

ANNUAL WATER QUALITY REPORT

Reporting Year 2025



Presented By



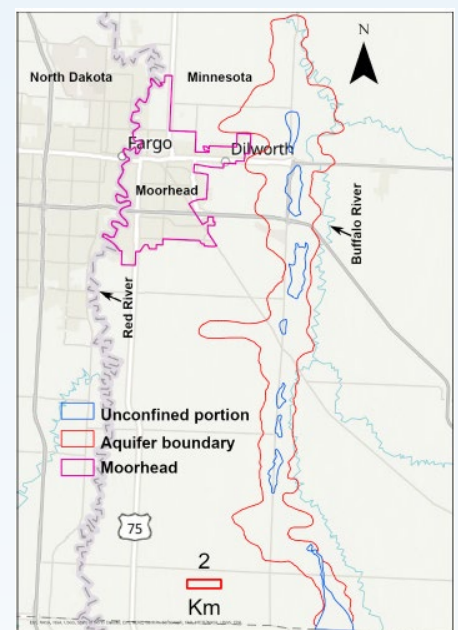
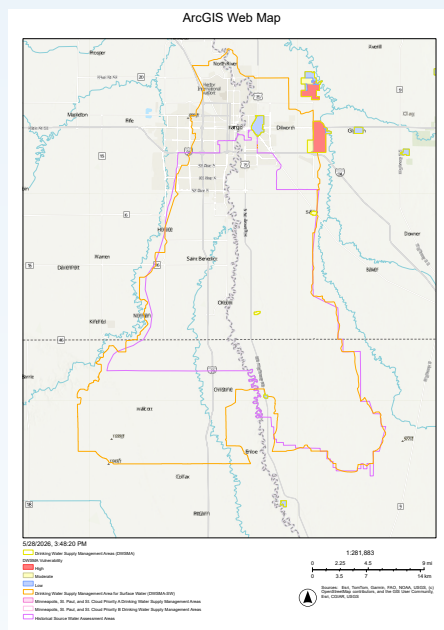
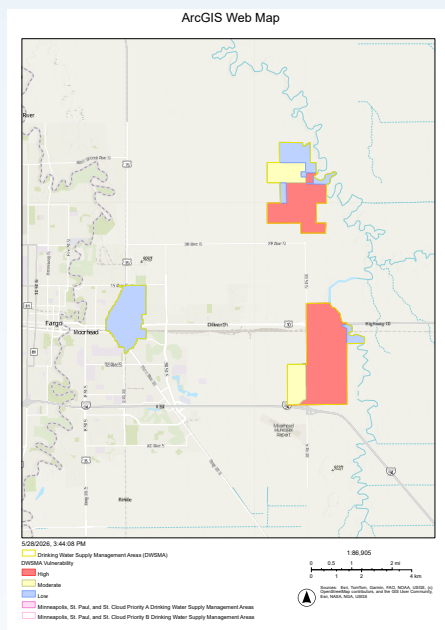
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Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2025. Included are details about your sources of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water and meet all regulatory requirements. 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 and providing you with this information because informed customers are our best allies.

Where Does My Water Come From?

Moorhead Public Service (MPS) customers are fortunate to enjoy water supplies from multiple sources. The Moorhead water treatment plant draws the majority of its supply from surface water from the Red River of the North. Our secondary groundwater sources are from the Buffalo and Moorhead Aquifers. The Moorhead water treatment plant was designed to draw from both surface water and groundwater sources. MPS strategically uses as much surface water as possible to save the area's groundwater resources as a drought backup supply. The Buffalo Aquifer alone could sustain water demand over a multiyear, 1930s-style drought. MPS's treatment facility provides roughly 1.2 billion gallons of clean drinking water every year to Moorhead and Dilworth.



Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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. These people should seek advice about drinking water from their health-care providers. U.S. Environmental Protection Agency (U.S. EPA)/Centers for Disease Control and Prevention (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 (800-426-4791) or epa.gov/safewater.



Community Participation

You can request information on how you can take part in decisions that may affect water quality. Moorhead Public Service's Commission meets each month to discuss important items relating to drinking water treatment.

QUESTIONS?

For more information about this report, or for any questions relating to Moorhead's drinking water, please contact Marc Pritchard, Water Plant Manager, at mpritchard@mpsutility.com or (218) 477-8070.

Substances That Could Be in Water

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 occur naturally in the soil or groundwater or may 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; and

Radioactive Contaminants, which can occur naturally or be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations also establish limits for contaminants in bottled water, which must provide the same protection for public health.

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 mean that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Safe Drinking Water Hotline (800-426-4791) or visiting epa.gov/safewater.

Source Water Assessment

A source water assessment and a Surface Water Intake Protection Plan have been completed for the Red River of the North. The purpose of the assessment is to determine the susceptibility of MPS's surface water source to potential contaminant sources. The report includes background information and a relative susceptibility rating of higher, moderate, or lower. It is important to understand that a higher susceptibility rating does not imply poor water quality, only the system's potential to become contaminated within the assessment area.



MPS also maintains a Wellhead Protection Plan for our groundwater sources in the Buffalo and Moorhead Aquifers. MPS operates and maintains two wellfields within the larger Buffalo Aquifer and one wellfield in the smaller Moorhead Aquifer. These groundwater resources are strategically used as a supplement to normal surface water use and as the primary drought backup supply for the region.

If you would like a copy of our assessments and water supply protection documents, please feel free to contact our office during regular business hours at the number provided in this report.

2023 SURFACE WATER INTAKE PROTECTION PLAN - MOORHEAD PUBLIC SERVICE
10

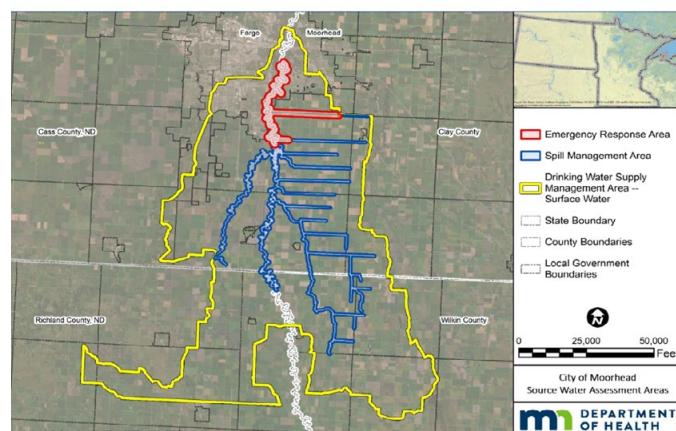


Figure 1 -- Moorhead's Drinking Water Supply Management Area, Spill Management Area, and Emergency Response Area

Water Treatment Process

The water treatment process at MPS consists of a series of steps. First, raw water is drawn from the Red River of the North (and wells as necessary) and sent to a large centralized softening basin, where lime and soda ash remove dissolved minerals like hardness compounds, heavy metals, dirt, and debris. Next is the main disinfection step, which uses ozone. Ozone is a powerful disinfectant and removes bacteria and viruses and breaks down organic molecules. After ozonation, the water is passed through dual-media filter banks that use granular activated carbon (GAC), which removes turbidity, total organic carbon (TOC), leftover compounds destroyed by the ozone, and ammonia compounds. Once the water passes through the filter banks, chloramines are added as a secondary disinfectant to ensure no bacterial regrowth occurs in the finished water distribution system.

Chlorine is mixed precisely with ammonia to form monochloramines, which are used as a secondary disinfectant against any bacteria that may still be present. (We carefully monitor the amount of monochloramines, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, very small amounts of fluoride (used to prevent tooth decay) and a phosphate corrosion inhibitor are added before the water is pumped to sanitized underground reservoirs and water towers and into your home or business.

Test Results

MPS's water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

MPS is proud to report that all regulatory requirements for drinking water were met or exceeded in 2025.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data is included, along with the year in which the sample was taken.

The percentage of total organic carbon (TOC) removal was measured each month. The system met all TOC removal requirements.

MPS participated in the fifth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR5) program by performing additional tests on our drinking water. UCMR5 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water to determine if it needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data is available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791. The UCMR5 data finder allows people to easily search for, summarize, and download the available analytical results at epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule-data-finder.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2025	10	0	1.6	NA	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Bromate (ppb)	2025	10	0	4.1	ND-4.1	No	By-product of drinking water disinfection
Chlorine (ppm)	2025	[4]	[4]	2.21	2.1-2.4	No	Water additive used to control microbes
Fluoride (ppm)	2025	4	4	0.67	0.64-0.68	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA5] (ppb)	2025	60	NA	4.9	1.3-9.6	No	By-product of drinking water disinfection
Nitrate (ppm)	2025	10	10	0.19	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon [TOC] (removal ratio)	2025	TT ¹	NA	2.0	1.56-2.26	No	Naturally present in the environment
Total Trihalomethanes [TTHMs] (ppb)	2025	80	NA	0.8	ND-1.00	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	RANGE LOW-HIGH	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2025	1.3	1.3	0.08	0.01-0.13	0/60	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2025	15	0	8.06	ND-27.5	1/60	No	Corrosion of household plumbing systems; Erosion of natural deposits

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

Herbicide: Any chemical(s) used to control undesirable vegetation.

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.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Pesticide: Generally, any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

ppt (parts per trillion): One part substance per trillion parts water (or nanograms per liter).

removal ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

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



UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Lithium (ppb)	2024	86	63.20–99.60	NA
Perfluorobutanoic Acid [PFBA] (ppt)	2024	5.65	2.47–7.59	NA
Perfluoroheptanoic Acid [PFHpA] (ppt)	2024	0.31	ND–0.92	NA
Perfluorohexanoic Acid [PFHxA] (ppt)	2024	0.88	ND–1.44	NA
Perfluorooctanoic Acid [PFOA] (ppt)	2022	0.39	0.38–0.39	Discharge from manufacturing and industrial chemical facilities; Use of certain consumer products; Occupational exposures; Firefighting activities
Perfluoropentanoic Acid [PFPeA] (ppt)	2024	0.98	ND–1.72	NA
Sodium (ppm)	2023	95	NA	NA
Sulfate (ppm)	2023	231	NA	NA
Turbidity ² (NTU)	2025	0.054	NA	Soil runoff

¹The value reported under Amount Detected for TOC is the lowest ratio of percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements.

²100% of monthly results were in compliance.

Lead in Home Plumbing

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. MPS's source waters do not contain lead, and lead is not present in the treated drinking water as it leaves the Moorhead water treatment plant.

MPS is responsible for providing high-quality drinking water and removing lead pipes but cannot control the variety of materials used in plumbing components in the privately owned portion of your service line or the plumbing in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk.

If you have lead materials present, before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, or doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute-accredited certifier to reduce lead in drinking water. If you are concerned about lead and wish to have your water tested, contact Moorhead Public Service's Lead Service Line Project at LSLProject@mpsutility.com or (218) 477-8070. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at epa.gov/safewater/lead.

To address lead in drinking water, public water systems were required to develop and maintain an inventory of service line materials by October 16, 2024. Developing an inventory and identifying the location of lead service lines (LSL) is the first step for beginning LSL replacement and protecting public health. The lead service inventory may be accessed at mpsutility.com/index.php/en/lead-information and maps.umn.edu/LSL. Please contact us if you would like more information about the inventory or any lead sampling that has been done.

Unregulated Contaminant Monitoring

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. The Minnesota Department of Health (MDH), U.S. 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 or the cost and technology of prevention and 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 is listed along with comparison values in the data tables in this report; 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 - infants, children, elderly, people with impaired immunity or who are pregnant — 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 the U.S. EPA determine where certain contaminants occur and whether it should consider regulating those contaminants in the future. More information is available on the webpages below.

MDH's A-Z List of Contaminants in Water:

health.state.mn.us/communities/environment/water/contaminants/index.html

Fourth Unregulated Contaminant Monitoring Rule (UCMR4):

health.state.mn.us/communities/environment/water/com/ucmr4.html

Fifth Unregulated Contaminant Monitoring Rule (UCMR5):

epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule

U.S. EPA UCMR5 Program Overview Factsheet:

epa.gov/system/files/documents/2022-02/ucmr5-factsheet.pdf

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 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 and 0.9 part 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.

