

Charter Township of



***Your Annual Consumer Confidence Report For
The Charter Township of Alpena***
January 1, 2021 - December 31, 2021

Dear Customer:

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality of the water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts made to continually improve the water treatment process and protect our water resources. We are wholly committed to ensuring the quality of your water.

Where does our water come from?

Our water source is surface water from Thunder Bay in Lake Huron. This has been the source of drinking water since 1905. Over the last 46 years, state and federal environmental regulations have progressively become more stringent resulting in significant improvements in Great Lakes water quality. 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 highly susceptible to potential contamination. The assessment is completed, and copies are available upon request.

The water is then treated via a very effective and unique process designed to reduce, remove, or destroy contaminants in the source water. This processing takes place at the City of Alpena Water Treatment Plant. The water treatment plant is staffed by Michigan Department of Environment, Great Lakes, and Energy (EGLE) certified professional water treatment specialists. As you will see in the following information, the City of Alpena and the Charter Township of Alpena monitor our lake water and drinking water supplied to you very closely to ensure its quality.

The Charter Township of Alpena wants their customers to be informed about their water quality and will be glad to answer any questions pertaining to your water supply. If you as a customer are confused or feel misinformed, give your utility the opportunity to clarify things.

We routinely monitor your drinking water for contaminants according to federal and state laws. The following tables included with this report show the results from the City of Alpena Water Treatment Plant as well as the Charter Township of Alpena. The monitoring period includes January 1, 2021 to December 31, 2021. Sample results that are more than nine years old is not included in the report, even if it is the last available data for the supply (e.g., some metals are collected on a nine-year frequency). 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 the water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency Safe Drinking Water Hot Line at 1-800-426-4791.

The Charter Township of Alpena is proud that your drinking water meets all federal and state requirements. We have learned from our monitoring and testing that some contaminants have been detected but are well within the standards. The EPA has determined that your water is safe at these levels. The Charter Township of Alpena has met all the monitoring requirements for 2021 for water quality.

Information for people with special health concerns

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. 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 Hot Line (800-426-4791).

The sources of all 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, 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, urban storm water runoff, and residential uses.
- **Organic Chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production in mining activities.

In order to ensure that tap water is safe to drink, the **EPA** prescribes regulations which limits 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. We will continue to work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future.

If you have questions concerning the contents of this report or the water utility, contact:

The Charter Township of Alpena
F&V Operations & Resource Management
4385 US 23 North
Alpena, MI 49707
989-356-0297 Ext. 1



Opportunities for Public Participation:

We believe that informed citizens can be strong allies of water systems as they take action on pressing problems. The following is a listing of meeting dates and locations where your elected officials may discuss water system issues.

Board of Trustees	Regular Meeting Schedule	Location / Contact
The Charter Township of Alpena	2 nd Tuesday @ 11:00 am 4 th Monday @ 6:00 pm Monthly	The Charter Township of Alpena Hall 4385 US 23 North Alpena, MI 49707 989-356-0297

In the following tables you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we have provided the following definitions:

Action Level (AL) - The concentration of a contaminant that if exceeded triggers treatment or other requirements that a water system must follow.

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 the 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.

Michigan Department of Environment, Great Lakes and Energy (EGLE)

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

Not regulated (NR) - The substance is not currently regulated by the USEPA and or EGLE. Monitoring helps EPA to determine where these contaminants occur and whether there is a need to regulate them.

Not applicable (NA)

Not Detected (ND)

parts per million (ppm)

parts per billion (ppb)

parts per trillion (ppt)

RAA – Running Annual Average

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

CITY OF ALPENA – WATER TREATMENT PLANT

PRIMARY STANDARDS – Required sampling for substances which have federally enforced regulations, these substances are directly related to the safety of drinking water.

Inorganic/Organic Chemicals	Sample Date	MCLG	MCL	Result	Range of all Results	Violation	Likely source
Nitrate (ppm)	8/11/2021	10	10	0.1	N/A	No	Erosion of natural deposits, Runoff from fertilizer, septic leakage
Barium (ppm)	8/12/2021	2	2	0.016	N/A	No	Discharge from metal refineries and coal-burning factories; discharge from industries
Fluoride (ppm)	8/11/2021	4	4	0.74	N/A	No	Water additive for dental health, naturally occurring in source water
Cadmium (ppb)	8/12/2020	5	5	0.23	N/A	No	Corrosion of galvanized pipes; erosion of natural deposits; discharge from industrial; runoff from waste batteries and paints
Chromium (ppb)	8/12/2020	100	100	1.1	N/A	No	Discharge from steel and pulp mills; erosion of natural deposits
Selenium (ppb)	8/12/2020	50	50	3.7	N/A	No	Discharge from petroleum and metal refineries, and mining operations; erosion of natural deposits
Plant Tap Per- and polyfluoroalkyl substances (PFAS)	Sample Date	MCLG	MCL	Result	Rang of All Results	Violation	Type Source of Contaminant
Hexafluoropropylene oxide dimer acid (HFPO-DA) ppt	8/11/2021	N/A	370	ND	ND	No	Discharge/waste from industrial facilities utilizing the Gen X chemical process
Perfluorobutane sulfonic acid (PFBS) ppt	8/11/2021	N/A	420	ND	ND	No	Discharge/waste from industrial facilities; stain-resistant treatments
Perfluorohexane sulfonic acid (PFHxS) ppt	8/11/2021	N/A	51	ND	ND	No	Firefighting foam; discharge and waste from industrial facilities
Perfluorohexanoic acid (PFHxA) ppt	8/11/2021	N/A	400,000	ND	ND	No	Firefighting foam; discharge and waste from industrial facilities
Perfluorononanoic acid (PFNA) ppt	8/11/2021	N/A	6	ND	ND	No	Discharge and waste from industrial facilities; breakdown of precursor compounds
Perfluorooctane sulfonic acid (PFOS) ppt	8/11/2021	N/A	16	ND	ND	No	Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial facilities
Perfluorooctanic acid (PFOA) ppt	8/11/2021	N/A	8	ND	ND	No	Discharge and waste from industrial facilities; stain-resistant treatments

CITY OF ALPENA – WATER TREATMENT PLANT

Distribution TOC Removal	Sample Date	MCLG	MCL	Lowest Removal	Removal Range	Violation	Likely source
TOC Removal Percentage	Monthly	N/A	TT	26% removal, 25% required	26% – 45%	No	Naturally present in the environment
Plant Filtered Water Turbidity	Sample Date	MCLG	MCL/TT	Highest Result	Range of all Results	Violation	Likely source
NTU Filtered Water	Daily	N/A	TT = 1	0.08	0.01 – 0.08	No	Soil run-off
% of samples <0.3 NTU	Daily	N/A	95%	100 %	N/A	No	Soil run-off

ADDITIONAL MONITORING – Required and non-required sampling for substances that do not have federally enforced regulations, these substances are not directly related to your health. They reflect aesthetic qualities such as taste, odor, and appearance.

Sampled at Plant Tap	Sample Date	MCLG	MCL	Average Result	Range of all Results	Violation	Likely source
Calcium ppm	2016	N/A	N/A	24	N/A	No	Naturally occurring element
Magnesium ppm	2016	N/A	N/A	6.7	N/A	No	Naturally occurring element
Sodium ppm	8/11/2021	N/A	N/A	8.2	N/A	No	Erosion of natural deposits
Chloride ppm	8/11/2021	N/A	250	11	N/A	No	Erosion of natural deposits
Sulfate ppm	8/11/2021	N/A	250	26	N/A	No	Naturally occurring mineral
TTHMs ppb	8/11/2021	4	4	41	N/A	No	Disinfection By-product
Nickel	8/12/2020	N/A	N/A	0.0028	N/A	No	Leaching from metals in contact with drinking water, such as pipes and fittings; naturally occurring element
Fluoride ppm	Daily	4	4	0.74	0.36 – 0.97	No	Erosion of natural deposits, water additive to protect teeth. Alpena is a Fluoridated system.
Chlorine ppm	Daily	4.0	4.0	1.18	1.03 – 1.36	No	Disinfectant added to control microbes
pH	Daily	N/A	6.5 – 8.5	7.1	6.6 – 7.6	No	Naturally occurring elements
Hardness CaCO3 ppm	Daily	N/A	N/A	108	82 – 154	No	Naturally occurring elements
Alkalinity CaCO3 ppm	Daily	N/A	N/A	78	60 – 114	No	Naturally occurring elements

UNREGULATED CONTAMINANTS –

Required sampling for substances which the EPA requires monitoring but has yet to establish standards. Monitoring helps the EPA determine where these contaminants occur and whether regulation is warranted in the future. Additional information about unregulated contaminants can be found here: www.epa.gov/dwucmr and www.dhd4.org

Sampled at Plant Tap	Sample Date	MCLG	MCL	Average Result	Range of all Results	Typical Source of Contaminant
Manganese ppb	2/3/2020 5/13/2020	N/A	N/A	0.58	0.41 – 0.74	Naturally occurring mineral
Sampled in Distribution	Sample Date	MCLG	MCL	Average Result	Range of all Results	Typical Source of Contaminant
HAA6 ppb	2/3/2020 5/13/2020	N/A	N/A	4.3	3.9 – 4.8	Disinfection by-product
HAA9 ppb	2/3/2020 5/13/2020	N/A	N/A	20.3	16.2 – 23.6	Disinfection by-product

CITY OF ALPENA – WATER TREATMENT PLANT

Sampled in Distribution	Sample Date	MCLG	MCL	Average Result	Range of all Results	Violation	Typical Source of Contaminant
Chloride ppm	2019	N/A	250	10.2	9.3 – 11.8	No	Erosion of natural deposits
Sulfate ppm	2019	N/A	250	25	8 – 38	No	Naturally occurring mineral
Orthophosphate ppm	2019	N/A	N/A	0.37	0.24 – 0.67	No	Water additive for corrosion control
Alkalinity CaCO3 ppm	2019	N/A	N/A	77	70 - 82	No	Naturally occurring elements
Fluoride ppm	10/month	4	4	0.77	0.52 – 0.96	No	Erosion of natural deposits, water additive to protect teeth. Alpena is a Fluoridated system.
pH	10/month	N/A	6.5 – 8.5	7.3	6.8 – 7.8	No	Naturally occurring elements

CHARTER TOWNSHIP OF ALPENA – DISTRIBUTION SYSTEM

Inorganic Contaminant Subject to ALS	Sample Date	MCLG	AL	Your Water ¹	Range of all Results	Violation	Typical Source of Contaminant
Copper (ppm)	2019	1.3	1.3	0.1	0.0 – 0.1	No	Corrosion of household plumbing; Erosion of natural deposits
Lead (ppb)	2019	0	15	0	0 – 0	No	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits

Important 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. Alpena 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 at 1-800-426-4791 or at <http://water.epa.gov/drink/info/lead>.

Disinfectant By-Products	Sample Date	MCLG	MCL	Highest RAA	Range of all Results	Violation	Typical Source of Contaminant
TTHMs (ppb)	Quarterly	N/A	80	46.6	22.2 – 66.9	No	Disinfection By-product
HAA5 (ppb)	Quarterly	N/A	60	20.0	11 – 25	No	Disinfection by-product
Disinfectant Residual	Sample Date	MRDLG	MRDL	Highest RAA	Range of all Results	Violation	Typical Source of Contaminant
Free Chlorine (ppm)	2021	4.0	4.0	0.82	0.09 – 1.39	No	Disinfectant added to control microbes.
Microbial Contaminants		MCL, TT	MCLG	Level Detected	Year Sampled	Violation	Typical Source of Contaminant
Total Coliform (total number or % of positive samples/month)		TT	N/A	N/A	2021	No	Naturally present in the environment
<i>E. coli</i> in the distribution system (positive samples)		See <i>E. coli</i> note ²	0	0	2021	No	Human and animal fecal waste

¹ Ninety (90) percent of the samples collected were at or below the level reported for our water

² *E. coli* MCL violation occurs if: (1) routine and repeat samples are total coliform-positive and either is *E. coli*-positive, or (2) the supply fails to take all required repeat samples following *E. coli*-positive routine sample, or (3) the supply fails to analyze total coliform-positive repeat sample for *E. coli*.