

# 2019 Water Quality Report for Berrien Springs/Oronoko Twp Water System

This report covers the drinking water quality for The Village of Berrien Springs Water Department for the 2019 calendar year. This water serves residents in the Village limits, Oronoko Township and Andrews University. This information is a snapshot of the quality of the water that we provided to you in 2019. Included are details about where your water comes from, what it contains, and how it compares to United States Environmental Protection Agency (U.S. EPA) and state standards.

Your water comes from 4 groundwater wells located in 2 well fields, one well field is over 75 feet deep and the other well field is over 174 feet deep. The State performed an assessment of our source water 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 on geologic sensitivity, well construction, water chemistry and contamination sources. The susceptibility of our source is ranked as "moderately sensitive" by the State of Michigan.

There are no significant sources of contamination in our water supply. We are making efforts to protect our sources by continuing to update our Wellhead Protection Program which has been approved by the State of Michigan.

**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 U.S. 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. U.S. EPA/Center for Disease Control 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.

## 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, The village of Berrien Springs Water Department 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 want 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>.

We performed a preliminary distribution system materials inventory in 2019 to estimate the possible number of lead service lines in the Village of Berrien Springs and Oronoko Township.

In the Village we have 780 service lines, 133 lines likely contain lead, 463 likely are galvanized which were previously connected to lead and 208 contain no lead.

In Oronoko Township there are 703 service lines, 400 lines likely contain lead, 85 are unknown and 218 contain no lead.

Lead copper testing results are on the last page of this report.

# INFORMATION ABOUT PFAS

In July 2018 the State of Michigan tested our wells for PFAS Per- and Polyfluoroalkyl Substances (PFAS). Our wells showed no detection of this contaminant. The letter from the State is available to view on our website <https://www.villageofberriensprings.com/>.

## Water Quality Data

In order to ensure that tap water is safe to drink, the U.S. EPA prescribes regulations that limit the levels of certain contaminants in water provided by public water systems. Federal Food and Drug Administration regulations establish limits for contaminants in bottled water which provide the same protection for public health.

The table below lists all the drinking water contaminants that we detected during the 2019 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 through December 31, 2019. 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 the data is representative of the water quality, but some are more than one year old.

The State of Michigan EGLE (Michigan Department of Environment, Great Lakes, and Energy) and the U.S. EPA require us to test our water on a regular basis to ensure its safety. We met all monitoring and reporting requirements for 2019.

### 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.

If you would like to know more about the report, please contact Dave Kunde, Village of Berrien Springs Water Superintendent at Village of Berrien Springs, PO Box 182 Berrien Springs, MI 49103. Or you can email [Watersupervisor@villageofberriensprings.com](mailto:Watersupervisor@villageofberriensprings.com) you can also visit our website for more information at [www.villageofberriensprings.com](http://www.villageofberriensprings.com).

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 Village Hall 112 North Cass Street, Berrien Springs, MI 49103.

We invite public participation in decisions that affect drinking water quality Village Council meets the first and third Mondays of each month. For more information about safe drinking water, visit the U.S. EPA at <http://www.epa.gov/safewater/lead>.

Regulated Contaminant	MCL, TT, or MRDL	MCLG or MRDLG	Level Detected	Range	Year Sampled	Violation Yes/No	Typical Source of Contaminant
Arsenic (ppb)	10	0	ND		2018	NO	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	.06	0-.06	2018	NO	Discharge of drilling wastes; Discharge of metal refineries; Erosion of natural deposits
Nitrate (ppm)	10	10	1.6	0-1.6	2019	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	.11	0-.11	2018	NO	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Sodium <sup>i</sup> (ppm)	N/A	N/A	27	8-27	2019	NO	Erosion of natural deposits
TTHM Total Trihalomethanes (ppb)	80	N/A	19.4	3.8-19.4	2019	NO	Byproduct of drinking water disinfection
HAA5 Haloacetic Acids (ppb)	60	N/A	ND		2019	NO	Byproduct of drinking water disinfection
Chlorine <sup>ii</sup> (ppm)	4	4	.64	.20-1.30	2019	NO	Water additive used to control microbes
Dichloromethane (ppm)	.005	0	.0067	.0067	2019	NO	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.

1 Sodium is not a regulated contaminant.

2 The chlorine "Level Detected" was calculated using a running annual average

### Terms and abbreviations used in tables:

- **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.
- **ND:** not detectable at testing limit
- **ppb:** parts per billion or micrograms per liter
- **ppm:** parts per million or milligrams per liter
- **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

## LEAD AND COPPER TESTING

In 2019 EGLE (Michigan Department of Environment, Great Lakes, and Energy) required us to sample Oronoko Township as a Separate water system for Lead and Copper. The first table is previous sampling of the combined system, the next two tables are Oronoko Township results. We will be sampling the Village this summer.

<b>VILLAGE OF BERRIEN SPRINGS LEAD COPPER TESTING</b>							
Inorganic Contaminant Subject to Action Levels (AL)	Action Level	MCLG	Your Water <sup>iii</sup>	Range of Results	Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	0	2	0-8	2017	0	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper (ppm)	1.3	1.3	.2	0-.45	2017	0	Corrosion of household plumbing systems; Erosion of natural deposits
<b>ORONOKO TOWNSHIP LEAD AND COPPER MONITORING FIRST ROUND JANUARY 1 THROUGH JUNE 30, 2019</b>							
Inorganic Contaminant Subject to Action Levels (AL)	Action Level	MCLG	Your Water <sup>iv</sup>	Range of Results	Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	0	1	0-4	2019	0	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper (ppm)	1.3	1.3	.3	0-3	2019	0	Corrosion of household plumbing systems; Erosion of natural deposits
<b>ORONOKO TOWNSHIP LEAD AND COPPER MONITORING SECOND ROUND JULY 1 THROUGH DECEMBER 31, 2019</b>							
Inorganic Contaminant Subject to Action Levels (AL)	Action Level	MCLG	Your Water <sup>v</sup>	Range of Results	Year Sampled	Number of Samples Above AL	Typical Source of Contaminant
Lead (ppb)	15	0	0	0-1	2019	0	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Copper (ppm)	1.3	1.3	.3	0-5	2019	0	Corrosion of household plumbing systems; Erosion of natural deposits

3 Ninety (90) percent of the samples collected were at or below the level reported for your water.

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