

## **CITY OF HASTINGS 2016 Water Quality Report**

The State of Michigan requires each public water supplier to issue an annual report to its citizens by June 1 of the following year summarizing the quality of its water. This report covers the drinking water quality for the City of Hastings, MI for the 2016 calendar year. 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 three groundwater wells, each over 290 feet deep. These wells all draw water from the Marshall Sandstone Aquifer, which is protected by an overlying clay barrier from surface contaminants. The State performed an assessment of our source water to determine the potential of contamination. The susceptibility rating is on a scale from "very-low" to "very-high" based on geologic sensitivity, well construction, water chemistry and contamination sources. The susceptibility of our source is defined as 'Moderately High'.

There are no significant sources of contamination to our water supply. We protect our water source by following our Wellhead Protection Program. This program helps protect our source water by identifying and mitigating potential contamination sources, providing public outreach and education services, and developing contingency plans and best management practices.

If you would like to know more about this report, please contact George Holzworth, Superintendent of the City of Hastings Water Treatment Facility (269-945-2331) or Lee Hays, City of Hastings Director of Public Services (269-945-2468).

- **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 the 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 does not describe ALL of the analyses conducted during the 2016 calendar year; it only lists the results of tests where contaminants were detected in our water during the 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:

- **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):** means 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.
- **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.
- **Range:** The difference between the lowest value and highest value for all tests in a selected group. For example, several types of trihalomethanes are analyzed; some were non-detectable, while the highest detectable concentration was 6.7 ppb.
- **Level Detected:** The highest concentration detected for a specific contaminant; OR; the sum of all detected concentrations for a selected group. For example, the level detected for Total Trihalomethanes is the sum of several different trihalomethanes.

**Abbreviations used below:**

- **N/A:** Not applicable
- **ppb:** parts per billion or micrograms per liter

**ND:** not detectable at testing limit  
**ppm:** parts per million or milligrams per liter.

Regulated Contaminant	MCL	MCLG	Level Detected	Range	Year Sampled	Violation Yes / No	Typical Source of Contaminant
Barium (ppm)	2	2	0.05	N/A	2010	No	Discharge of drilling wastes; Discharge of metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	0.57	N/A	2016	No	Erosion of natural deposits. Discharge from fertilizer and aluminum factories. Water additive used to control tooth decay.
TTHM - Total Trihalomethanes (ppb)	80	N/A	10.6	N/A	2016	No	Byproduct of drinking water disinfection
HAA5 Haloacetic Acids (ppb)	60	N/A	5.0	N/A	2016	No	Byproduct of drinking water disinfection
Chlorine* (ppm)	<b>MRDL</b>	<b>MRDLG</b>	0.28	0.01-0.79	2016	No	Water additive used to control microbes
	4	4					
<b>Contaminant Subject to AL</b>	Action Level	MCLG	<b>90% of Samples ≤ This Level</b>	<b>Year Sampled</b>	<b>Number of Samples Above AL</b>	<b>Typical Source of Contaminant</b>	
<b>Lead (ppb) **</b>	15	0	3	2015	1	Corrosion of household plumbing systems; Erosion of natural deposits	
<b>Copper (ppm)</b>	1.3	1.3	1.19	2015	1	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	
Special Monitoring and Unregulated Contaminant ***	Level Detected		Year Sampled			Comments	
Sodium (ppm)	9		2016			Naturally present in environment	
Hardness (ppm)	240		2016			Naturally present in environment	
Chloride (ppm)	5		2016			Naturally present in environment	

\* Chlorine was calculated using the running annual average.

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

\*\*\* 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.

**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. Infants and children who drink water containing lead in excess of the AL could experience delays in their physical or mental development. Children could show slight deficits in their attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level in 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. The City of Hastings 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 or at <http://www.epa.gov/safewater/lead>.

Due to changes to the regulations for bacterial monitoring that took effect April 1, 2016, the tables below are broken out to reflect these changes.

**From January 1, 2016, to March 31, 2016:**

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

**From April 1, 2016, to December 31, 2016:**

Microbial Contaminants	MCL	MCLG	Number Detected	Level 1 or Level 2 Assessment Triggered?	Violation Yes / No	Typical Source of Contaminant
Total Coliform Bacteria	N/A	N/A	1	No	No	Naturally present in the environment
<i>E. coli</i>	Routine and repeat sample total coliform positive, and one is also <i>E. coli</i> positive	0	0	No	No	Human and animal fecal waste

**Monitoring and Reporting to the DEQ 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, 201 E. State Street, Hastings, MI 49058. This report will not be sent to you.

We invite public participation in decisions that affect drinking water quality. Regular City Council meetings occur on the 2<sup>nd</sup> and 4<sup>th</sup> Mondays of each month in City Hall at 7:00 p.m. For more information about your water, or the contents of this report, contact George Holzworth at 269-945-2331. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at [www.epa.gov/safewater/](http://www.epa.gov/safewater/).