

TOWNSHIP OF ALPENA WATER DEPT.
Annual Drinking Water Quality Report
2016 Consumer Confidence Report

Dear water utility customer:

This is the next report in a continuing series of an Annual Water Quality Report. A key component of the new law is mandatory public disclosure about compliance with drink water regulations. The water sample results presented in the following report are technical in nature, and our goal is to help you understand how the data supports the safety of consuming drinking water treated by the City of Alpena and provided by the Township of Alpena Water Dept. If you have any questions about the contents of this report, please contact Jerry Bleau at (989) 356-2851.

Our fresh water source is surface water from Thunder Bay in Lake Huron. This has been the source of drinking water in Alpena since 1905. Over the last 40 years, state and federal environmental regulations have progressively become more stringent resulting in significant improvements in Great Lakes water quality. Efforts to protect our fresh water source include a "Source Water Assessment" conducted by the Michigan Department of Environmental Quality. The assessment indicates that the Alpena source water is highly susceptible to potential contamination. The assessment is completed and copies are available upon request. The city of Alpena and the Township of Alpena closely monitor both the source and the treated drinking water supplied to you to ensure its quality and safety. The sample data shows that it is of the highest quality.

The City of Alpena and the Township of Alpena routinely monitors your drinking water for impurities according to Federal and Michigan State laws. The table included with this report shows the results of our monitoring for the period January 1st thru December 31st, 2016. Sample results that are more than (5) five years old need not be included in the report, even if they are the last available date for the supply.

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 consuming the water poses an increased health risk. 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. It also can pick up substances resulting from the presence of animals or human activity. If you need more information about contaminants and potential health effects, please call the EPA Safe Drinking Water Hotline at 1-800-426-4791.

Contaminants that may be present in source water include:

- (A) **Microbial contaminants:** such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- (B) **Inorganic contaminants:** **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.
- (C) **Pesticides and herbicides:** **Pesticides and herbicides**, which may come from a variety of sources such as agriculture urban, storm water runoff, and residential uses.
- (D) **Radioactive contaminants, Radioactive contaminants:** which can be naturally occurring or be the result of oil and gas production and mining activities.
- (E) **Organic chemical contaminants:** **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, which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

As you will see by the following tables, our water system had no Maximum Contaminate Level (MCL) violations during 2016. We are proud that your drinking water meets or exceeds all federal and state requirements. We have learned through our monitoring and testing that some contaminants have been detected, but the concentrations found are well below the regulatory standards. The EPA has determined that you're **DRINKING WATER IS SAFE** at these levels.

Maximum contaminate levels are set at very restrictive concentrations. To understand the possible health effects described for many of the regulated contaminants listed in this report, a person would have to drink two (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. Immune-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 for infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Center for Disease Control, at 1-800-342-2437) guidelines on appropriate means to lessen the risk of infection *Cryptosporidium* and other microbial contaminants are available

from the Safe Drinking Water Hotline at 1-800-426-4791.

In the following tables are many terms and abbreviations you might not be familiar with. To help you better understand these terms; we've provided the following definitions:

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

MCL (Maximum Contaminant Level) the highest level of a contaminant that is allowed in drinking water. MCLs are set close to MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal) the level of a contaminant in drinking water below which there is not known or expected risk to health. MCLGs allow for a margin of safety.

N/A (Not Applicable)

NTU (Nephelometric Turbidity Unit) turbidity a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the person.

PCi/L (Picocuries per liter) a measure of the radioactivity in water.

Ppb (Part per Billion) or ug/l (Micrograms per liter)- one (1) part per billion corresponds to one (1) minute in 2,000 years, or a single (1) penny in \$10,000,000.

PPM (Parts per Million) or mg/l (Milligrams per liter) one (1) part per million corresponds to one (1) minute in two years or a single (1) penny in \$10,000.

TT (Treatment Technique) a required process intended to reduce the level of a contaminant in drinking water.

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

New lead language: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and youth children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Alpena Township Water 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>.

The utility is managed as an enterprise fund and all operation, maintenance, and replacement expenditures are financed entirely by user fees. The operation of the Township of Alpena Water Dept. is overseen by the Township of Alpena Board of Trustees, which meets on the first Monday of each month at 4385 US 23 North, Alpena, Mich.

Water Treatment Plant test results for 2016							
Regulated	MCL	MCLG	Detected	Range	Sample Date	Violation	Typical Sources
Turbidity (NTU)	TT=1	N/A	0.17	0.05-0.17	2016	No	Soil Runoff
Fluoride (PPM)	4	2	0.83	0.49-0.83	2016	No	Erosion of Natural deposits
Nitrate (PPM)	10	10	.31	N/A	2016	No	Erosion of Natural deposits
Barium (PPM)	2	2	0.01	N/A	6/20-2011	No	Erosion of Natural deposits
Alpha Emitters (pCi/l)	15	0	2.3	N/A	2015	No	Erosion of Natural deposits

Secondary Standards- Recommendations for substances that not directly related to health. They reflect aesthetic qualities such as taste, odor and appearance.

Sampled at the Plant tap	MCL	MCLG	Result	Sample Date	Violation	Typical Sources
Sodium (PPM)	N/A	N/A	8.4	2016	No	Naturally occurring
Sulfate (PPM)	N/A	N/A	19	2016	No	Naturally occurring

Chloride (PPM)	N/A	N/A	11	2016	No	Erosion of natural deposits
Calcium	N/A	N/A	24	2016	No	Naturally occurring element
Magnesium	N/A	N/A	6.7	2016		

Distribution System Test Results

Lead and copper were collected from 18 high-risk homes on 9/8/2014

The levels found are not found in the Township's water.

*90 percent of samples at or below this level.

Regulated Contaminant	Action level	You're Water*	Samples over Action level	Likely source of Contamination
Lead (PPB)	Al = 15	.36	0	Corrosion of Household plumbing
Copper (PPB)	1300	262	0	Corrosion of Household plumbing

2016							
Regulated Contaminant	MCL	MCLG	Average	Range	Sample Dates	Violation	Typical Sources
HAA5	60	N/A	23	10-42	Quarterly	No	Disinfection Byproduct

2016							
Regulated Contaminant							
	Sampled	MCL	MCLG	Average	Range	Violation	
TTHM	Quarterly	80	N/A	65.25	34-92	no	
Typical Source	Disinfection Byproduct						

Volatile Organic Contaminants Continued							
Substance	Year	Date	MCL	MCLG	RAA Detected	Range Low-High	Violation
Free Chlorine	2016	Quarterly	4.0	4.0	0.81	0.40-1.30	No