

2024 Water Quality Report for Charlevoix Township

Water Supply Serial Number: 1335

This report covers the drinking water quality for Charlevoix Township Water System 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.

Your water comes from 11 groundwater wells, varying in depths of 260 feet to 402 feet within Lake Michigan watershed at five different locations. The State performed an assessment of our source water to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a seven-tiered scale from "very-low" to "very-high" based on geologic sensitivity, well construction, water chemistry and contamination sources. The susceptibility of our source is low to moderately low.

There are no significant sources of contamination within our isolated area. We are making efforts to protect our sources by routine maintenance, monthly well site inspections and routine water sampling/quality checks.

If you would like to know more about this report, please contact: *Mr. Daniel Ulrich, Township Supervisor, 12491 Waller Road, Charlevoix, Michigan 49720. Office phone number: 231-547-4611*

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).

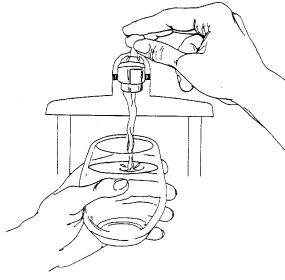
Vulnerability of sub-populations: Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune systems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

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.

1 Monitoring Data for Regulated Contaminants

Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes/No	Typical Source of Contaminant
<i>Arsenic (ppb)</i>	10	0	.002	N/A	2019	NO	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
<i>Barium (ppm)</i>	2	2	0.1	N/A	2019	NO	Discharge of drilling wastes; Discharge of metal refineries; Erosion of natural deposits
<i>Nitrate (ppm)</i>	10	10	<0.1	<0.1	2024	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
<i>Fluoride (ppm)</i>	4	4	1.66	1.32-1.66	2024	NO	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
<i>Sodium¹ (ppm)</i>	N/A	N/A	22.9	9.53-22.9	2024	NO	Erosion of natural deposits
<i>TTHM Total Trihalomethanes (ppb)</i>	80	N/A	3.2	ND-3.2	2024	NO	Byproduct of drinking water disinfection
<i>HAA5 Haloacetic Acids (ppb)</i>	60	N/A	2.0	<1.0-2.0	2024	NO	Byproduct of drinking water disinfection
<i>Chlorine² (ppm)</i>	4	4	1.85	0.49-1.85	2024	NO	Water additive used to control microbes
<i>Alpha emitters (pCi/L)</i>	15	0	2.20	1.00-2.20	2023	NO	Erosion of natural deposits
<i>Combined radium (pCi/L)</i>	5	0	1.339	0-1.339	2023	NO	Erosion of natural deposits
<i>Total Coliform (total number or % of positive samples/month)</i>	TT	N/A	N/A	N/A	2024	NO	Naturally present in the environment
<i>E. coli in the distribution system (positive samples)</i>	See E. coli note ³	0	N/A	N/A	2024	NO	Human and animal fecal waste
<i>Fecal Indicator – E. coli at the source (positive samples)</i>	TT	N/A	N/A	N/A	2024	NO	Human and animal fecal waste

¹ Sodium is not a regulated contaminant.

² The chlorine “Level Detected” was calculated using a running annual average.

³ *E. coli* MCL violation occurs if: (1) routine and repeat samples are total coliform-positive and either is *E. coli*-positive, or (2) the supply fails to take all required repeat samples following *E. coli*-positive routine sample, or (3) the supply fails to analyze total coliform-positive repeat sample for *E. coli*.

Per- and polyfluoroalkyl substances (PFAS)							
Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes/No	Typical Source of Contaminant
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ppt)	370	N/A	N/D	N/D	2024	NO	Discharge and waste from industrial facilities utilizing the Gen X chemical process
Perfluorobutane sulfonic acid (PFBS) (ppt)	420	N/A	N/D	N/D	2024	NO	Discharge and waste from industrial facilities; stain-resistant treatments
Perfluorohexane sulfonic acid (PFHxS) (ppt)	51	N/A	N/D	N/D	2024	NO	Firefighting foam; discharge and waste from industrial facilities
Perfluorohexanoic acid (PFHxA) (ppt)	400,000	N/A	N/D	N/D	2024	NO	Firefighting foam; discharge and waste from industrial facilities
Perfluorononanoic acid (PFNA) (ppt)	6	N/A	ND	N/D	2024	NO	Discharge and waste from industrial facilities; breakdown of precursor compounds
Perfluorooctane sulfonic acid (PFOS) (ppt)	16	N/A	N/D	N/D	2024	NO	Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial facilities
Perfluorooctanoic acid (PFOA) (ppt)	8	N/A	N/D	N/D	2024	NO	Discharge and waste from industrial facilities; stain-resistant treatments
Inorganic Contaminant Subject to Action Levels (AL)	Action Level	MCLG	Your Water⁴	Range of Results	Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	0	0	0 – 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 – 0.1	2024	0	Corrosion of household plumbing systems; Erosion of natural deposits

⁴ Ninety (90) percent of the samples collected were at or below the level reported for our water.

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. Charlevoix Township 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, contact Tim Collins, Operator in Charge at 231-497-8369. 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.

Our water supply has zero (0) known lead service lines and three-hundred-twelve (312) service lines of unknown material out of a total of seven-hundred-fifty (750) 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 Charlevoix Township Hall, 12491 Waller Road, Charlevoix, Michigan 49720. Or online at www.charlevoixtownship.gov/waterdept/

We invite public participation in decisions that affect drinking water quality. Questions and/or concerns regarding your water supply may be addressed during any regular Township board meeting, held on the second Monday of each month at 7pm located at Charlevoix Township Hall 12491 Waller Road, Charlevoix Michigan 49720.

For more information about your water, or the contents of this report, contact Tim Collins, Operator in Charge, 231-497-8369.

For more information about safe drinking water, visit the U.S. EPA at <http://www.epa.gov/safewater>.