Madison Lake 2024 Drinking Water Report

Making Safe Drinking Water

Your drinking water comes from a groundwater source: two wells that are 440 feet deep, that draw water from the Prairie Du Chien-Jordan aquifer.

Madison Lake works hard to provide you with safe and reliable drinking water that meets federal and state water quality requirements. The purpose of this report is to provide you with information on your drinking water and how to protect our precious water resources.

Contact Adam Fennell, Public Works Director, at (507) 243-3011 or afennell@madisonlakemn.gov if you have questions about Madison Lake's drinking water. You can also ask for information about how you can take part in decisions that may affect water quality.

The U.S. Environmental Protection Agency sets safe drinking water standards. These standards limit the amounts of specific contaminants allowed in drinking water. This ensures that tap water is safe to drink for most people. The U.S. Food and Drug Administration regulates the amount of certain contaminants in bottled water. Bottled water must provide the same public health protection as public tap water.

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 at 1-800-426-4791.

Madison Lake Monitoring Results

This report contains our monitoring results from January 1 to December 31, 2024.

We work with the Minnesota Department of Health to test drinking water for more than 100 contaminants. It is not unusual to detect contaminants in small amounts. No water supply is ever completely free of contaminants. Drinking water standards protect Minnesotans from substances that may be harmful to their health.

Learn more by visiting the Minnesota Department of Health's webpage Basics of Monitoring and testing of Drinking Water in Minnesota (https://www.health.state.mn.us/communities/environment/water/factsheet/sampling.html).

How to Read the Water Quality Data Tables

The tables below show the contaminants we found last year or the most recent time we sampled for that contaminant. They also show the levels of those contaminants and the Environmental Protection Agency's limits. Substances that we tested for but did not find are not included in the tables.

We sample for some contaminants less than once a year because their levels in water are not expected to change from year to year. If we found any of these contaminants the last time we sampled for them, we included them in the tables below with the detection date.

We may have done additional monitoring for contaminants that are not included in the Safe Drinking Water Act. To request a copy of these results, call the Minnesota Department of Health at 651-201-4700 between 8:00 a.m. and 4:30 p.m., Monday through Friday.

Some contaminants are monitored regularly throughout the year, and rolling (or moving) annual averages are used to manage compliance. Because of this averaging, there are times where the Range of Detected Test Results for the calendar year is lower than the Highest Average or Highest Single Test Result, because it occurred in the previous calendar year.

Definitions

- **AL (Action Level)**: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **EPA:** Environmental Protection Agency
- **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.
- **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.
- **N/A (Not applicable)**: Does not apply.
- **pCi/l (picocuries per liter)**: A measure of radioactivity.
- **ppt (parts per trillion)**: One part per trillion is like one drop in one trillion drops of water, or about one drop in an Olympic sized swimming pool. ppt is the same as nanograms per liter (ng/l).
- **ppb (parts per billion)**: One part per billion in water is like one drop in one billion drops of water, or about one drop in a swimming pool. ppb is the same as micrograms per liter (µg/l).
- **ppm (parts per million)**: One part per million is like one drop in one million drops of water, or about one cup in a swimming pool. ppm is the same as milligrams per liter (mg/l).
- **PWSID**: Public water system identification.

Monitoring Results – Regulated Substances

LEAD AND COPPER – Tested at customer taps.

Contaminant (Date, if sampled in previous year)	**EPA's Ideal Goal** (MCLG)	**EPA's Action Level**	**90% of Results Were Less Than**	**Number of Homes with High Levels**	**Range of Detected Test Results**	**Violation**	**Typical Sources**
Lead (09/01/23)	0 ppb	90% of homes less than 15 ppb	0.55 ppb	0 out of 10	0 - 3.9 ppb	NO	Corrosion of household plumbing.
Copper (09/01/23)	0 ppm	90% of homes less than 1.3 ppm	0.24 ppm	0 out of 10	0.02 - 0.27 ppm	NO	Corrosion of household plumbing.

INORGANIC & ORGANIC CONTAMINANTS – Tested in drinking water.

Contaminant (Date, if sampled in previous year)	**EPA's Ideal Goal** (MCLG)	**EPA's Limit** (MCL)	**Highest Average or Highest Single Test Result**	**Range of Detected Test Results**	**Violation**	**Typical Sources**
Barium (07/26/22)	2 ppm	2 ppm	0.25 ppm	N/A	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposit.
Gross Alpha	0 pCi/l	15 pCi/l	7.4 pCi/l	5.5 - 9.1 pCi/l	NO	Erosion of natural deposits.
Combined Radium	0 pCi/l	5 pCi/l	3.8 pCi/l	3.3 - 4.3 pCi/l	NO	Erosion of natural deposits.

CONTAMINANTS RELATED TO DISINFECTION – Tested in drinking water.

Substance (Date, if sampled in previous year)	**EPA's Ideal Goal** (MCLG or MRDLG)	**EPA's Limit** (MCL or MRDL)	**Highest Average or Highest Single Test Result**	**Range of Detected Test Results**	**Violation**	**Typical Sources**
Total Trihalomethanes (TTHMs)	N/A	80 ppb	48.9 ppb	45.40 - 48.90 ppb	NO	By-product of drinking water disinfection.
Total Haloacetic Acids (HAA)	N/A	60 ppb	33 ppb	29.00 - 33.00 ppb	NO	By-product of drinking water disinfection.
Total Chlorine	4.0 ppm	4.0 ppm	0.44 ppm	0.09 - 0.87 ppm	NO	Water additive used to control microbes.

Total HAA refers to HAA5

OTHER SUBSTANCES – Tested in drinking water.

Substance (Date, if sampled in previous year)	**EPA's Ideal Goal** (MCLG)	**EPA's Limit** (MCL)	**Highest Average or Highest Single Test Result**	**Range of Detected Test Results**	**Violation**	**Typical Sources**
Fluoride	4.0 ppm	4.0 ppm	0.77 ppm	0.64 - 0.86 ppm	NO	Erosion of natural deposits; Water additive to promote strong teeth.

Potential Health Effects and Corrective Actions (If Applicable)

Fluoride: Fluoride is nature's cavity fighter, with small amounts present naturally in many drinking water sources. There is an overwhelming weight of credible, peer-reviewed, scientific evidence that fluoridation reduces tooth decay and cavities in children and adults, even when there is availability of fluoride from other sources, such as fluoride toothpaste and mouth rinses. Since studies show that optimal fluoride levels in drinking water benefit public health, municipal community water systems adjust the level of fluoride in the water to an optimal concentration between 0.5 to 0.9 parts per million (ppm) to protect your teeth. Fluoride levels below 2.0 ppm are not expected to increase the risk of a cosmetic condition known as enamel fluorosis.

Monitoring Results – Unregulated Substances/Emerging Contaminants

In addition to testing drinking water for contaminants regulated under the Safe Drinking Water Act, we sometimes also monitor for contaminants that are not regulated. Unregulated contaminants do not have legal limits for drinking water. MDH, EPA, and other health agencies may have developed comparison values for some of these compounds. Some of these comparison values are based solely on potential health impacts and do not consider our ability to measure contaminants at very low concentrations nor the cost and technology of prevention and/or treatment. These values may be set at levels that are costly, challenging, or impractical for a water system to meet (for example, large-scale treatment technology may not exist for a given contaminant). Sample data are listed along with comparison values in the table below; it is important to note that these comparison values are not enforceable.

Detection alone of a regulated or unregulated contaminant should not cause concern. The significance of a detection should be determined considering current health effects information. We are often still learning about the health effects, so this information can change over time.

A person drinking water with a contaminant at or below the comparison value would be at little to no risk for harmful health effects. If the level of a contaminant is above the comparison value, people of a certain age or with special health conditions-like a fetus, infants, children, elderly, and people with impaired immunity—may need to take extra precautions. We are notifying you of the unregulated/emerging contaminants we have detected as a public education opportunity.

Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether the Agency should consider regulating those contaminants in the future.

- More information is available on MDH's A-Z List of Contaminants in Water (https://www.health.state.mn.us/communities/environment/water/contaminants/index.html)
- Fourth Unregulated Contaminant Monitoring Rule (UCMR 4) (https://www.health.state.mn.us/communities/environment/water/com/ucmr4.html)
- Fifth Unregulated Contaminant Monitoring Rule (https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule)
- EPA has developed a UCMR5 Program Overview Factsheet (https://www.epa.gov/system/files/documents/2022-02/ucmr5-factsheet.pdf) describing UCMR 5 contaminants and standards.

In the past year, your drinking water may have tested for additional unregulated contaminants as part of the Fifth Unregulated Contaminant Monitoring Rule (https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule) and results are still being processed. The Unregulated Contaminant Monitoring Rule 5 (UCMR 5) Data finder allows people to easily search for, summarize, and download the available UCMR 5 analytical results (https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule-data-finder).

UNREGULATED/EMERGING CONTAMINANTS – Tested in drinking water.			
Contaminant	**Comparison Value**	**Highest Average Result or Highest Single Test Result**	**Range of Detected Test Results**
Sodium* (2023)	20 ppm	5.34 ppm	N/A
Sulfate (2023)	500 ppm	4.09 ppm	N/A
Perfluorobutanoic acid (PFBA) (2021)	7000 ppt	7.6 ppt	0.00 - 7.60 ppt

*Note that home water softening can increase the level of sodium in your water.

Some People Are More Vulnerable to Contaminants in Drinking Water

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 from infections. The developing fetus and therefore pregnant women may also be more vulnerable to contaminants in drinking water. These people or their caregivers should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Learn More about Your Drinking Water

Drinking Water Sources

Groundwater supplies 75 percent of Minnesota's drinking water, and found in aquifers beneath the surface of the land. Surface water supplies 25 percent of Minnesota's drinking water, and is the water in lakes, rivers, and streams above the surface of the land.

Contaminants can get in drinking water sources from the natural environment and from people's daily activities. There are five main types of contaminants in drinking water sources.

- **Microbial contaminants,** such as viruses, bacteria, and parasites. Sources include sewage treatment plants, septic systems, agricultural livestock operations, pets, and wildlife.
- **Inorganic contaminants** include salts and metals from natural sources (e.g. rock and soil), oil and gas production, mining and farming operations, urban stormwater runoff, and wastewater discharges.
- **Pesticides and herbicides** are chemicals used to reduce or kill unwanted plants and pests. Sources include agriculture, urban stormwater runoff, and commercial and residential properties.
- **Organic chemical contaminants** include synthetic and volatile organic compounds. Sources include industrial processes and petroleum production, gas stations, urban stormwater runoff, and septic systems.

- **Radioactive contaminants** such as radium, thorium, and uranium isotopes come from natural sources (e.g. radon gas from soils and rock), mining operations, and oil and gas production.

The Minnesota Department of Health provides information about your drinking water source(s) in a source water assessment, including:

- How Madison Lake is protecting your drinking water source(s);
- Nearby threats to your drinking water sources;
- How easily water and pollution can move from the surface of the land into drinking water sources, based on natural geology and the way wells are constructed.

Find your source water assessment at Source Water Assessments (https://www.health.state.mn.us/communities/environment/water/swp/swa) or call 651-201-4700 between 8:00 a.m. and 4:30 p.m., Monday through Friday.

Lead in Drinking Water

Lead can cause serious health problems, babies, children under six years, and pregnant women are at the highest risk. You may be in contact with lead through paint, water, dust, soil, food, hobbies, or your job. There is no safe level of lead.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Our water system is responsible for proving high quality drinking water and removing lead pipes from service lines but cannot control the variety of materials used in plumbing components in your home. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk.

Read below to learn how you can protect yourself from lead in drinking water.

1. **Let the water run** before drinking tap water flush your pipes for several minutes by running your tap. If you have a lead service line, you may need to let the water run longer. A service line is the underground pipe that brings water from the main water pipe under the street to your home.
    - Activities such as taking a shower, doing laundry or dishes help keep water moving in your home system but are not a replacement for running the tap before you drink if it has not been used for a long period of time.
    - The only way to know if lead has been reduced by letting it run is to check with a test. If letting the water run does not reduce lead, consider other options to reduce your exposure.
2. **Know your service line materials by** contacting your public water system, or you can search for your address online at the Minnesota Lead Inventory Tracking Tool (https://maps.umn.edu/LSL/).
    - Protect Your Tap: A quick check for lead (https://www.epa.gov/ground-water-and-drinking-water/protect-your-tap-quick-check-lead) is EPA's step by step guide to learn how to find lead pipes in your home.
3. **Use cold water** for drinking, making food, and making baby formula. Hot water releases more lead from pipes than cold water.

4. **Test your water.** In most cases, letting the water run and using cold water for drinking and cooking should keep lead levels low in your drinking water. If you are still concerned about lead, arrange with a laboratory to test your tap water. Testing your water is important if young children or pregnant women drink your tap water.
    - Contact a Minnesota Department of Health accredited laboratory to purchase a sample container and instructions on how to submit a sample:
      Environmental Laboratory Accreditation Program
      (https://eldo.web.health.state.mn.us/public/accreditedlabs/labsearch.seam)
      The Minnesota Department of Health can help you understand your test results.
5. **Treat your water** if a test shows your water has high levels of lead after you let the water run. You can use a filter certified with ANSI/NSF standards 53 and 42 for lead reduction.
    - Read about water treatment units:
      Point-of-Use Water Treatment Units for Lead Reduction
      (https://www.health.state.mn.us/communities/environment/water/factsheet/poulead.html)

Information on lead in drinking water, testing methods, and other steps you can take to minimize exposure are available at:

- Visit EPA Basic Information about Lead in Drinking Water (http://www.epa.gov/safewater/lead)
- Visit the Minnesota department of Health Lead in Drinking Water
  (https://www.health.state.mn.us/communities/environment/water/contaminants/lead.html)
- To learn about how to reduce your contact with lead from sources other than your drinking water, visit Lead Poisoning Prevention: Common Sources
  (https://www.health.state.mn.us/communities/environment/lead/fs/common.html)

6. **Be Aware:** Head Start Programs, Child Care Centers, Public and Charter Schools all have requirements to test for lead in drinking water. These programs can learn more about requirements and resources for testing and remediation at MDH Drinking Water in Schools and Child Cares
   (https://www.web.health.state.mn.us/communities/environment/water/schools/index.html)

Service Line Material Inventory

Madison Lake has completed and submitted our service line materials inventory to the Minnesota Department of Health. The service line inventory is publicly available, and you can check the materials for your service line by visiting the Lead Inventory Tracking Tool (LITT) (https://maps.umn.edu/LSL/). You may also contact us at <Insert Contact Information>. To complete the service line inventory, our system <insert a general description of how the system determined the status of service lines>. As of 10/11/2024, our inventory contains 0 lead, 1 galvanized requiring replacement, 141 unknown material, and 649 non-lead service lines.