

2011 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 2011. This information is a snapshot of the quality of water that we provided to you in 2011. 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 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 contamination sources. The susceptibility of our source is moderately high on all of our 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 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/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 2011 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, 2011. 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.

Regulated Contaminant	MCL	MCLG	Our Water	Sample Date (If not in '11)	Violation Yes / No	Typical Source of Contaminant
Arsenic (ppb)	10ppb	0	ND	12/07/2009	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Nitrate	10	10	ND	4/2012	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	ND-0.15	4/2012	No	Erosion of natural deposits. Discharge from fertilizer and aluminum factories.
Unregulated Contaminant **						
Sodium (ppm)	NA	NA	5-18 mg/l	4/2012	No	Erosion of natural deposits
Contaminant Subject to AL	Action Level	90% of Samples ≤ This Level			Number of Samples Above AL	
Lead (ppb)	15	4 ppb	2011	1	Corrosion of household plumbing systems; Erosion of natural deposits	
Copper (ppm)	1300	180 ppb	2011	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	

* EPA considers 50 pCi/l to be the level of concern for beta particles.

** 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 <i>E. coli</i>	Routine and repeat sample total coliform positive, and one is also fecal or <i>E. coli</i> positive	0	0	N	Human and animal fecal waste

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 arsenic maximum contamination level (MCL) of 0.010 milligrams per liter, or 10 parts per billion (ppb).

Lead: Infants and children who drink water-containing lead in excess of the action level could experience delays in their 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. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline at 800-426-4791.

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

Chlorine Residuals: The chlorine residuals in our system ranged from a minimum monthly average of 0.06 parts per million to a maximum monthly average of 0.14 parts per million. The annual monthly average was 0.093.

In 2012, we conducted tests for over 70 contaminants and all were not detected or were below regulated limits for the City drinking water.

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 www.threeriversmi.org. This report will not be sent to you.

We invite public participation in decisions that affect drinking water quality. City Commission meetings 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/.