WATER QUALITY REPORT 2024

issued April 2025

City of Alpena Water Utility operated by VEOLIA

The City of Alpena Water Treatment Plant was constructed in 1922 and has since been designated an American Water Landmark by the American Water Works Institute. The WTP has undergone numerous expansions and upgrades over the years; including an additional finished water storage reservoir in 1935, increased high service pumping capacity in 1953, and significant improvements to pretreatment, sedimentation and filtration in 1965. Upgrades and improvements are continuous due to infrastructure age, technological advancements in the water industry, changing customer base as well as increasingly stringent regulations. Our community is fortunate to have Lake Huron as a wonderful source of drinking water, however the lake is subject to frequent rapid water quality changes which pose difficult treatment solutions. The City is dedicated to meeting these challenges while continuing to provide our community with high quality safe drinking water for generations to come.

More information about the Water Treatment Plant on the City of Alpena website www.alpena.mi.us/

DEAR CUSTOMER,

We are pleased to provide you with this Annual Water Quality Report, the water provided to the City of Alpena during the past year meets or exceeds established water quality standards. This report covers the drinking water quality for the City of Alpena for the 2024 calendar year. This information is a snapshot of the quality of the water that we provided to you in 2024.

This report includes details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and State of Michigan Department of Environment Great Lakes & Energy (EGLE) standards. Under the Safe Drinking Water Act (SDWA), the EPA sets the national limits for hundreds of substances in drinking water and specifies treatment methods that water systems must utilize to remove these substances. Similarly, the United States Food and Drug Administration (USFDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Utilities continually monitor the water they produce for contaminants and report results directly to their state regulatory agency, which in turn reports to the EPA if any are detected in the drinking water. EPA uses this data to ensure that consumers are receiving clean water and verify that states are enforcing the laws that regulate drinking water.

The City of Alpena Water Utility, Public Water Supply ID 0160, is overseen by the Alpena Municipal Council and operated by Veolia, which provides day to day management of the water system. We work to provide you with water that meets and often exceeds state and federal standards.

We regularly test water samples to ensure that your water continuously meets the SDWA standards. All results are on file with the Michigan Department of Environment Great Lakes & Energy (EGLE). EGLE requires water suppliers to provide this Consumer Confidence Report (CCR) to customers each year.

The utility welcomes this annual reporting requirement and views it as an opportunity to inform customers about the high-quality drinking water being supplied to them. Please review the CCR carefully as it contains important information about your drinking water. We hope that you find it meaningful and informative.

Correspondence may be directed to the following personnel:

Bill Denton, Veolia – Alpena WTP Manager	(989)356-0757	bill.denton@veolia.com
Mike Collins, Veolia – Alpena Utility Manager	(989)354-1400	michael.collins1@veolia.com
Rachel Smolinski – Alpena City Manager	(989)354-1711	rachels@alpena.mi.us
Steve Shultz – Alpena City Engineer	(989)354-1732	steves@alpena.mi.us

ONLINE INFORMATION

Water quality reports going back to 1998 can be found on the City of Alpena web site (www.alpena.mi.us). Additionally, the EPA Office of Water (water.epa.gov) web site provides a substantial amount of information on many issues relating to water resources, water conservation and public health. Other websites regarding drinking water have been provided at the end of this report.

NOTED WEBSITES FOR FURTHER INFORMATION ON DRINKING WATER

www.dhd4.org www.epa.gov/safewater/lead www.michigan.gov/MILeadSafe https://www.epa.gov/sdwa
www.cdc.gov/healthywater/drinking/index.html www.michigan.gov/communitywater www.epa.gov/pfas/pfas-explained

WHERE DOES YOUR WATER COME FROM?

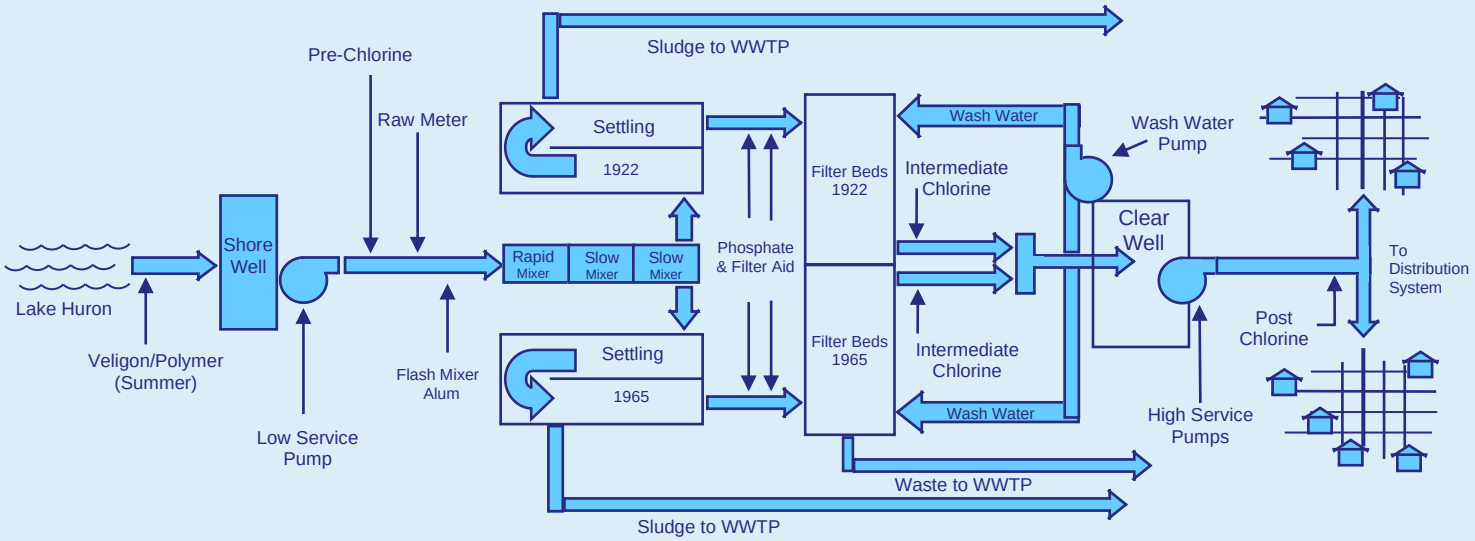
Surface Water from Thunder Bay Lake Huron has been the source for Alpena's water supply since 1905. Although vulnerable to changes and classified as highly sensitive to contaminant sources; current and historical sample data shows that it is of high quality. State and federal regulations have progressively become more stringent, resulting in significant improvement to Great Lakes water quality. Efforts to protect our fresh water source include a Source Water Assessment conducted by the Michigan Department of Environment Great Lakes & Energy (EGLE). The assessment identifies sources of pollution that may have a negative impact on the quality of our source water. These include local industries, businesses, major storm drainage areas plus urban and agricultural runoff from the Thunder Bay River watershed. Based on these criteria, the Intake is classified as highly sensitive. Our source water is highly susceptible to contamination. However, the City of Alpena Water Treatment Plant has historically effectively treated this water to meet and exceed drinking water standards. Additionally, a Source Water Intake Protection Plan details the source of water for Alpena, possible areas of exposure to contamination throughout the entire Thunder Bay Watershed, management practices, possible alternate water sources and ways to educate our community on the importance of protecting our water resources as they pertain to our drinking water. Water is the most valuable asset our community has – let's keep it that way.

WATER PRODUCTION & TREATMENT INFORMATION

FINISHED WATER PRODUCTION DURING 2023 – *includes water supplied to Alpena Township*
Total yearly production – 616 million gallons
Average daily production – 1.68 million gallons
Maximum daily production – 2..22 million gallons

WATER CONSERVATION – We all share the same water, let's please use it wisely.
Water conservation measures are an important step in protecting our water supply. These measures not only reduce water usage, but can also save you money by reducing your bill. Some conservation measures you can use inside your home include: fixing leaking faucets, shower heads and toilets (a leaking toilet can waste 240 gallons of water day); washing full-loads of laundry; not disposing trash down the toilet; taking shorter showers; and watering lawns or gardens in the early morning or evening.

HOW IS YOUR WATER TREATED?
Your water is purified at the City Water Filtration Plant located near Starlight Beach. The treatment process consists of a series of steps. Raw water is drawn from Lake Huron, along the way chlorine is added for disinfection of pathogens. Alum, polymer, and fluoride are then added. Alum and polymer are used to remove sediment from the water. The addition of alum causes smaller particles to adhere to one another until they are heavy enough to settle to the bottom of basins, only the cleaner water continues throughout the treatment process. After settling, phosphate is added as well as filter aid if needed. Phosphate aides in filter performance and helps prevent corrosion of pipes throughout the water system. Filter aid helps with turbidity removal during filtration. Filtration occurs when the water travels through a layer of granular activated carbon, sand, and other media. As smaller, suspended particles are removed, turbidity decreases, and clear water emerges. Chlorine is added again at this point as a final disinfectant. Chlorine is carefully monitored to maintain the required minimal dosage throughout the distribution system to ensure the microbial safety of your water. The water is then pumped through the distribution piping to water towers, and your home or business.



Alpena Water Treatment Plant process schematic

WATER QUALITY DATA –
The tables on the following pages list all the drinking water contaminants that were detected during the 2023 calendar year, unless sampled in previous years. We are required to report results of any parameter for 5 years. Not all parameters are sampled annually. EGLE 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 of the data is representative of the water quality you are receiving, but some are more than one year old. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk.

What are PPM, PPB and PPT?

Parts per million (ppm) and parts per billion (ppb) are units used to measure the concentration of a substance in water.
Here are some examples that illustrate just how small these amounts actually are.

One PPM is the same as:	One PPB is the same as:	One PTT is the same as:
• One second in 11 days	● One second in 32 years	● One second in 32,000 years
• One minute in 2 years	● One minute in 2000 years	● One minute in 2,000,000 years
• One penny in $10,000	● One penny in $10,000,000	● One penny in $10,000,000,000

What are MCLG and MCL?

MCLG = Maximum Contaminant Level Goal, the level at which there is no known or expected health risk.
MCL = Maximum Contaminant Level, the highest level allowed in drinking water without a violation.

What is RAA?

Running Annual Average = calculated average based on the average of samples taken during the most recent 12-month period

Terms and Definitions –

Additional definitions for terms found throughout these tables are located at the end of this report.

SUBSTANCES ARE EXPECTED TO BE IN DRINKING WATER
The sources of drinking 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 materials. Substances are also added from animal and human activity. 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 EPA Safe Drinking Water Hotline (1-800-426-4791) or by visiting the websites provided in this report.

The sources of drinking water (both tap water and bottled water) include rivers, lakes streams, ponds, reservoirs, springs, and wells. Our water comes from Lake Huron. 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:

- Microbial contaminants such as viruses and bacteria which 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 also 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 agricultural, urban storm water runoff and residential use.
- Organic chemical contaminants including synthetic and volatile organic chemicals, which are by-products or 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 and mining activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Similarly, the United States Food & Drug Administration (USFDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

DRINKING WATER AND PEOPLE WITH WEAKENED IMMUNE SYSTEMS
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 of 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 microbial contaminants are available from the EPA Safe Drinking Water Hotline via phone at (800-426-4791).

PRIMARY REGULATED STANDARDS –
Required sampling for substances which have federally enforced regulations, these substances are directly related to the safety of drinking water. Sample location can range from within the Plant to select services in the Distribution System.

Plant Tap	Sample Date	MCLG	MCL	Result	Range of all Results	Violation	Typical Source of Contaminant
Nitrate (ppm)	5/21/2024	10	10	0.20	N/A	No	Erosion of natural deposits, runoff from fertilizer, septic leakage
Barium (ppm)	8/12/2020	2	2	0.016	N/A	No	Discharge from drilling wastes and metal refineries; erosion of natural deposits
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
Distribution Copper & Lead	**Sample Date**	**MCLG**	**AL**	**Your Water 90th Percentile**	**Range of all Results**	**Violation**	**Typical Source of Contaminant**
Copper (ppm)	2022	1.3	1.3	0.1	0.0 – 0.1	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2022	0	15	0	0 – 1	No	Lead service lines, corrosion of household plumbing including fittings and fixtures; Erosion of natural deposits
Distribution Disinfectant Residual	**Sample Date**	**MRDLG**	**MRDL**	**Quarterly RAA**	**Range of all Results**	**Violation**	**Typical Source of Contaminant**
Chlorine (ppm)	10/month	4.0	4.0	0.82	0.32 – 1.21	No	Disinfectant added to control microbes
Distribution TOC Removal	**Sample Date**	**MCLG**	**MCL**	**Lowest Removal**	**Removal Range**	**Violation**	**Typical Source of Contaminant**
TOC Removal Percentage	Quarterly	N/A	TT	24% removal, 25% required	24% – 61%	No	Naturally present in the environment
Distribution Disinfectant By-Products	**Sample Date**	**MCLG**	**MCL**	**Highest LRAA**	**Range of all Results**	**Violation**	**Typical Source of Contaminant**
TTHMs (ppb)	Quarterly	N/A	80	46.8	16 – 78	No	Disinfection by-product
HAA5 (ppb)	Quarterly	N/A	60	14.7	4.9 – 33	No	Disinfection by-product
Plant Filtered Water Turbidity	**Sample Date**	**MCLG**	**MCL/TT**	**Highest Result**	**Range of all Results**	**Violation**	**Typical Source of Contaminant**
NTU	Daily	N/A	TT = 1	0.30	0.02 – 0.30	No	Soil run-off
% of samples <0.3 NTU	Daily	N/A	95%	100.0 %	N/A	No	Soil run-off
Distribution Microbial Contaminants	**Sample Date**	**MCLG**	**MCL**	**Detected**	**Range of all Results**	**Violation**	**Typical Source of Contaminant**
Total Coliform total number of positive samples	10/month	N/A	TT	0	N/A	No	Naturally present in environment
E.Coli total number of positive samples	10/month	0	See note below	0	N/A	No	Human and animal fecal waste

E.Coli MCL violation occurs if: (1) a 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 samples, or (3) the supply fails to analyze total coliform positive repeat sample for *E.coli*.

PRIMARY REGULATED STANDARDS with non-detectable amounts –
Required sampling for substances which have federally enforced regulations, these substances are directly related to the safety of drinking water. Sample locations can range from within the Treatment Plant to select services in the Distribution System.
Samples with non-detectable amounts are not required to be included in this report, however the City of Alpena wishes to include them so that our customers have the most current information regarding the contaminant PFAS/PFOS.

Plant Tap Per- and polyfluoroalkyl substances (PFAS)	Sample Date	MCLG	MCL	Result	Range of all Results	Violation	Typical Source of Contaminant
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ppt)	5/21/2024	N/A	370	ND	ND	No	Discharge/waste from industrial facilities utilizing the Gen X chemical process.
Perfluorobutane sulfonic acid (PFBS) (ppt)	5/21/2024	N/A	420	ND	ND	No	Discharge/waste from industrial facilities; stain-resistant treatments
Perfluorohexane sulfonic acid (PFHxS) (ppt)	5/21/2024	N/A	51	ND	ND	No	Firefighting foam; discharge and waste from industrial facilities
Perfluorohexanoic acid (PFHxA) (ppt)	5/21/2024	N/A	400,000	ND	ND	No	Firefighting foam; discharge and waste from industrial facilities
Perfluorononanoic acid (PFNA) (ppt)	5/21/2024	N/A	6	ND	ND	No	Discharge and waste from industrial facilities; breakdown of precursor compounds
Perfluorooctane sulfonic acid (PFOS) (ppt)	5/21/2024	N/A	16	ND	ND	No	Firefighting foam; discharge from electroplating facilities; discharge and waste from industrial facilities
Perfluorooctanic acid (PFOA) (ppt)	5/21/2024	N/A	8	ND	ND	No	Discharge and waste from industrial facilities; stain-resistant treatments

We are currently constructing a new one-million-gallon finished water tank, also known as a clearwell. This new tank will replace the existing clearwells, which have served the community for over 100 years. The clearwell is a critical component of our water infrastructure, as it stores treated drinking water before it is distributed to the community. We anticipate that the new clearwell will be completed in late summer 2025. This improvement project reflects the City of Alpena's ongoing commitment to enhancing and safeguarding our vital water resources.

ADDITIONAL MONITORING –
Required and non-required sampling for substances that do not have federally enforced regulations. These are goals and suggested levels which are not enforceable. 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	SMCL	Average Result	Range of all Results	Violation	Typical Source of Contaminant
Sodium (ppm)	5/21/2024	N/A	N/A	<0.50	N/A	No	Erosion of natural deposits
Chloride (ppm)	5/21/2024	N/A	250	13	N/A	No	Erosion of natural deposits
Sulfate (ppm)	5/21/2024	N/A	250	33	N/A	No	Naturally occurring mineral
Nickel (ppm)	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
Chlorine (ppm)	Daily	4.0	4.0	1.17	1.01 – 1.33	No	Disinfectant added to control microbes
pH	Daily	N/A	6.5 – 8.5	7.2	6.9 – 7.7	No	Naturally occurring elements
Hardness CaCO3 (ppm)	Daily	N/A	N/A	114	96 – 154	No	Naturally occurring elements
Alkalinity CaCO3 (ppm)	Daily	N/A	N/A	81	68 – 118	No	Naturally occurring elements
Geosmin (ppt)	9/9/2024	N/A	N/A	<2.0	N/A	N/A	Naturally occurring compounds, which can cause earthy taste & odor
MIB (ppt)	9/9/2024	N/A	N/A	2.7	N/A	N/A	Naturally occurring compounds, which can cause earthy taste & odor
Sampled in Distribution	**Sample Date**	**MCLG**	**SMCL**	**Average Result**	**Range of all Results**	**Violation**	**Typical Source of Contaminant**
pH	10/month	N/A	6.5 – 8.5	7.4	7.0 – 7.8	No	Naturally occurring elements
Geosmin (ppt)	10/10/2024	N/A	N/A	<2.0	N/A	N/A	Naturally occurring compounds, which can cause earthy taste and odor
MIB (ppt)	10/10/2024	N/A	N/A	<2.0	N/A	N/A	Naturally occurring compounds, which can cause earthy taste & odor

UNREGULATED CONTAMINANTS (UCMR) –
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. These monitoring events are known as unregulated contaminant monitoring rule monitoring (UCMR) and they are conducted every few years as determined by the EPA.

UCMR5 monitoring was conducted during the first quarter of the year in January 2024, this involved sample collection and analysis of 29 Perfluorinated Chemicals using EPA Methods 533 and 537.1 and Lithium using Method 200.7. All results were non-detect for these unregulated contaminants, meaning they were not found in your drinking water.

Detections from previous UCMR events are summarized in the table below.

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

Additional information about unregulated contaminants can be found here: www.epa.gov/dwucmr and www.dhd4.org
The City of Alpena took part in the UCMR5 monitoring event during 2023, the results of this sampling can be obtained on the EPA's national database: www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule or by calling (989) 356-0757.

Water systems were never intended to remove disposable disinfectant wipes, despite what manufacture labeling suggests. Wastewater plants like ours cannot efficiently remove them from the process because they do not break down and disintegrate in water like toilet paper. Throughout the nation, including Alpena, disposable wipes and other materials not intended to be in the system cause a great deal of damage to critical equipment such as lift stations, pumps, screens, and pipes. This results in expensive maintenance and replacement of this equipment and can lead to system overflows into our homes. The City of Alpena reminds all customers that they should not use their toilets as garbage cans.

Please only flush the 3 P's - pee, poop and toilet paper.

Bar screen at WWTP full of wipes

Wipes removed from WWTP process

LEAD AND YOUR DRINKING WATER

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. The City of Alpena is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for at least 5 minutes to flush water from both your home plumbing and the lead service line. If you are concerned about lead in your water and wish to have your water tested, contact [INSERT NAME OF SYSTEM and CONTACT INFORMATION] for available resources. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at https://www.epa.gov/safewater/lead.

There is no safe level of lead in drinking water. Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of persons who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

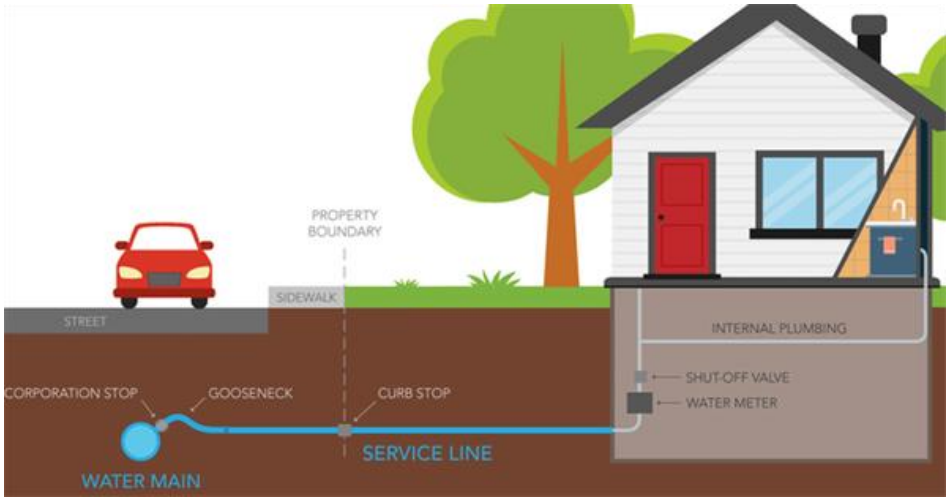
Sources of Lead

Lead is a common metal found in the environment. The main sources of lead exposure are lead-based paint and lead-contaminated dust or soil, and some plumbing materials. Lead can also be found in some pottery, fixtures, food and cosmetics.
The EPA estimates that 10-20 percent of a person's potential exposure to lead may come from drinking water with the remaining being caused by other sources. Infants who consume mostly formula mixed with lead-containing water can receive 40-60 percent of their exposure to lead from drinking water.

There is no detectable lead in the City of Alpena drinking water when it leaves the water plant. Water is naturally corrosive, which is why phosphate is added during treatment to help reduce corrosion. However, water may accumulate microscopic amounts of lead if it sits idle for extended periods of time in pipes, plumbing, or fixtures that contain lead. Lead levels in drinking water are likely to be highest in homes with lead service lines connecting the home to the water main, in homes with lead indoor plumbing or lead solder joints, and in homes that have brass faucets or other fixtures – even fixtures certified as "lead free" can contain up to 8% lead.

Service Line Inventory Information

The City of Alpena Water System is comprised of 4,331 service lines. Of these, 7 are known to be lead, 616 are composed of galvanized materials presumed to contain lead, and 3,708 are of unknown material which may or may not potentially be lead containing. During 2024 the city surveyed every customer who responded to our requests, to identify the service line material type inside the property. There remains a chance that the material from the street to the meter is comprised of other material. The City of Alpena was required to submit a Complete Distribution Materials Inventory to EGLE in 2024. If you would like more information about this report, please contact Mike Collins, Veolia Project Leader for the City of Alpena at (989)356-1401 or michael.collins1@veolia.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 of the report are available from the City of Alpena Engineering Office or Veolia Water Utility Office. This report will not be sent directly to you. The City of Alpena is working on having this information online via the city website so that you can view current information of your service line material. The State of Michigan and EPA require the city to replace all lead and galvanized service lines or identify all service line material types so that they are completely known from main to meter to be lead free by year 2037.



LEAD AND YOUR DRINKING WATER - continued

Lead Monitoring Information

The State of Michigan and EPA require the City of Alpena to test our water on a regular basis to ensure its safety. The city most recently sampled for Lead and Copper from select homes throughout the System in the summer of 2022. In 2022, the 90th Percentile lead result was 0.0 parts per billion (ppb), none of sample sites exceeded the Action Level of 15 ppb. The city has been notified by EGLE that your water is compliant with the Lead and Copper Rule and Safe Drinking Water Act and have met all the monitoring and reporting requirements for 2024.

Customers and the public are invited to participate in decisions that affect drinking water quality. The City of Alpena Municipal Council meets regularly on the first and third Monday of each month where public comment is welcome. For more information about your water, or the contents of this report contact the City of Alpena Water Utility at (989)354-1400. For more information about safe drinking water visit the EPA website http://www.epa.gov/safewater.

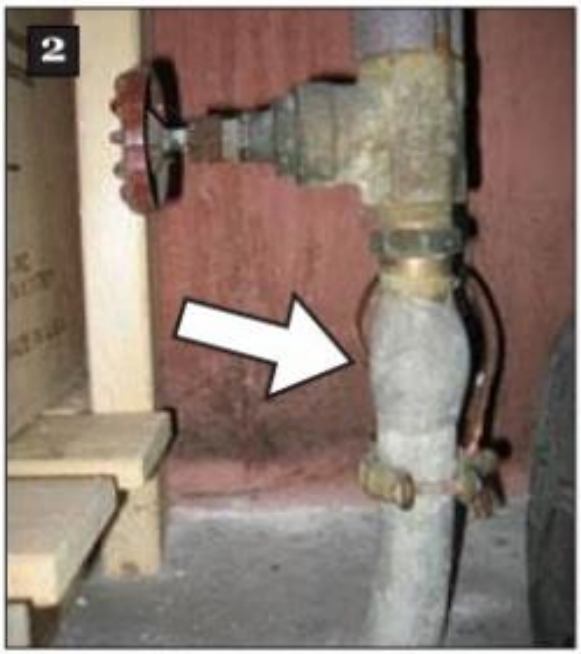
Steps you can take to reduce potential exposure to lead in your drinking water:

- Run your water to flush out the lead. Run your water for 15 seconds to 2 minutes until it becomes cold before using.
- Always use cold water for drinking, cooking, and preparing food or baby formula.
- Do not boil water to remove lead – this will not reduce lead.
- Periodically clean and remove your faucet screen/aerator.
- You may consider investing in a home water treatment device - maintain the device to manufacturer recommendations.
- Identify and replace plumbing fixtures and service lines containing lead.
- Have a licensed electrician check your wiring to ensure it is not attached/grounded to your water service line.
- Test your water for lead by a certified laboratory.

What do lead service lines look like?

The water mains in our distribution system contain no lead, however some service lines especially in those serving homes built between 1930 and 1960 may contain lead. Below is guidance from the EPA to help identity lead pipe.

- Lead service lines are generally a dull gray color and are very soft. You can identify them easily by carefully scratching with a key – do not use a sharp instrument and take care not to puncture a hole in your pipe. If the pipe is lead, the area scratched will turn bright silver color. (Image 1 below)
- Galvanized pipe may also be a dull grey color. Apply a strong magnet to the pipe – if it sticks it is galvanized, not lead.
- In the past, lead service lines have been connected to residential plumbing using solder and have a characteristic “bulb” at the end, a compression fitting, or other connectors made of galvanized iron or bass or bronze. (Image 2 below)
- **If you think you may have a Lead Service Line, please contact the Water Utility at (989)354-1400 or (989)356-0757**.



CROSS CONNECTIONS – unsafe water from outside the water system can potentially enter our drinking water

A cross connection is an unprotected direct or potential connection between drinking water piping and a contamination source. This can be as simple as garden hose submerged in a swimming pool, a bucket of detergent, or other non-potable liquid. Other sources are service lines connected to boilers, irrigation systems, or other process equipment. Under certain conditions, cross connections allow unsafe water to flow backward through piping and into the drinking water. This is called back-flow, and its caused by two types of pressure changes: back siphonage and backpressure.

Back siphonage

Back siphonage is caused by negative pressure from a vacuum in the supply piping, just as drinking through a straw draws liquid from a glass. Back siphonage can be created when there is a stoppage in the water supply due to repairs, breaks in the distribution system, or increased demand at one location such as firefighting. This can reverse the normal flow of water in the system and pull contaminants into the drinking water from unprotected cross connections inside your home or business.

Backpressure

Backpressure reverses normal system flow and occurs when downstream water pressure is greater than the pressure in the distribution system. This can occur in any pressurized system such as boilers, elevated tanks, or systems with pumps installed after the drinking water enters the building.

What can you do?

We all need to do our part to ensure that our homes have the clean water we expect each and every day. **Per State of Michigan plumbing codes and city ordinance, if you have any devices inside your property, you are responsible for and required to report them to the city as well as have them routinely tested.** Common hazards in and around your home can contaminate your drinking water as well as your neighbors. Look around your home or business to identify areas where you might unknowingly have a cross connection – the laundry room, the garage, the utility room, or your sprinkler system. It is especially important to remove outside garden hoses from buckets while conducting cleaning or work around your home. A garden hose can be extremely hazardous when left submerged in a swimming pool, a bucket, chemical sprayer or when left elevated above the outside faucet. Backflow prevention devices must be purchased and installed on all cross connections – contact a local plumbing contractor to ask about having your home checked and protected from cross connections.

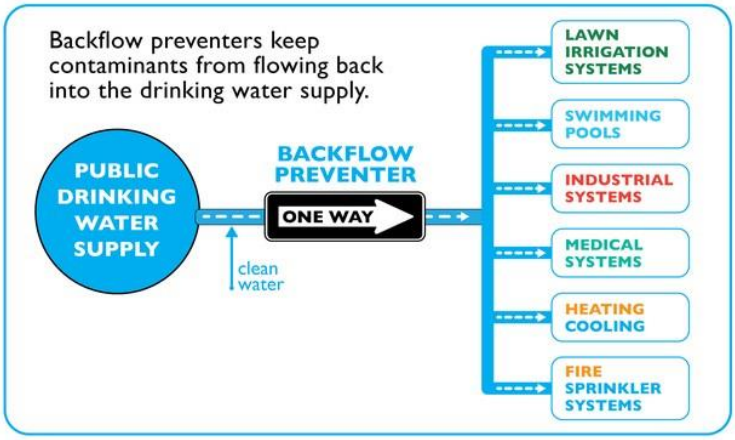
These devices include:

- Air gap – physical distance of 2 inches from the potentially unsafe liquid piping from the supply water
- Pressure vacuum breaker
- Double check valve assembly
- Reduced pressure principle backflow preventer

Unprotected cross connections are everyone's responsibility

The water we all drink comes from our water plant and our water system – we all share the same water, let's keep it safe. Additionally, EGLE and City of Alpena have approved mandatory cross connection programs in which inspections and verification can/may occur throughout the water utility system to ensure the protection of our water with respect to cross connections - this includes commercial and residential customers. **Per State of Michigan plumbing codes and city ordinance, if you have any devices inside your property, you are responsible for and required to report them to the city as well as have them routinely tested.**

For more information on cross connections visit the EPA website below.
https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=2000ZZB8.txt
https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=2000262T.txt



TERMS AND ABBREVIATIONS USED IN THIS REPORT

AL = **Action Level**. Concentration if exceeded, triggers treatment/process changes or other requirements.

Coliform and E. coli = bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Disease-causing microbes (pathogens) in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. These pathogens may pose a special health risk for infants, young children, and people with severely compromised immune systems.

Disinfection By-products = TTHMs and HAAs. By-products of water disinfection during water treatment which can form when chlorine reacts with naturally occurring materials.

Geosmin & MIB = Geosmin and 2-Methylisoborneol (MIB) are naturally occurring compounds that have an earthy/musty taste and odor. Some kinds of algae present in our source waters naturally produce geosmin and MIB. An increase in this production typically happens during the summer. They are not harmful at the levels found in drinking water, however some people have an increased sensitivity to these compounds.

HAA5 = Haloacetic Acids. Regulated disinfection by-products: Monobromoacetic acid, Dibromoacetic acid, Dichloroacetic acid, Monochloroacetic acid, and Trichloroacetic acid. Some people who consume HAAs in excess of MCL during their lifetime may experience increased health risks.

HAA6 = Haloacetic Acids. Unregulated disinfection by-products: Bromochloroacetic acid, Bromodichloroacetic acid, Chlorodibromoacetic acid and Tribromoacetic acid, plus Monobromoacetic acid, Dibromoacetic acid. Some people who consume HAAs in excess of MCL during their lifetime may experience increased health risks.

HAA9 = Haloacetic Acids. Unregulated disinfection by-products: includes all the haloacetic acids of HAA5 and HAA6 combined.

Highest Results = data based on the highest detection of a single sample during the monitoring year.

LRAA = Locational Running Annual Average. Calculated yearly average of all the results at specific sample site.

MCL = Maximum Contaminant Level. The highest level allowed in drinking water without violation.

MCLG = Maximum Contaminant Level Goal. The level at which there is no known or expected health risk. MCLGs allow for a margin of safety.

MRDLG = Maximum Residual Disinfection Level Goal. 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.

MRDL = Maximum Residual Disinfectant Level. 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.

ND = Not Detected during analysis of sample. ***NA*** = Not Applicable

NTU = Nephelometric Turbidity Units. Unit of measurement for turbidity.

ppm = parts per million. Unit of measurement. One part per million is equivalent to 30 seconds out of 1 year.

ppb = parts per billion. Unit of measurement. One part per billion is equivalent to 3 seconds out of 100 years.

ppt = parts per trillion. Unit of measurement. One part per trillion is equivalent to 3 seconds out of 100,000 years.

pCi/L = Picocuries per liter. Unit of measurement for radioactivity.

PFAS = Perfluoroalkyl and Polyfluoroalkyl substances (PFAS) sometimes known as Perfluorinated Chemicals or PFCs are a class of organic chemicals that are fire resistant and repel stains, oil, grease, and water. PFAS have been manufactured since the 1950s and have been used in numerous industrial processes and consumer products, such as fire-fighting foams, stain repellants, nonstick cookware, waterproof clothing and fast-food wrappers. PFAS are persistent and bioaccumulate in the environment which intensifies their potential public health threat. PFAS are found in the environment worldwide. More information on PFAS can be found at www.epa.gov/pfas/pfas-expained.

RAA = Running Annual Average = calculated average based on the average of samples taken during the most recent 12-month period

Range of all Results = data based on the lowest and highest detection of all samples during the monitoring year.

SMCL – Secondary Maximum Contaminant Level. Non-mandatory highest level that are guidelines for aesthetic considerations.

TTHM = Total Trihalomethanes. Some people who consume TTHMs in excess of the MCL during their lifetime may experience increased health risks.

TOC = Total Organic Carbon. Amount of carbon found in an organic compound and is often used as a non-specific indicator of water quality. The removal percentage between source and tap water helps determine if treatment processes are adequate. TOC has no health effects but can provide a medium for the formation of Disinfection By-products.

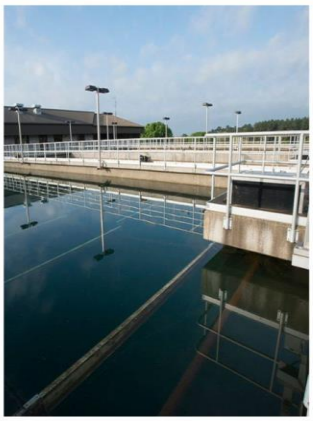
Turbidity = Measurement of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

TT = Treatment technique, required process intended to reduce the level of a contaminant. Filtered water must be less than 1 NTU at all times and 0.3 NTU 95% of the time.

WWTP – wastewater treatment plant

90th Percentile = Measurement of data for which 90% of the results are less than the level reported.

Water Treatment



ACTIVATED CARBON
ADSORPTION
AERATION
BACTERIA
BIOLOGICAL
CHEMICAL
CHEMICAL PROCESSES
CHLORINATION
COAGULATION
CONTAMINANTS
CONTAMINATION
DISINFECTION
DRINKING WATER
EFFLUENT
FILTRATION
FLOCCULATION
HEAVY METALS
IRRIGATION
MICROORGANISMS
MINERALS
PARTICULATES
PATHOGENS
PHYSICAL
PROCESS
PURIFICATION
REVERSE OSMOSIS
SEDIMENTATION
SETTLING
SEWAGE
SLOW SAND FILTERS
ULTRAFILTRATION
UNDESIRABLE COMPONENTS
VIRUSES
WASTEWATER
WATER CYCLE
WATER QUALITY
WATER SUPPLY
WATER TREATMENT

C O N T A M I N A T I O N E C N V K U I C L P C M A N B
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