

2016 Water Quality Report for the City of Rogers City

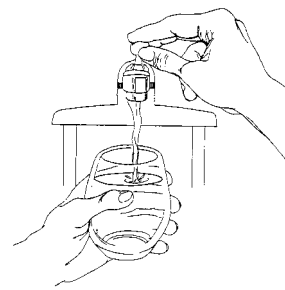
This report covers the drinking water quality for City of Rogers City for the calendar year 2016. This information is a snapshot of the quality of the water that we provided to you in 2016. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and State standards.

Your water currently comes from three ground water wells that range from 150' to 400' deep and are protected by a clay layer. The State performs 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 upon geologic sensitivity, well construction, water chemistry and contamination sources. Well # 4 was determined to have a "moderate" rating. The other wells have not yet been rated. The wells are located at Lake Street, East Depot and Forest Ave. The City has been continually trying to improve its water production wells.

- **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 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, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. 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 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 are more than one year old.**

Terms and abbreviations used below:

- Action Level (AL): The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.
- 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.
- N/A: Not applicable. ND: not detectable at testing limit. ppb: parts per billion or micrograms per liter or one second of time in 32 years. ppm: parts per million or milligrams per liter or one minute in 2 years. pCi/l: picocuries per liter (a measure of radioactivity) RAA: running annual average.

Samples Collected at the Wellhouse:

Regulated Chemical Contaminants	MCL	MCLG	Our Water	Sample Date	Violation Yes / No	Typical Source of Contaminants
Arsenic (ppb)	10	0	5*	2016	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	.02 *	2016	No	Discharge of drilling wastes; erosion of natural deposits
Selenium (ppb)	50	50	ND *	2016	No	Erosion of natural deposits; discharge from mines
Nitrate (ppm)	10	10	ND **	2016	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion from natural deposits
Fluoride (ppm)	4	4	Range 1.5 – 1.8 Ave=1.6 **	2016	No	Erosion of natural deposits

*These test results were done only at Well #8

** These test results were done at Well 4, Well 7 and Well 8

Radioactive Contaminants	MCL	MCLG	Our Water	Sample Date	Violation Yes / No	Typical Source of Contaminants
Alpha emitters (pCi/L)	15	0	Range 6.8 to 8 Ave=7.4***	2016	No	Erosion of natural deposits
Combined radium 226 / 228 (pCi/L)	5	0	Range 1.34 to 2.25 Ave=1.80***	2016	No	Erosion of natural deposits

*** These test results were done only at Well 8

Unregulated Chemical Contaminants ²	Our Water	Sample Date	Violation Yes / No	Typical Source of Contaminants
Sodium (ppm)	Range = 6 to 8 Ave = 6.7 *	2016	N/A	Erosion of natural deposits

* These test results were done only at Wells #4, #7 & #8

² Unregulated contaminants are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants. **Rogers City was selected by the EPA in 2015 to test for a list of unregulated contaminants. These tests had no detects and a copy of them are available at City Hall, 193 E. Michigan.**

Samples Collected in the Distribution System:

Contaminants Subject to an Action Level	MCL	MCLG	Your Water	Sample Date	Violation Yes/No	Typical Source of Contaminants
Total Coliform Bacteria	0 positive sample/month*	0	0	Monthly (2016)	NO	Naturally present in the environment
E. Coli or fecal coliform bacteria		0	0	Monthly (2016)	No	Human waste and animal fecal waste.

*if a system collecting fewer than 40 samples per month has **two or more positive** samples in one month, the system has a MCL violation

Contaminants Subject to an Action Level	Action Level, MCL, or MRDL	Our Water	Sample Date	Number of Samples Above AL	Typical Source of Contaminants
Lead (ppb) ³	AL = 15	4.0	2016	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	AL = 1.3	.270	2016	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

³ 90 percent of the samples collected were at or below the level reported for our water.

Regulated Chemical Contaminants	MCL, or MRDL	Our Water	Sample Date	Violation Yes / No	Typical Source of Contaminants
Total Trihalomethanes (ppb)	MCL = 80	26.7	2016	No	Disinfection byproducts
Haloacetic Acids (ppb)	MCL = 60	8	2016	No	Disinfection byproducts
Free Chlorine Residual (ppm)	MRDL = 4.0 MRDLG = 4	Range = .07 to 1.15 RAA = .54	Monthly 2016	No	Disinfectant added to control microbes

About total coliform:

Coliforms are bacteria that are naturally present in the environment and are used as an *indicator* that other, potentially-harmful, bacteria **may be present**.

About lead in drinking water:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Rogers City 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 at your expense. Information on lead in drinking water, test 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>.

About total trihalomethanes:

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

Health Effects Language for listed contaminants:

Organic Contaminants:

Chlorine: People who drink water containing Chlorine in excess of the MRDL may experience eye and nose irritation or stomach discomfort, possible anemia.

Haloacetic Acids: Some people who drink water containing haloacetic acids in excess of the MCL over many years could experience nervous system or liver damage.

Total Trihalomethanes (TTHMs): Some people who drink water containing TTHM's in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and have an increased risk of getting cancer.

Inorganic Contaminants:

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

Barium: Some people who drink water containing barium **in excess of the MCL** over many years could experience an increase in their blood pressure.

Copper: Copper is an essential nutrient, but some people who drink water containing Copper **in excess of the Action Level** over a relatively short 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 doctor.

Fluoride: Some people who drink water containing fluoride **well in excess of the MCL** over many years could get bone disease, including pain and tenderness of the bones.

Lead: Infants and children who drink water containing Lead **in excess of the Action Level** could experience delays in physical or 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.

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

Selenium: Selenium is an essential nutrient. However, some people who drink water containing selenium **in excess of the MCL** over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.

Radioactive Contaminants:

Alpha Emitters: Certain minerals are radioactive and emit a form of radiation known as Alpha radiation. Some people who drink water containing these alpha emitters **in excess of the MCL** over many years may have an increased risk of getting cancer.

Combined Radium 226/228: Some people who drink water containing radium 226/228 **in excess of the MCL** over many years may have an increased risk of getting cancer.

Monitoring and Reporting Requirements:

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 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 City Hall located at 193 E. Michigan Ave. **This report will not be sent to you.**

We invite public participation in decisions that affect drinking water quality. The Rogers City Council meets the first and third Tuesday of every month at 7:00 pm. For more information about your water, or the contents of this report, contact Chuck Kieliszewski at 989-734-2191. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.