2016 Water Quality Report for City of Three Rivers

This report covers the drinking water quality for the City of Three Rivers, 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 comes from 5 groundwater wells located in various locations around the City. The State performed an assessment of our source water in 2007 to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a six-tiered scale from "very-low" to "high" base primarily on geologic sensitivity, water chemistry and contamination sources. The susceptibility of our source is moderately high on all of our wells. A copy of the assessment is available at the Department of Public Services by calling 269-273-1845 to request a copy.

- **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 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 stormwater runoff, and septic systems.

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. 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. 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:

- 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.
- N/A: Not applicable
- ND: not detectable at testing limit ppb: parts per billion or micrograms per liter ppm: parts per million or milligrams per liter pCi/l: picocuries per liter (a measure of radiation).
- Action Level (AL): The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.
- 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 contamination.

Regulated Contaminant	MCL	MCLG	Our Water	Sample Date (If not in '16)	Violation Yes / No	Typical Source of Contaminant
Arsenic (ppb)	10	0	ND-6	09/2014	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Nitrate (ppm)	10	10	0.7	09/2016	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	0.11	09/2016	No	Erosion of natural deposits. Discharge from fertilizer and aluminum factories.
Unregulated Contaminant *						
Sodium (ppm)	NA	NA	6-19	09/2016	No	Erosion of natural deposits
Contaminant Subject to AL	**Action Level**		**90% of Samples ≤ This Level**		**Number of Samples Above AL**	
Lead (ppb)	15		3 ppb	09/2014	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppb)	1300		238 ppb	09/2014	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

* Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Microbial Contaminants	MCL	MCLG	Number of Detections	Violation Y / N	Typical Source of Contaminant
Total Coliform Bacteria	No more than 1 positive sample per month	0	0	N	Naturally present in the environment
Fecal Coliform and *E. coli*	Routine and repeat sample total coliform positive, and one is also fecal or *E. coli* positive	0	0	N	Human and animal fecal waste

Radiological (Radionuclides)	MCL	MCLG	Our Water	Range	Typical Source	Potential Health Effects
Alpha emitters [gross alpha] (pci/L)	15	0	0	N/A	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Combined radium [226 & 228] (pci/L)	5	0	1.7	1.4-1.7	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Chlorine	MRDL	MRDLG	Our water	Minimum Month Average	Maximum Month Average	Typical Sources	Potential Health Effects
Chlorine Residual	4 PPM	4 PPM	.079 PPM	.056 PPM	.109 PPM	Water additives used to control microbes	Eye or nose irritation, or stomach discomfort

Disinfection by-product	MCL	MCLG	Our Water	Range	Typical source	Potential Health Effects
Total trihalomethanes [TTHM] (ppb)	80**	N/A	7.2	5.6-7.2	By-product of drinking water disinfection	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.
Haloacetic acids	60***	N/A	2	N/A	By-product of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

****** The MCL for total trihalomethanes is the sum of the concentration of the individual trihalomethanes.
*** The MCL for total haloacetic acids is the sum of the concentrations of the individual haloacetic acids.

Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Arsenic: EPA is reviewing the drinking water standard for arsenic because of special concerns that it may not be stringent enough. Arsenic is a naturally occurring mineral known to cause cancer in humans at high concentrations. Supplies must comply with the new arsenic maximum contamination level (MCL) of 0.010 milligrams per liter, or 10 parts per billion (ppb).

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. City of Three Rivers 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 at 800-426-4791 or at http://water.epa.gov/drink/info/lead/index.cfm.

Coliform: Bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Other Contaminants: In 2016, we conducted tests for many other contaminants and all were either not detected or were below regulated limits for drinking water.

Violations: The City experienced one violation in 2016. The violation is a resulting of collecting and sampling for Total Trihalomethanes (TTHMs) and Haloacecetic Acids (HAA5s) during the month of September instead of the required month of August. The results confirmed that no quality issues were present. We will sample these along with performing all other regular monitoring in 2017 as we work with the MDEQ to insure that all requirements are met and no further violations occur. This is not, and was at no time, any type of an emergency or reason to be concerned about the quality of our drinking water; it was simply a “monitoring period” violation.

We are committed to providing you 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. Copies of this report are available at City Hall, Three Rivers DPS, Three Rivers Library, and on the City of Three Rivers Web page at http://www.threeriversmi.org/wp-content/uploads/2016-Water-Quality-Report.pdf. This report will not be sent to you.

We invite public participation in decisions that affect drinking water quality. City Commission meeting are held the first and third Tuesdays of each month. For more information about your water, or the contents of this report, contact Amy Roth, Department of Public Services Director, or Mark Glessner, Water System Superintendent at (269) 273-1845. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.