

# CHARLEVOIX TOWNSHIP 2016 WATER QUALITY REPORT

Last year, your tap water met all EPA and State drinking water health standards. We are proud to report that Charlevoix Township has not violated any state or federal water quality standards.

This information is a snapshot of the quality of the water that we provided to you in 2016. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. For more information about your water, call 547-4611.

Your water comes from eleven groundwater wells located in five locations around town; near south elevated tank, near the airport, near the north elevated tank, and near country club. The State performed an assessment of our source water in 2003 to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a six-tiered scale from "very-low" to "high" based primarily on geologic sensitivity, water chemistry and contaminant source. The susceptibility of our source is "Moderately Low" for North side system and "Low" for south side system.

- **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 **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. 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).
- **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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
  - \* **Pesticides and herbicides**, which may come from a variety of sources such as agriculture and residential uses.
  - \* **Radioactive contaminants**, which are naturally occurring.
  - \* **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 system

In order to ensure that tap water is safe to drink, EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. We treat our water in accordance with these regulations. Food and Drug Administration regulations establish limits for contaminants in bottled water, which provide the same protection for public health.

## Water Quality Data

The tables below list all the drinking water contaminants that we detected during the 2016 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 – December 31, 2016. 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 is 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.
- **Action Level (AL):** The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **N/A:** Not applicable **ND:** not detected **ppb:** parts per billion or micrograms per liter  
**ppm:** parts per million or milligrams per liter
- **Maximum residual disinfectant level (MRDL) :** The highest level of a disinfectant allowed in drinking water.  
**Maximum residual disinfectant level goal (MRDLG) :** The level of a drinking water disinfectant below which there is no known or expected risk to health.

### Samples Collected at North Side

<i>Inorganic Contaminants</i>	MCLG	MCL	<i>System water</i>	Range of detections	Sample date	Violation	Typical Source of Contaminant
Barium (ppm)	2	2	0.02	N/A	2016	No	Erosion of natural deposits
Fluoride (ppm)	4.0	4.0	1.6	1.3 – 1.6	2016	No	Erosion of natural deposits.
Contaminant Subject to AL	Action Level	MCL G	90% Percentil Value	Sample Date	Number of Samples Above AL		Typical Source of Contaminant
Lead (ppb) **	15	0	1	2015	0		Corrosion of household plumbing systems Erosion of natural deposits
Copper (ppb)	1300	1300	150	2015	0		Corrosion of household plumbing systems Erosion of natural deposits Leaching from wood preservatives
<b>Total Trihalomethanes (ppb)</b>		80	ND	ND	2016	No	Disinfection byproduct
<b>Haloacetic Acids (ppb)</b>		60	ND	ND	2016	No	Disinfection byproduct
<b>Free Chlorine Residual (ppm)</b>	MRDL = 4 MRDLG=4		0.57	0.12– 0.77	2016	No	Disinfectant added to control microbes
<b>Unregulated Contaminants</b>							
Sodium (ppm)	N/A	N/A	13	7-13	2016	N/A	Erosion of natural deposits
<b>Radioactive Contaminants</b>							
Alpha emitters (pCi/l)	0	15	4.5	0.85– 1.23	2013	No	Erosion of natural deposits
Radium 226 (pCi/l)	0	5	0.54	0.33 – 0.35	2013	No	Erosion of natural deposits

## Conservation Tips

Did you know that the average U.S. household uses approximately 350 gallons of water per day? Luckily there are many low-cost or no-cost ways to conserve water. Water your lawn at the least sunny times of the day. Fix toilet and faucet leaks. Take short showers- a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath. Turn the faucet off when brushing your teeth and shaving, 3 to 5 gallons of water go down the drain per minute. 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 usage**

### Samples Collected at South Side

<i>Inorganic Contaminants</i>	MCLG	MCL	<u>System water</u>	Range of detections	Sample date	Violation	Typical Source of Contaminant
Fluoride (ppm)	4.0	4.0	1.6	1.5 to1.6	2016	No	Erosion of natural deposits.
Contaminant Subject to AL	Action Level	MCLG	90% of Samples ≤ This Level	Sample Date	Number of Samples Above AL		Typical Source of Contaminant
Lead (ppb) **	15	0	1	2015	0		Corrosion of household plumbing systems Erosion of natural deposits
Copper (ppb)	1300	1300	150	2015	0		Corrosion of household plumbing systems Erosion of natural deposits Leaching from wood preservatives
<b>Total Trihalomethanes (ppb)</b>		80	ND	ND	2016	No	Disinfection byproduct
<b>Haloacetic Acids (ppb)</b>		60	ND	ND	2016	No	Disinfection byproduct
<b>Free Chlorine Residual (ppm)</b>	MRDL=4 MRDLG=4		0.57	0.34 – 0.71	2016	No	Disinfectant added to control microbes
<b>Unregulated Contaminants</b>							
Sodium (ppm)	N/A	N/A	13	N/D to 5	2016	N/A	Erosion of natural deposits
<b>Radioactive Contaminants</b>							
Alpha emitters (pCi/l)	0	15	1.1	1.1	2013	No	Erosion of natural deposits
Radium 226	0	5	0.35	0.26 – 0.35	2013	No	Erosion of natural deposits

Microbial Contaminants	MCL	MCLG	Number Detected	Violation Yes / No	Typical Source of Contaminant
Total Coliform Bacteria	>1 positive monthly sample (>5.0% of monthly samples positive)	0	0	No	Naturally present in the environment
Fecal Coliform and <i>E. coli</i>	Routine and repeat sample total coliform positive, and one is also fecal or <i>E. coli</i> positive	0	0	No	Human and animal fecal waste

**J 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. **Charlevoix Township** 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 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 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

**Is our water system meeting other rules that govern our operations?** The State and EPA require us to test our water on a regular basis to ensure its safety. *We met all the monitoring and reporting requirements for 2016*

We are committed to providing you safe, reliable, and healthy water. We are pleased to provide you with this information to keep you fully informed about your water. We will be updating this report annually, and will also keep you informed of any problems that may occur throughout the year, as they happen.