

2017 Drinking Water Quality Report

MOSINEE WATER UTILITY

PWS ID: 73701595

Water System Information

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 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 we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Water is supplied to Mosinee's customers from two well fields. Wells #1, #2 and #6 are located on the east side of the City. Wells #3, #4 and #5 are located on the west side. The water treatment plant, which was originally constructed in 1995, was completely reconstructed in 2015. The water treatment plant removes iron, manganese and organic compounds from the water before it is pumped into the distribution system. Only the water from Wells 3, 4 and 5 is treated at the plant before entering the distribution system. The new treatment plant is producing excellent quality drinking water. Utility staff is now working to get the distribution system cleaned up through a process of aggressive water main flushing called Unidirectional Flushing or UDF. This flushing method allows shorter sections of water main to be flushed at higher velocities than what can be obtained with normal flushing procedures, thereby cleaning the pipes more effectively and efficiently. This aggressive flushing is removing iron and sediment that has accumulated in the piping system. Ph is adjusted at all locations to make the water non-corrosive and chlorine is added to kill bacteria. A river crossing connects the east and west side water systems. This connection gives the Utility the ability to pump water in either direction in the event of a mechanical problem or to satisfy an increased water demand. To obtain a summary of the source water assessment please contact, Kevin Breit at (715) 693-3840.

Health Information

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 Environmental Protection Agency's safe drinking water hotline (800-426-4791).

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 systems 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 microbial contaminants are available from the Environmental Protection Agency's safe drinking water hotline (800-426-4791).

Source(s) of Water

Source ID	Source	Depth (in feet)	Status
1	Groundwater	60	Active
2	Groundwater	60	Active
3	Groundwater	55	Active
4	Groundwater	45	Active
5	Groundwater	45	Active
6	Groundwater	64	Active

Educational Information

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, 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 stormwater 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 stormwater runoff and residential uses.
- 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 stormwater runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

The Mosinee Water Utility routinely monitors for constituents in your drinking water according to Federal and State laws. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which shall provide the same protection for public health.

Definitions

Term	Definition
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Level 1 Assessment	A Level 1 assessment is a study of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.
Level 2 Assessment	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine, if possible, why an E. coli MCL violation has occurred or why total coliform bacteria have been found in our water system, or both, on multiple occasions.
MCL	Maximum Contaminant Level: 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.
MCLG	Maximum Contaminant Level Goal: 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.
MFL	million fibers per liter.
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.
MRDLG	Maximum residual disinfectant 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.
mrem/year	millirems per year (a measure of radiation absorbed by the body).
NTU	Nephelometric Turbidity Units.
pCi/l	picocuries per liter (a measure of radioactivity).
ppm	parts per million, or milligrams per liter (mg/l).
ppb	parts per billion, or micrograms per liter (ug/l)

ppt parts per trillion, or nanograms per liter.
 ppq parts per quadrillion, or picograms per liter.
 TCR Total Coliform Rule.
 TT Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

Detected Contaminants

Your water was tested for many contaminants last year. We are allowed to monitor for some contaminants less frequently than once a year. The following tables list only those contaminants which were detected in your water. If a contaminant was detected last year, it will appear in the following tables without a sample date. If the contaminant was not monitored last year, but was detected within the last 5 years, it will appear in the tables below along with the sample date.

Disinfection Byproducts

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2015)	Violation	Typical Source of Contaminant
HAA5 (ppb)	ST1-1	60	60	12	6 - 14		No	By-product of drinking water chlorination
TTHM (ppb)	ST1-1	80	0	25.1	16.2 - 34.6		No	By-product of drinking water chlorination
HAA5 (ppb)	ST1-3	60	60	30	17 - 29		No	By-product of drinking water chlorination
TTHM (ppb)	ST1-3	80	0	56.3	24.8 - 37.9		No	By-product of drinking water chlorination

Radioactive Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2017)	Violation	Typical Source of Contaminant
RADIUM, (226 + 228) (pCi/l)		5	0	1.1	1.1		No	Erosion of natural deposits

Inorganic Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2017)	Violation	Typical Source of Contaminant
BARIUM (ppm)		2	2	0.070	0.015 - 0.070		No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM (ppb)		100	100	1	0 - 1		No	Discharge from steel and pulp mills; Erosion of natural deposits
FLUORIDE (ppm)		4	4	0.4	0.1 - 0.4		No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NICKEL (ppb)		100		1.1000	0.6400 - 1.1000		No	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.
NITRATE (NO3-N) (ppm)		10	10	2.60	0.58 - 2.60		No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SODIUM (ppm)		n/a	n/a	77.00	26.00 - 77.00		No	n/a

Contaminant (units)	Action Level	MCLG	90th Percentile Level Found	# of Results	Sample Date (if prior to 2017)	Violation	Typical Source of Contaminant
COPPER (ppm)	AL=1.3	1.3	0.8100	1 of 50 results were above the action level.		No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD (ppb)	AL=15	0	4.70	2 of 50 results were above the action level.		No	Corrosion of household plumbing systems; Erosion of natural deposits

Synthetic Organic Contaminants including Pesticides and Herbicides

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2017)	Violation	Typical Source of Contaminant
DI(2-ETHYLHEXYL) ADIPATE (ppb)		400	400	1.0	1.0		No	Discharge from chemical factories

Unregulated Contaminants

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. EPA required us to participate in this monitoring.

Contaminant (units)	Level Found	Range	Sample Date (if prior to 2017)
SULFATE (ppm)	9.00	6.00 - 9.00	
NAPHTHALENE (ppb)	0.28	0.28	8/8/2013

Health effects for any contaminants with MCL violations or Action Level Exceedances

Contaminant Health Effects

Lead Infants and children who drink water containing lead in excess of the action level 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.

Copper Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilsons Disease should consult their personal doctor.

Additional Health Information

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. Mosinee Waterworks 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 www.epa.gov/safewater/lead.

Other Drinking Water Regulations Violations:

Description	Contaminant Group	Sample Location	Compliance Period Beginning	Compliance Period Ending
WQP M/R Initial/Follow/Routine	Pbcu_Rule	200	7/1/2017	12/31/2017
WQP M/R Initial/Follow/Routine	Pbcu_Rule	Distribution System	7/1/2017	12/31/2017

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the compliance period noted in the above table, we did not complete all monitoring or testing for the contaminant(s) noted, and therefore cannot be sure of the quality of your drinking water during that time.

Actions Taken

Clarified monitoring schedule with the DNR.

If you have any questions about this report, lead testing or your water utility, please contact **Kevin Breit, Director of Public Works at 693-3840 or e-mail to: publicworks@mosinee.wi.us**. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Public Works or City Council meetings. They are held on the 2nd Monday of each month. The meeting times for Public Works will vary but the City Council meetings usually start at 7:30 p.m. All meetings are held at the Mosinee City Hall located at 225 Main Street.

We at the Mosinee Water & Sewer Utility work around the clock to provide top quality water to every tap. Hundreds of water quality tests are performed annually to ensure that you receive quality drinking water. We also 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.