

Burt Township (Grand Marais)

2017 Annual Water Quality Report

March 20, 2018

Burt Township's (Grand Marais) constant goal is to produce the best quality drinking water possible. The purpose of this report is to provide you with information about your drinking water. The report explains to you where your water comes from and the treatment it receives before it reaches your tap. The report also lists any contaminants detected in your water and an explanation of any violations in this year. Your drinking water has met all EPA and State of Michigan drinking water health standards and is safe to drink.

Where does my water come from? Burt Township Water Department (Grand Marais) gets its water from underground, known as Ground Water, by way of two wells. They are both from the same watershed known as the Betsy-Chocolay Watershed. The U.S.G.S. cataloging unit # is 0402021. Upstream of our watershed is the Dead-Kelsey watershed, while downstream is the Waiska Watershed. The #1 well was abandoned in November of 2006 and is no longer in use. #2 well and our new #3 well are our main production wells. The new #3 well was installed in 2006. Wells #2 and #3 supplied 100 percent of our water for 2017. No chemicals are added to the water for treatment purposes before delivery to Grand Marais' customers. For the year 2017 we have pumped a grand total of 13,207,224 gallons. An average daily pumping of 36,184 gallons, maximum daily pumping of 126,975 gallons and a minimum daily pumping of 10,053 gallons. The state performed an assessment of our source water in 2003 to determine the susceptibility or the relative potential of contaminations. The susceptibility rating is on a six-tiered scale from “very low” to “high” based on geologic sensitivity, water chemistry and contaminant sources. **The susceptibility of our sources is moderately high susceptibility. Our high rating is due to the nature of our local soil to allow contaminants into the aquifer and the lack of a local sewer system.**

Reason for Report: This report shows Grand Marais' water quality and what it means.

Questions concerning this report: If you have any questions about this report or concerning your water utility, please contact Michael L. Beek at 906-494-2381. Burt Township wants its residents to be informed about their water utility. If you want to learn more, please attend any of the Burt Township's regularly scheduled meetings. They are held on the 2nd Tuesday of each month at 7:00 p.m., in the community center at the corner of Campbell and Brazel St. E21738.

Monitoring: The Burt Township (Grand Marais) Water Department routinely monitors for contaminants in its water according to federal and state laws. Unless otherwise noted, the following tables show the results of this monitoring from January 1, 2017 through December 31, 2017. As water travels over the land and underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. As you review the results, it is important to take into account that the presence of these contaminants does not necessarily pose a health risk. The EPA regulates over 80 contaminants in drinking water. Some states set stricter standards, however all states must have standards at least as stringent as the EPA's.

Definition of Terms: In this table you will find many terms and abbreviations that might not be familiar. Therefore, the following is a list of definitions of these terms that you will encounter as you review the report:
(MDL) Minimum Detection Limit
(ppm) Parts per million or (mg/L) Milligrams per Liter. One part per million corresponds to one minute in two years or a single penny in \$10,000.00.
(ppb) Parts per billion or Micrograms per Liter. One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.00.
Picocuries per Liter (PCi/L) – Pico curies per Liter are 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 – (mandatory language) The “Maximum Allowed” (MCL) is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
Maximum Contaminant Level Goal–(mandatory language) The “Goal” (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

Why are there contaminants in Drinking Water? All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man-made. 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 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.

Explanation of MCL's (maximum contaminant level): 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 more than 2 quarts of water every day for a lifetime to have a one-in-a-million chance of having the described effect.

Required Additional Health Information: Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer and 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 from their health care providers about drinking water. 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 (1-800-426-4791). You can also visit the U. S. Environmental Protection Agency at www.epa.gov/safewater/.

Closing Remarks: Please call our office if you have any questions regarding this report or any other concerns about your water. The Burt Township Water Department is committed to providing its water customers with the best quality water possible. In return, we ask that all residents of Burt Township help us protect our water sources. Keeping water clean is a much easier task than making contaminated water clean. The following results are from our water sources.

TEST RESULTS

Contaminant	Violation	Level Detected	Unit Measured	MCLG	MCL	Likely Source of Contamination
Inorganic Contaminants						
1. Copper	No	1080 ppb	ppb	1300 ppb	1300 ppb	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
2. Lead	No	4 ppb	ppb	15 ppb	15 ppb	Corrosion of household plumbing systems; erosion of natural deposits
3. Nitrate (as Nitrogen)	No	2.9 mg/L	mg/L	10 mg/L	10 mg/L	Runoff from fertilizer use; leaching from septic systems; erosion of natural deposits

Note: Test results are from primary wells 2 & 3. Well #1 was abandoned in 2006 due to high Nitrate and hydro carbon levels. Radioactive testing was done in 2015, no further testing is required until 2024.

Note: Lead and Copper results are from 2016, no further testing required until 2019

Note: 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. Burt 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 for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking 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 at <http://www.epa.gov/safewater/lead>.

Notes:

- (1) Copper: Copper is an essential nutrient, but some people who drink water containing copper in excess of the MCL over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the MCL over many years could suffer from liver or kidney damage. People with Wilson's disease should consult their personal doctor.
- (2) Lead: Infants and children who drink water containing lead in excess of the MCL could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
- (3) Nitrate: Infants below the age of six months who drink water containing nitrate in excess of the MCL could be seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

UNREGULATED CONTAMINANTS & NON DETECTED CONTAMINANTS

Contaminant	Violation	Level Detected	Unit Measured	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
1. Total Coliform Bacteria	No	0	--	0	0	Naturally present in environment
Radioactive Contaminants						
2. Gross Alpha	No	2.59+/-1.37	PCi/L	15	15	Erosion of natural deposits
3. Gross Beta	No	1.09+/-1.14	PCi/L	50	50	Erosion of natural deposits
4. Radium-226	No	0.17+/-0.06	PCi/L	50	50	Erosion of natural deposits
5. Radium-228	No	0.12+/-0.41	PCi/L	Combined	Combined	Erosion of natural deposits
Inorganic Contaminants						
6. Arsenic	No	0	mg/L	.010 mg/L	.010 mg/L	Likely Source of Contamination
7. Fluoride	No	0	ppm	4 ppm	4 ppm	Erosion of natural deposits; promotes strong teeth
8. Nitrite (as Nitrogen)	No	0	mg/L	1 mg/L	1 mg/L	Runoff from fertilizer use; leaching from septic systems; erosion of natural deposits
Unregulated Contaminants						
9. Chloride	No	16.5 mg/L	mg/L	250 mg/L	None	Erosion of natural deposits
10. Hardness	No	172 mg/L	mg/L	None	None	Erosion of natural deposits
11. Iron	No	0	mg/L	0.3 mg/L	None	Erosion of natural deposits
12. Sodium	No	10.5 mg/L	mg/L	None	None	Erosion of natural deposits
13. Sulfate	No	10 mg/L	mg/L	250 mg/L	None	Erosion of natural deposits

Notes:

- (1) Total Coliform: the Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria is present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio.
- (2) Alpha emitters: Certain minerals are radioactive and may emit forms of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
- (3) Beta/photon emitters: Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
- (6) Arsenic: Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
- (7) Fluoride: Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth. Fluoride occurs naturally in our water source and promotes strong teeth.

The Burt Township Water System has had no violations as you can see from the charts above. We are proud to be able to provide dependable and safe drinking water that meets or exceeds State and Federal requirements. For More Information: Attn: Michael L. Beek (Public Works Manager), Burt Township, P.O. Box 430, Grand Marais, MI, 49839. Phone: 906-494-2381, fax: 906-494-2627. You can view the report on the Burt Township website at www.burttownship.com or at the Township Offices.