

# ***2016 Annual Drinking Water Quality Report***

## ***Village of Shelby***

### ***July 1, 2017***

The Village of Shelby is pleased to present you with this year's Annual Drinking Water Quality Report, also known as the Consumers Confidence Report or CCR. This report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. The Village of Shelby routinely monitors for contaminants in your drinking water according to Federal and State laws. We are committed to ensuring the quality of your water, and want you to understand the efforts we make to continually improve the water treatment process and protect our water resources.

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.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over 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 animal or human activity.

The Village of Shelby's source of water comes from four (4) ground water wells all of which draw water from an aquifer located in glacial material. The depth of our ground water wells range from 135 feet to 330 feet deep. In 1995 the Village of Shelby voluntarily began a Wellhead Protection Program, which identifies where our water supply recharge area is located, educates the public about our water source and our water system and identifies possible contaminant sources. With the help of the Department of Environmental Quality (DEQ), Wellhead Protection Grants, the DEQ staff and various contractors, the Village of Shelby completed and received program approval in 2001. The Village completed updating its Wellhead Protection Program in 2006 which included all new delineation maps. If you would like additional information about Shelby's Wellhead Protection Program, contact the Shelby Water Department at 231-861-2500.

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 EPA Safe Drinking Water Hotline (1-800-426-4791).

"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 Village of Shelby 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>."

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be:

- **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** that may come from a variety of sources such as agriculture and residential uses.
- **Radioactive contaminants** that are 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 storm water runoff, and septic systems.

All drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.**

You may find many terms and abbreviations that you may not be familiar with in this report. To help you better understand these terms we've provided the following definitions:

- *Not-Detected (ND)* - laboratory analysis indicates that the contaminant is not present.
- *Parts per million (ppm) or Milligrams per liter (mg/l)* - one part per million corresponds to one minute in two years or a single penny in \$10,000.
- *Parts per billion (ppb) or Micrograms per liter* - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- *Picocuries per liter (pCi/L)* - Picocuries per liter is a measure of the radioactivity in water.
- *Action Level* - the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
- *Maximum Contaminant Level Goal* - The "Goal" (MCLG) is 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.
- *Reporting Limit - (RL)* The reporting limit is the level that a contaminant must exceed to be reported on the laboratory reports. Should the contaminant level be less than the RL the report shows (Not Detected)
- *Maximum Contaminant Level* - The "Maximum Allowed" (MCL) is 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.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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. The following tables represent the most current testing information available.

The tables in this report show the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2016.

<b>Inorganic Contaminants</b>							
<i>Contaminant</i>	<i>Violation Y/N</i>	<i>Highest Level Detected</i>	<i>Unit of Measure</i>	<i>Average</i>	<i>RL</i>	<i>MCL</i>	<i>Likely Source of Contamination</i>
Fluoride, Range 0 - 0.17 ppm Tested, Sept. 2013	N	0.16	ppm	0.075	0.1	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrite Range 0 - 0.13 ppm Tested, Sept. 2013	N	0.12	ppm	0.03	0.05	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrate (as Nitrogen), Range 1.8-3.5 ppm Tested, Sept. 2013	N	3.1	ppm	2.57	0.4	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<i>Lead &amp; Copper Monitoring</i>	<i>Date Tested</i>	<i>Number of Sites Tested</i>	<i>Sites over Action Level</i>	<i>Action level/ units</i>	<i>90<sup>th</sup> Percentile</i>		<i>Likely Source of Contamination</i>
Lead	Sept. 2015	10	1	15 ppb	3 ppb		Corrosion of household plumbing systems; erosion of natural deposits
Copper	Sept. 2015	10	0	1300 ppb	80 ppb		Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

**Note for 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 defects in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems of high blood pressure.

**Arsenic:** Beginning in January 2006, drinking water supplies must comply with the new arsenic maximum contaminant level(MCL) of 0.010 milligrams per liter, or 10 parts per billion (ppb). A likely source of arsenic comes from erosion of natural deposits; runoff from orchards and runoff from glass & electronics production wastes. **NOTE:** Shelby's water supply well,#1,#2,#3,4 were tested for arsenic in AUG. 2016 and the results were "negative".

## Common Consumer Confidence Report (CCR) Errors

**Dates:** Ensure all dates have been updated to 2016, with the exception of contaminants sampled in the last five years, but prior to 2016. For those, the date sampled must be included.

**CCR Units:** Verify contaminants have been reported in the proper units. Maximum Contaminant Levels (MCL) and Action Levels (AL) must be reported as a value greater than or equal to 1.0. **If a MCL or AL is converted to parts-per-billion (ppb) to be above 1.0, the sample results must also be converted.**

Most results are reported in milligrams per liter (mg/L), which is the same as parts-per-million (ppm). For contaminants such as arsenic and lead, you must convert the lab result to ppb. To do this, move the decimal point three places to the right (or multiply the lab result by 1,000). For example, a lab result of 0.004 mg/L would be 4 ppb for the report. **Please ensure that the MCL or AL units match the sample result units.**

**Reporting Contaminants Not Detected (ND):** You may, but are not required to, report undetected contaminants. If you do, they must be in a separate table from detected contaminants. When you have a non-detect or a "<", put a "0" for the result. If you write "ND," you must explain what ND means.

**Violations:** All violations incurred in 2016 must be reported on the CCR. If it is an MCL violation, the table must indicate it was a violation. Additionally, for all monitoring/reporting, MCL, or treatment technique violations, you must include an explanation of what happened, how long it lasted, the actions taken, and specific health effect language, depending on the contaminant involved. If you are utilizing your CCR to issue a Tier 3 Public Notice, you must attach the actual Public Notice to the CCR. For very small systems who usually post notice of the CCR, the CCR must be individually delivered to all customers.

**Lead Health Statement:** All water supplies must include standard language "About Lead." If you need assistance with this, please visit our website at [www.michigan.gov/drinkingwater](http://www.michigan.gov/drinkingwater), or contact your district office.

**Unregulated Contaminant Monitoring Rule (UCMR):** If the U.S. Environmental Protection Agency (U.S. EPA) directed you to monitor for unregulated contaminants during 2016, you must report the average and range of each contaminant detected. Also, provide an explanation of this required monitoring, such as, "Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants. We monitored for these contaminants and results of monitoring are available on request."