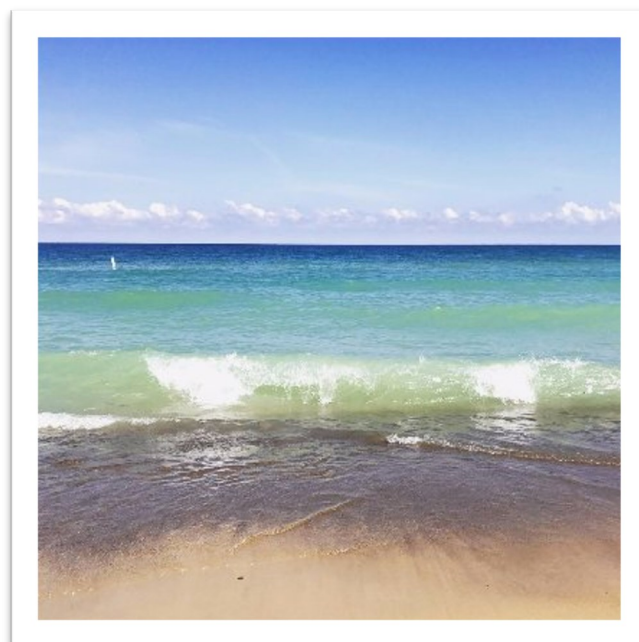
The 2024 Lake Charter Township Water System Water Quality Report (consumer confidence report) is listed in multiple sections. The data tables are listed with the section information for easy reference. In the spirit of transparency, we have added all of the contaminants that were tested in 2024. That is why you will notice multiple contaminants that resulted in non-detect or ND. We are fortunate to have such a great source for our drinking water, Lake Michigan.

How can I get involved

For any specific questions or concerns on how to get involved in water conservation, source water protection or other water issues, log on to the EPA website www.epa.gov

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Calm Waves of Lake Michigan

DRINKING WATER

MICROBIOLOGICAL ANALYSIS



Is my water safe?

This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory

agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

Where does my water come from?

Lake Charter Township draws its source water from Lake Michigan. In 2024, water was pumped at an average rate of 1.58 million gallons daily.

It is mixed with sodium hypochlorite and aluminum sulfate. The water remains in four large basins to allow disinfection and settling of suspended matter.

It is then filtered, and the water quality is continuously monitored and ensured by hundreds of tests performed daily. Once the drinking water is pumped from the filtration plant, it is checked for free available chlorine residual and possible microorganisms. We also contract with independent laboratories to test numerous possible contaminants entering the water supply.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range	Sample Date	Violation	Typical Source
Microbiological Contaminants							
Total Coliform Bacteria	TT	0	0	0	2024	No	Naturally present in the environment
E. coli (RTCR) - in the distribution system	0	Routine and repeat samples are total coliform positive and either is E. coli - positive or system fails to take repeat samples following E. coli positive routine sample or system fails to analyze total coliform positive repeat sample for E. coli.	0	NA	2024	No	Human and animal fecal waste.

SOURCE WATER ASSEMENT

ANALYSIS

Source Water Assessment and its Availability

The purpose of the Source Water Assessment is to analyze the sensitivity and determine susceptibility of a community's source of drinking water to potential sources of contamination. In 2021 the Michigan Rural Water Association conducted a source water assessment for Lake Charter Township Water System.

Sensitivity is determined from the natural setting of the source water (raw water to the water treatment plant), and indicates natural protection afforded the source water. Using procedures established in the Great Lakes Protocol, Michigan Source Water Assessment Program, the somewhat shallow, offshore intake for the Lake Charter Township Water Treatment Plant has a moderate degree of sensitivity to potential contaminants. When the effects of winds, lake currents, and the influence of Tanner Creek are considered, the Lake Charter Township intake is categorized as moderately sensitive.



Susceptibility identifies factors within the community's source water area that may pose a risk to the water supply. The susceptibility determination provides information with respect to listed facilities and land areas within the source water area that should be given greater priority and oversight in implementing a source water protection program.

- The source water area for the Lake Charter Township intake includes 13 potential contaminant sources, one listed potential contaminant source holding two permits within the susceptible area, plus urban and agricultural runoff from Bridgman and surrounding communities into Tanner Creek.
- The potential contaminant sources, in combination with the moderately sensitive intake, indicate that the Lake Charter Township source water has moderately high susceptibility to potential contamination.

Source Water Assessment Analysis:

The Lake Charter Township source water is categorized with moderately high susceptibility, given land uses and potential contaminant sources within the source water area. However, it is noted that historically, the Lake Charter Township Water Treatment Plant has effectively treated this source water to meet drinking water standards. Lake Charter Township has instituted pollution prevention programs, but should be cognizant of additional potential threats to its source of drinking water that are identified in this report. This report explains the background and basis for these determinations.

VOLATILE ORGANIC CONTAMINANTS

DATA TABLE

CONTAMINANTS

Why Are There Contaminants In My 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 (EPA) 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: microbial contaminants, such as viruses and bacteria, that 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; and 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 that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Volatile Organic Contaminants							
Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range	Sample Date	Violation	Typical Source
1,1,2-Trichloroethane (ppb)	3	5	0	NA	2024	No	Discharge from industrial chemical factories
1,2,4-Trichlorobenzene (ppb)	70	70	0	NA	2024	No	Discharge from textile-finishing factories
1,2-Dichloroethane (ppb)	0	5	0	NA	2024	No	Discharge from industrial chemical factories

VOLATILE ORGANIC CONTAMINANTS

DATA TABLE

CONTINUED

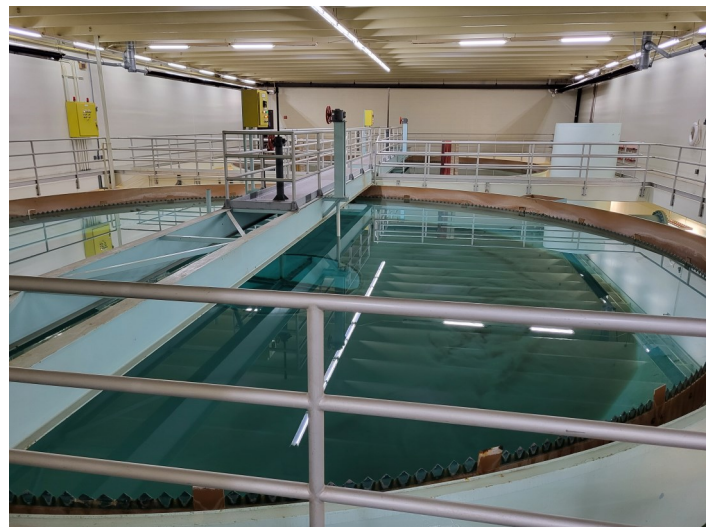
Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range	Sample Date	Violation	Typical Source
1,2-Dichloropropane (ppb)	0	5	0	NA	2024	No	Discharge from industrial chemical factories
Benzene (ppb)	0	5	0	NA	2024	No	Discharge from factories; Leaching from gas storage tanks and landfills
Carbon Tetrachloride (ppb)	0	5	0	NA	2024	No	Discharge from chemical plants and other industrial activities
Chlorobenzene (monochlorobenzene) (ppb)	100	100	0	NA	2024	No	Discharge from chemical and agricultural chemical factories
Dichloromethane (ppb)	0	5	0	NA	2024	No	Discharge from pharmaceutical and chemical factories
Ethylbenzene (ppb)	700	700	0	NA	2024	No	Discharge from petroleum refineries
Styrene (ppb)	100	100	0	NA	2024	No	Discharge from rubber and plastic factories; Leaching from landfills
Toluene (ppm)	1	1	0	NA	2024	No	Discharge from petroleum factories
Trichloroethylene (ppb)	0	5	0	NA	2024	No	Discharge from metal degreasing sites and other factories
Vinyl Chloride (ppb)	0	2	0	NA	2024	No	Leaching from PVC piping; Discharge from plastics factories
Xylenes (ppm)	10	10	0	NA	2024	No	Discharge from petroleum factories; Discharge from chemical factories
cis-1,2-Dichloroethylene (ppb)	70	70	0	NA	2024	No	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene (ppb)	100	100	0	NA	2024	No	Discharge from industrial chemical factories

Water Treatment Process

Description of Water Treatment Process

Your water is treated in a "treatment train" (a series of processes applied in a sequence) that includes coagulation, flocculation, sedimentation, filtration, and disinfection. Coagulation removes dirt and other particles suspended in the source water by adding chemicals (coagulants) to form tiny sticky particles called "floc," which attract the dirt particles.

Flocculation (the formation of larger flocs from smaller flocs) is achieved using gentle, constant mixing. The heavy particles settle naturally out of the water in a sedimentation basin. The clear water then moves to the filtration process where the water passes through sand, gravel, charcoal or other filters that remove even smaller particles. Sodium Hypochlorite (bleach) is used to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water before water is stored and distributed to homes and businesses in the community.



FILTRATION DISINFECTION

DATA TABLE

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Chlorine (as Cl2) (ppm)	4	4	1.50	1.28	1.74	2024	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	24.8	17.9	33.7	2024	No	By-product of drinking water chlorination
TTHMs [Total Tri-halomethanes] (ppb)	NA	80	46.8	30.4	72.7	2024	No	By-product of drinking water disinfection
Total Organic Carbon (% Removal)	NA	TT	8.5	NA	NA	2024	No	Naturally present in the environment
Turbidity (NTU)	NA		0.03	0.03	0.07	2024	No	Soil runoff
100% of the samples were below the TT value of .30 NTU. A value less than 95% constitutes a TT violation. The highest single measurement was .07 NTU. Any measurement in excess of 1.0 NTU is a violation unless otherwise approved by the state. 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.								

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.



CROSS CONNECTION CONTROL PROGRAM

INORGANIC CONTAMINANTS

Do I need to take special precautions?

- 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/ 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 Water Drinking Hotline (800-426-4791).

Residential Cross Connection Inspections

The Water Dept. has completed all initial exterior residential cross-connection inspections in 2023. We have contracted with Hydrocorp Inc., which specializes in cross-connection management. We have more information in the resources tab on our website, www.lakechartertownshipwater.org, and a good video explaining cross-connections and why it is vital to eliminate any potential hazard. With over 1,700 external residential inspections completed, there were only 26 minor violations that were easily corrected.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Inorganic Contaminants								
Antimony (ppb)	6	6	0	NA	NA	2024	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; test addition.
Arsenic (ppb)	0	10	0	NA	NA	2024	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	.021	NA	NA	2024	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	4	4	0	NA	NA	2024	No	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	5	5	0	NA	NA	2024	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints
Chromium (ppb)	100	100	.91	NA	NA	2024	No	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	200	200	0	NA	NA	2024	No	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories

INORGANIC CONTAMINANTS

CONTINUED

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Viola- tion	Typical Source
				Low	High			
Inorganic Contaminants								
Fluoride (ppm)	4	4	.1	NA	NA	2024	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Mercury [Inorganic] (ppb)	2	2	0	NA	NA	2024	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
Nitrate [measured as Nitrogen] (ppm)	10	10	.33	NA	NA	2024	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	50	50	0	NA	NA	2024	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Sodium (optional) (ppm)	NA	NA	11	NA	NA	2024	No	Erosion of natural deposits; Leaching
Thallium (ppb)	.5	2	0	NA	NA	2024	No	Discharge from electronics, glass, and Leaching from ore-processing sites; drug factories

LEAD / COPPER

What Does Lead Pipe Look Like?

Information About Lead

Information about 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. LCTWS 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. If you are concerned about lead in your water and wish to have your water tested, or obtain the service line inventory report, contact Lake Charter Twp Water System, Jeff Burkhard 269-465-3850. 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>.

Lake Charter Township Water System has no known lead service connections in the water distribution system.

of known lead service lines: **0**

of unknown service line materials needing verification: **451**

of total service line connections: **1,735**

What Do Lead Service Lines Look Like? Lead service lines are generally a dull gray color and are very soft. You can identify them easily by carefully scratching with a key. If the pipe is made of lead, the area you've scratched will turn a bright silver color. Do not use a knife or other sharp instrument and take care not to puncture a hole in the pipe. Note: Galvanized piping can also be dull gray in color. A strong magnet will typically cling to galvanized pipes, but will not cling to lead pipes. Lead service lines can be connected to the residential plumbing using solder and have a characteristic solder "bulb" at the end, a compression fitting, or other connector made of galvanized iron or brass/bronze.



Lead pipes are dull gray and very soft and look like a new nickel when scratched or



Galvanized pipes are dull gray and a strong magnet will stick to the pipe



1. Lead, 2. Galvanized, 3. Copper, 4. Plastic



Copper looks like a new penny when scratched or sanded

Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source of Contaminant
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	0.1	2024	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
100% of the samples were below the AL of 1.3 ppm. The range of samples were 0 ppm - .1 ppm							
Lead - action level at consumer taps (ppb)	0	15	2	2024	0	No	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
100% (20 of 20) of the samples were below the AL of 15 ppb. The range of samples were 0 ppb – 9 ppb							

PFAS

EDUCATION

PFAS

Per- and polyfluoroalkyl substances (PFAS) are a large group of man-made chemicals that include perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). PFAS have been used globally during the past century in manufacturing, firefighting and thousands of common household and other consumer products. These chemicals are persistent in the environment and in the human body – meaning they don't break down and they can accumulate over time. In recent years, experts have become increasingly concerned by the potential effects of high concentrations of PFAS on human health.

HOW CAN I STAY UPDATED ON THE SITUATION?

The State has created a website where you can find information about PFAS contamination and efforts to address it in Michigan. The site will be updated as more information becomes available. The website address is:
<http://michigan.gov/pfasresponse>.

PFAS AND YOUR HEALTH

The State of Michigan is working with the National Center for Environmental Health, Agency for Toxic Substances and Disease Registry (ATSDR), and additional partners to better understand how PFAS might affect people's health.

Scientists are still learning about the health effects of exposures to mixtures of PFAS. Although more research is needed, some studies in people have shown that certain PFAS may:

- Lower a woman's chance of getting pregnant
- Increase the chance of high blood pressure in pregnant women
- Increase the chance of thyroid disease
- Increase cholesterol levels
- Change immune response

Increase the chance of cancer, especially kidney and testicular cancers

PFAS

DATA TABLE

TAP SAMPLE: Date Collected 2/15/2024									
Analyte	MCL, TT, or MRDLG	MCLG or MRDLG (ppt)	Detect In Your Water (ppt)	Range Low to High	Year Sampled	Violation Yes/NO	Typical Source of Contaminant	RL	Result Conc. (ng/L)
Perfluorooctanesulfonic acid (PFOS)	16	N/A	2.1	N/A	2024	NO	Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial facilities	1.9	2.1
Perfluoroundecanoic acid (PFUnA)	N/A	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9
Perfluorohexanoic acid (PFHxA)	400,000	N/A	ND	N/A	2024	NO	Firefighting foam; discharge and waste from industrial facilities	1.9	<1.9
Perfluorododecanoic acid (PFDoA)	N/A	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9
Perfluorooctanoic acid (PFOA)	8	N/A	2.2	N/A	2024	NO	Discharge and waste from industrial facilities; stain-resistant treatments	1.9	2.2
Perfluorodecanoic acid (PFDA)	N/A	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9
Perfluorododecanoic Acid (PFDoA)	N/A	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9
Perfluorohexanesulfonic acid (PFHxS)	51	N/A	ND	N/A	2024	NO	Firefighting foam; discharge and waste from industrial facilities	1.9	<1.9
Perfluorobutanesulfonic acid (PFBS)	420	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9
Perfluoroheptanoic acid (PFHpA)	N/A	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9
Perfluorononanoic acid (PFNA)	6	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9
Perfluorotetradecanoic acid (PFTeDA)	N/A	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9
Perfluorotridecanoic acid (PFTrDA)	N/A	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9

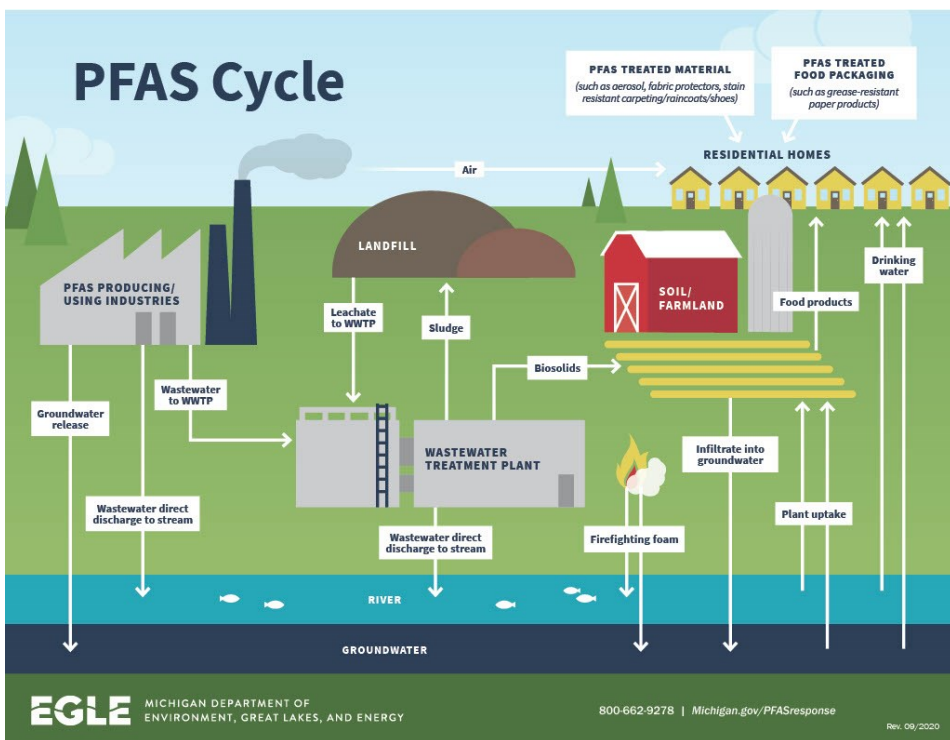
PFAS

DATA TABLE CONTINUED

TAP SAMPLE:

Date Collected: 2/15/2024

Analyte	MCL, TT, or MRDLG	MCLG or MRDLG (ppt)	Detect In Your Water (ppt)	Range Low to High	Year Sampled	Violation Yes/NO	Typical Source of Contaminant	RL	Result Conc. (ng/L)
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	N/A	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	N/A	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	370	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities utilizing the Gen X chemical process	1.9	<1.9
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	N/A	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	N/A	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	N/A	N/A	ND	N/A	2024	NO	Discharge and waste from industrial facilities	1.9	<1.9



How Does PFAS Stay In Our Environment

PFAS originates from industries that either produce or use them in their products. This graphic shows how PFAS cycle through our environment.

Michigan has great PFAS resources available on their website: www.michigan.gov/pfasresponse

DEFINITIONS

TERMS AND ABBREVIATIONS

ppm parts per million, or milligrams per liter (mg/L)

ppb parts per billion, or micrograms per liter (µg/L)

ppt parts per trillion, or nanograms per liter (ng/L)

NTU Nephelometric Turbidity Units. 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.

NA not applicable

ND Not detected

NR Monitoring not required, but recommended.

positive samples positive samples/yr: The number of positive samples taken that year

MCLG MCLG: Maximum Contaminant Level Goal: 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.

MCL 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.

TT Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

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

Variances and Exemptions State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

MRDLG Maximum residual disinfection level goal. 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.

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.

MNR Monitored Not Regulated

MPL State Assigned Maximum Permissible Level

Water Quality Tables

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. We have listed all of the drinking water contaminants that we tested for in the calendar year of this report.

All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report.

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. As such, some of our data, though representative, may be more than one year old. In these tables you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions.

ADDITIONAL CONTAMINANTS

WATER CONSERVATION

In an effort to insure the safest water possible the State has required us to monitor some contaminants not required by Federal regulations. Of those contaminants only the ones listed below were found in your water.

Contaminants	State MCL	Your Water	Violation	Explanation and Comment
Chloride	NA	12.09 ppm	No	Erosion of natural deposits
Gross Alpha Radioactivity	15 pCi/L	-.81 pCi/L	No	Erosion of natural deposits
Uranium	30 ppb	<1.0 ppb	No	Erosion of natural deposits
Hardness CaCO ₃	NA	140 ppm (8.20 Grains)	No	Erosion of natural deposits
Sulfate	NA	31.03 ppm	No	Erosion of natural deposits

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Water plants only when necessary.



- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!

Visit www.epa.gov for more information.