

2018 Water Quality Report for Otsego Township

This report covers the drinking water quality for Otsego Township for the calendar year 2018. This information is a snapshot of the quality of the water that we provided to you in 2018. 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 and is treated with liquid chlorine to provide water system disinfection. The township has a 500,000 gallon elevated water storage tank, and an emergency water supply interconnection with the cities of Plainwell and Otsego. 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 seven-tiered scale from "very-low" to "very-high" based primarily on geologic sensitivity, water chemistry and contaminant sources. The susceptibility of our source has been determined to be moderate by the Department of Environmental Quality. We are making efforts to protect our sources. The Township completed the wellhead protection program to protect the ground water resource serving the Township's wells. If you would like to know more about the report please contact the Otsego Township Hall at (269) 694-9434, Monday through Thursday, 8:00 am until 4:00 pm.

- **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 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 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 storm water 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 lists all the drinking water contaminants that we detected during the 2018 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, 2018. 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):** 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.
- **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. **ppq:** parts per quadrillion or picograms per liter.
- **Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Regulated Contaminant	MCL	MCLG	Highest Level Detected	Sample Date	Violation Yes / No	Typical Source of Contaminant
Fluoride (ppm)	4	4	0.14	5/10/2018	no	Erosion of natural deposits. Discharge from fertilizer and aluminum factories
Nitrate (ppm)	10	10	0.4	5/9/2018	no	Run off from fertilizer use; leaching from septic tanks, sewage; Erosion of natural deposits
Alpha Emitters (pCi/L)	15	0	1.8	12/8/2015	no	Erosion of natural deposits
Total Radium 226/228 (pCi/L)	5	0	0.93	12/8/2015	no	Erosion of natural deposits
2,3,7,8-TCDD (ppq)	30	0	ND	9/18/2018	no	Emissions from waste incineration and other combustion; discharge from chemical factories

Special Monitoring and Unregulated Contaminant *	Highest Level Detected	Sample Date	Violation Yes / No	Typical Source of Contaminant
Sodium (ppm)	15	5/9/2018	N/A	Erosion of natural deposits
Sulfate (ppm)	26	5/9/2018	N/A	Erosion of natural deposits
Hardness (ppm)	290	5/9/2018	N/A	Erosion of natural deposits

* 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.

Contaminant Subject to AL	Action Level	MCLG	Your Water ¹	Range of Results	Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb) **	15	0	0	ND For all samples	2016	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	1.3	1.3	0.1	ND – 0.1	2016	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

¹ Ninety (90) percent of the samples collected were at or below the level reported for Your Water.

Otsego Township has no lead service lines, and no service lines of unknown material. There are 193 total service lines.

**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. Otsego Township 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>.

Microbial Contaminants	MCL	MCLG	Year Sampled	Number Detected	Range	Typical Source of Contaminant
Total Coliform Bacteria	>1 positive monthly sample (>5.0% of monthly samples positive)	0	2018	0	N/A	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	2018	0	N/A	Human and animal fecal waste

Disinfection Byproducts	MCL	MCLG	Level Detected	Range	Sample Date	Violation Yes/No	Typical Source of Contaminant
Trihalomethane (ppb)	80	N/A	38.7	38.7-38.7	2018	No	Disinfection Byproducts
Haloacetic Acids (ppb)	60	N/A	ND	NO	2018	No	Disinfection Byproducts
Free Chlorine Residual	MRDL	MRDLG	RAA	0.28-1.31	2018	No	Water additive used to control microbes
	4	4	0.82				

PFAS (Per- and Polyfluoroalkyl Substances)

Date	Location	PFOS (ppt)	PFOA (ppt)	PFOS + PFOA (ppt)	LHA (ppt)	Total of Other PFAS (ppt)
5/1/2018	Water Plant Tap	ND	ND	ND	70	ND

What are Per- and polyfluoroalkyl substances (PFAS) and why are they harmful?

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.

There are many other PFAS compounds that currently do not have LHA levels. For information on PFOA, PFOS, and other PFAS, including possible health outcomes, you may visit these websites: <https://www.epa.gov/pfas>; <https://www.atsdr.cdc.gov/pfas/>; or <http://www.michigan.gov/pfasresponse>.

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.

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.

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>

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 Otsego Township Hall, 400 N. 16th Street, Otsego, Michigan, 49078.

We invite public participation in decisions that affect drinking water quality. Township Board meetings are held on the second Monday of each month at 7:00p.m. at Township Hall (address listed above).

For more information about your water, or the contents of this report, contact George Regan via email at gregan@fv-operations.com. For more information about safe drinking water, visit the U.S. Environmental Protection Agency at www.epa.gov/safewater/.

CERTIFICATION: 11262

WSSN: 05065

I certify that this water supply has fully complied with the public notification regulations in the Michigan Safe Drinking Water Act, 1976 PA 399, as amended, and the administrative rules.

Signature: 

Title: Project Manager

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