

*Annual Drinking Water Quality Report for 2017*  
*Village of Sparta*

We're pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the quality 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. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our water source is from four (4) water wells owned by the Village. Our wells draw water from glacial material. The depth of the wells vary from ninety (90) feet to one hundred eleven (111) feet below the surface.

We have a source water protection plan, commonly referred to as a wellhead protection plan, which includes a ten (10) year well delineation for the Villages wells. A copy is available from our office that provides more information such as potential sources of contamination and the methods of protecting ground water from contamination.

*In addition to the source water protection plan, a source water assessment study was performed by the State in 2003. This study was to identify any contamination threats to our four production wells. A rating of "moderate susceptibility" was the final determination by State Officials because of the following.*

- 1. All well construction meets standards.*
- 2. There are no potential contamination sources within the standard isolation area.*
- 3. Our community has an active wellhead protection plan that supports management of existing or potential sources of contamination in the WHPA.*
- 4. Known sources of contamination within the WHPA are in process of re-mediation to prevent movement of contamination to the municipal wells.*

This report shows our water quality and what it means.

If you have any questions about this report or concerning your water utility, please contact Randy Carter at 383 S. State St., Sparta, MI 49345 or call 616-887-0854.. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the second Monday of every month at the Township Office, 160 E. Division, starting at 7 p.m.

The Village of Sparta water system routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2015.

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

*Non-Detects (ND)* - laboratory analysis indicates that the constituent 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.

*Treatment Technique (TT)* - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

*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.

*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. MRDL - Highest Level of a disinfectant allowed in drinking water.

MRDLG - The level of a drinking water disinfectant below which there is no know or expected risk to health.

<b>TEST RESULTS</b>						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
<b><i>Radioactive Contaminants</i></b>						
<i>Radium-226 &amp; 228 2016</i>	<i>N</i>	<i>0.1</i>	<i>pCi/l</i>	<i>0</i>	<i>5.0</i>	<i>Erosion of natural deposits</i>
<b><i>Inorganic Contaminants</i></b>						
<i>Barium 2006</i>	<i>N</i>	<i>0.01</i>	<i>ppm</i>	<i>2.0</i>	<i>2.0</i>	<i>Discharge of drilling wastes Discharge from metal refineries, Erosion of natural deposits</i>
<i>Fluoride 2017</i>	<i>N</i>	<i>0.63</i>	<i>ppm</i>	<i>4</i>	<i>4</i>	<i>Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories</i>

<i>Regulated contaminates in Distribution System</i>	<i>Date Tested</i>	<i># of Sites Tested</i>	<i>90<sup>th</sup> Percentile</i>	<i># of Sites over Action Level</i>	<i>Action Level/Units of Measurement</i>	<i>Likely Source of Contamination</i>
<i>Lead</i>	<i>2017</i>	<i>20</i>	<i>0</i>	<i>0</i>	<i>15. ppb</i>	<i>Corrosion of household plumbing systems, erosion of natural deposits</i>

<i>Copper</i>	2017	20	0.5 ppm	0	1.3 ppm	<i>Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives</i>	
	<i>Date Tested</i>	<i>Violation Y/N</i>	<i>Level Detected</i>	<i>Unit of Measurement</i>	<i>MCLG MRDLG</i>	<i>MCL MRDL</i>	<i>Likely Source of contamination</i>
<i>TTHM</i>	2017	N	0.0199 ppm	ppm	NA	0.080 ppm	<i>By-product of drinking water chlorination</i>
<i>Total Trihalomethanes</i>	2017	N	10.6 ppb	ppb		60 ppb	
<i>Total Coliform Bacteria</i>	2017	N	0	N/A	N/A	1	<i>Naturally Present in the Environment</i>
<i>Chlorine Residual</i>	2017	N	0.50-0.92 ppm 0.6 RAA running annual average	ppm	4	4 ppm	<i>Water additive used to control microbes</i>
<i>Unregulated Contaminates</i>	<i>Date Tested</i>	<i>Violation Y/N</i>	<i>Level Detected</i>	<i>Unit of Measurement</i>	<i>MCLG MRDLG</i>	<i>MCL MRDL</i>	<i>Likely source of contamination</i>
<i>Sodium</i>	2017	N	109 ppm	ppm	n/a	n/a	<i>By-product of treatment process/softening</i>

We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or manmade. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

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 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 storm water 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, urban storm water runoff, and residential uses.
- \* Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- \* Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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 must provide the same protection for public health.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, 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.

## **Per- and Polyfluoroalkyl Substances (PFAS)**

Per- and polyfluoroalkyl substances (PFAS), sometimes called PFCs, are a group of chemicals that are resistant to heat, water, and oil. PFAS have been classified by the U.S. Environmental Protection Agency (EPA) as an emerging contaminant on the national landscape. For decades, they have been used in many industrial applications and consumer products such as carpeting, waterproof clothing, upholstery, food paper wrappings, fire-fighting foams, and metal plating. They are still used today. PFAS have been found at low levels both in the environment and in blood samples of the general U.S. population.

These chemicals are persistent, which means they do not break down in the environment. They also bioaccumulate, meaning the amount builds up over time in the blood and organs. Studies in people who were exposed to PFAS found links between the chemicals and increased cholesterol, changes in the body's hormones and immune system, decreased fertility, and increased risk of certain cancers.

### **Are there health advisory levels?**

The EPA has not established enforceable drinking water standards, called maximum contaminant levels, for these chemicals. However, EPA has set a lifetime health advisory (LHA) level in drinking water for two PFAS: perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). The PFOA and PFOS LHA is the level, or amount, *below which no harm is expected from these chemicals*. The LHA level is 70 parts per trillion (ppt) for PFOA and 70 ppt for PFOS. If both PFOA and PFOS are present, the LHA is 70 ppt for the combined concentration.

Low levels of per- and polyfluoroalkyl substances (PFAS) specifically Perfluorobutanesulfonic Acid (PFBS) was detected in a sample collected from Well #2 from the Village of Sparta municipal water system.

For information on PFOA, PFOS and other PFAS, including possible health outcomes, you may visit these websites: <https://www.epa.gov/pfas>; [www.atsdr.cdc.gov/pfas](http://www.atsdr.cdc.gov/pfas); or <http://www.michigan.gov/pfasresponse>.

### **Why was the Village of Sparta's source water tested for PFAS?**

In response to citizen concern and recent events in which some water supplies in Kent County showed the presence of PER- and Polyfluoroalkyl Substances. A sample collected from the Village of Sparta wells showed that well #2 tested positive for PFBS at 3.3 parts per trillion (ppt). The well has not been in service since testing positive for PFBS.

## **Who can I call if I have questions about PFAS in my drinking water?**

If any resident has additional questions regarding this issue, the State of Michigan Environmental Assistance Center can be contacted at 800-662-9278. Representatives may be reached to assist with your questions Monday – Friday, 8:00 AM to 4:30 PM. You may also contact Randy Carter, Water Operator at 616-887-0854 or Village Manager Julius Suchy at 616-887-8251.

## **Is it safe to eat fish in these areas?**

Wild fish samples are being collected from local lakes and rivers. These samples will be analyzed to determine the levels of PFAS in fish and make recommendations on how much is safe to eat. Some information is already available in the State of Michigan Eat Safe Fish guides, which are available at [www.michigan.gov/eatsafefish](http://www.michigan.gov/eatsafefish).

## **May I bathe or swim in water containing PFAS?**

Yes, PFAS does not easily absorb into the skin. It is safe to bathe, as well as do your laundry and household cleaning. It is also safe to swim in and use recreationally.

## **How can PFAS affect people's health?**

Some scientific studies suggest that certain PFAS may affect different systems in the body. The National Center for Environmental Health (NCEH)/Agency for Toxic Substances and Disease Registry (ATSDR) is working with various partners to better understand how exposure to PFAS might affect people's health.

If you are concerned about exposure to PFAS in your drinking water, please contact the MDHHS Toxicology Hotline at 800-648-6942 or the CDC/ATSDR: <https://www.cdc.gov/cdc-info/> or 800-232-4636. Currently, scientists are still learning about the health effects of exposures to PFAS, including exposure to mixtures.

## **What other ways could I be exposed to PFOA, PFOS and other PFAS compounds?**

PFAS are used in many consumer products. They are used in food packaging, such as fast food wrappers and microwave popcorn bags; waterproof and stain resistant fabrics, such as outdoor clothing, upholstery, and carpeting; nonstick coatings on cookware; and cleaning supplies, including some soaps and shampoos. People can be exposed to these chemicals in house dust, indoor and outdoor air, food, and drinking water. Usually the amounts of PFAS a person may be exposed to is quite small.

## **What is being done about this issue?**

State and local agencies are actively working to obtain more information about this situation as quickly as possible. Additional testing of the drinking water will be conducted to demonstrate that the PFAS levels are consistent, and reliably below the existing LHA. Additional monitoring of the municipal well system is being performed by the Village and the DEQ, which will help us answer more questions and determine next steps.

## **How can I stay updated on the situation?**

The state has created a website where you can find information about PFAS contamination and efforts to address it in Michigan. The site will be updated as more information becomes available. The website address is <http://michigan.gov/pfasresponse>. You can also visit [www.spartami.org](http://www.spartami.org) and review the PFBS Information page the Village has created.

**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. The Village of Sparta 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, 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>.

In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Please call our office if you have questions, at 887-0854.

We at Sparta Water Department work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

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