

**Annual Drinking Water Quality Report**  
**2018**  
**Breitung Township Water Department**  
**Quinnesec Water System**

We're pleased to provide you with this year's Annual Quality Water Report. We want to keep you informed about the water and services we have delivered to you over the past year. Our goal is and always has been, to provide you with a safe and dependable supply of drinking water.

**Where does my water come from?**

Our water in Quinnesec is supplied by two deep wells. Well No. 3 has a capacity of 350 gpm (gallons per minute). Well No. 4 has a capacity of 325 gpm.

**Source Water Assessment Program**

In 2003, the Michigan Dept. Of Environmental Quality performed a source water assessment of the Breitung Township wells. Under the provisions of the 1996 amendments of the Safe Water Drinking Act, the State of Michigan is required to develop and implement an assessment of all public water supplies. Breitung Township wells received a score of moderate.

**Is my water safe?**

**YES, I am pleased to report that our drinking water is safe and meets Federal and State requirements.**

This report shows our water quality and what it means.

**Drinking Water in General**

Drinking water, including bottled water, may reasonably be expected to contain some small amounts of 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 Water Drinking Water Hot Line 1-800-426-4791.

**General Sources of Drinking Water**

The sources of drinking water, both bottled and tap, include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves natural 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 water before it is treated**

1. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
2. Inorganic Contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water run off, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.
3. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential use.
4. 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.
5. 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 the public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.**

**Do I need to take special precautions?**

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. 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 micro biological contaminants are available from the Safe Drinking Water Hot line (800-426-4791).

**Terms and Abbreviation**

*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.

*Pico curies per liter (pCi/L)* - Pico curies per liter is a measure of the radioactivity in water.

*Action Level (AL)* - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

*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.

*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.

Contaminants	Test Result					Likely Source of Contamination
	MCLG	MCL	Our Water	Sample Date	Violation	
<b>Inorganic</b>						
Nitrate (ppm)	0	10	2.5 – 3.7	03/19/18	No	Runoff from fertilizer use. Leaching from septic tanks. erosion Natural Occurring
Fluoride (ppm)	0	4.0	0	03/19/18	No	
<b>Radiological</b>						
Gross Alpha (pCi/l)	0	15	2.12	5/15	No	Decay of Natural and manmade products Erosion of natural deposits
Gross Beta (pCi/l)	0	50	1.32	5/15	No	
Radium-226	0	5.0	.20	5/15	No	
Radium-228	0	combined	.20	5/15	No	
<b>Microbiological Contaminants</b>						
Total Coliform (Positive Samples)	0	0	3	2018	Yes	Naturally present in the environment
<b>Unregulated Contaminants</b>						
PFAS/PFOS	NR	NR	0	2018	No	Run off
Sodium (ppm)	NR	NR	33 to 68	3/18	No	Naturally present in the environment
<b>Lead/Copper at Consumer Tap</b>						
		<b>AL</b>				
Lead (ppb)	0	15.0	2	2017	No	Corrosion of household plumbing systems
Copper (ppb)	0	1300	100	2017	No	Corrosion of household plumbing systems

**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 Charter Township of Breitung 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>.

**Unregulated contaminants:** 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 monitor for these contaminants and results of monitoring are available on request.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct the problems that were found during these assessments

The Quinnesec distribution system currently has 486 water services that were installed between about 1900 to the present. Those services installed to residences and small businesses between 1900 to the late 1960s contained a 24 inch long section of lead pipe that connected the water main to the galvanized iron service piping. Since the late 1960s, smaller water services have been installed using type K copper pipe and no lead pipe section. In addition, over the years many water services have been repaired or replaced and the lead sections have been removed and replaced with copper pipe. The Breitung Township is in the process of taking inventory of the water services that contain these short sections of lead pipe to meet the requirements of the recently changed rules to PA 399 DRINKING WATER Act and to formulate a plan to begin replacing these services. This information regarding the number of water services containing any lead pipe will be reported in future Water Quality Reports.

### 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 United States Environmental Protection Agency (U.S. 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 from 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. Although our understanding of these emerging contaminants is constantly evolving, elevated levels of PFAS have the potential to cause increased cholesterol, changes in the body's hormones and immune system, decreased fertility, and increased risk of certain cancers. Links to these health effects in humans are supported by epidemiologic studies and by laboratory studies in animal models.

### Are there health advisory levels?

The U.S. EPA has not established enforceable drinking water standards, called maximum contaminant levels, for these chemicals. However, the U.S. 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.**

PFOA and PFOS,s were **NOT Detected** in samples taken from our system.. 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>.

### **Why was Quinnesec's source water tested for PFAS?**

The Michigan Department of Environmental Quality (MDEQ) has coordinated a statewide initiative to test drinking water from all schools that use well water and community water supplies for PFAS. MDEQ is taking this precautionary step to testing these drinking water sources to determine if public health actions are needed.

### **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 through Friday, 8:00 AM to 4:30 PM. You may also contact [water supply information].

### **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 <http://www.michigan.gov/eatsafefish>.

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

Yes, information currently available suggests that this is not a major contributor to overall exposure.

### **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 Michigan Department of Health and Human Services Toxicology Hotline at 800-648-6942, or the Center for Disease Control and Prevention/ATSDR at <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. There is still uncertainty regarding these routes of exposure and more research is necessary.

### **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 in and around our region and other affected areas will also be performed by the Michigan Department of Environmental Quality, 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>

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 2018 testing meets or exceeds all Federal and State requirements

If you have any questions about this report or concerning your water utility, please contact Guy Forstrom at Breitung Township Water Dept. 779-2052 Mon.- Fri. 7 am to 3:30 pm

A copy of this report may be obtained at the Breitung Township Hall, 3851 Menominee Ave. Quinnesec, MI  
Regular meetings of the Breitung Township Water Board are held the first Thursday of the month, at the Breitung Township Hall, 3851 Menominee Ave, Quinnesec, MI or online at [www.breitungtpw.org](http://www.breitungtpw.org).