ANNUAL WATER QUALITY REPORT

Reporting Year 2025

Presented By

BRAINERD
MINNESOTA
A City for All Seasons

PWS ID#: MN1180002

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 source 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. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. Brainerd 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 resource. 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?

Brainerd's groundwater source is a quaternary water table aquifer that supplies six wells ranging from 123 to 187 feet deep.

What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air-conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer.

For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.

Why We Test So Often

Drinking water is one of the most closely monitored resources in the United States. Water systems regularly test for bacteria, disinfectants, metals, organic chemicals, radioactive substances, and many other contaminants. Some tests are performed daily, while others are conducted weekly, monthly, quarterly, or annually, depending on regulatory requirements and system size. Microbiological testing for bacteria such as coliforms ensures that disinfection is working properly. Turbidity monitoring confirms effective filtration. Chemical testing verifies that treatment processes remain optimized. All certified laboratories must meet strict quality assurance requirements to ensure accurate results. When results approach regulatory limits, corrective actions are taken immediately.

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.

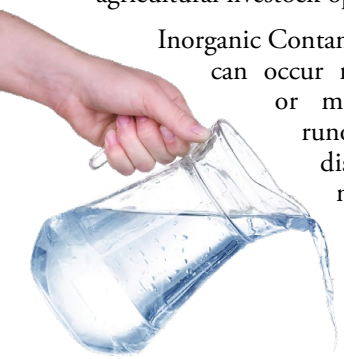
Questions?

For more information about this report, or for any questions relating to your drinking water, please contact Charlie Gammon, Water/Wastewater Manager, at (218) 330-3237 or cgammon@bpu.org.

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.

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 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.

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. Brainerd is responsible for providing high-quality drinking water and removing lead pipes but cannot control the variety of materials used in plumbing components 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. 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. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at epa.gov/safewater/lead.

Brainerd 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 at maps.umn.edu/LSL. You may also contact Paul Sandy at PSandy@bpu.org. Brainerd has been conducting water service line material inventory by reviewing historic records, performing field inspections, and using customer self-surveys to identify water service line materials. These inventories are required by the U.S. EPA's Lead and Copper Rule Revisions (LCRR). As of November 7, 2025, our inventory contains no lead, 1,065 galvanized requiring replacement, 388 unknown material, and 3,454 nonlead service lines.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through them.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen and disinfectant levels and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use, and avoid using hot water to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

Source Water Assessment

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

- How Brainerd is protecting your drinking water source;
- Nearby threats to your drinking water sources; and
- 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 health.state.mn.us/communities/environment/water/swp/swa.html or call (651) 201-4700 between 8:00 a.m. and 4:30 p.m., Monday through Friday.

Brainerd operates in Crow Wing County as a community public water system. It serves a population of 14,670. The source of supply for the system is groundwater. Details on the source of supply for the system are provided in the table below.

BRAINERD	UNIQUE WELL NO.	DEPTH (FT)	USE	SOURCE	SOURCE VULNERABILITY
Well #3	232347	125	Primary	Glacial deposit	Vulnerable
Well #4	232348	123	Primary	Glacial deposit	Vulnerable
Well #5	232349	145	Primary	Glacial deposit	Vulnerable
Well #6	232350	156	Primary	Glacial deposit	Vulnerable
Well #7	232352	157	Primary	Glacial deposit	Vulnerable
Well #8	403973	187	Primary	Glacial deposit	Vulnerable
Interconnect - Baxter	NA	NA	Emergency	Purchased groundwater	NA

Brainerd is required to manage any potential contaminant sources within 200 feet of the public water supply sources. The potential contaminant source inventory for the system's water sources was last completed on October 18, 2023. The following potential sources of contamination have been identified within 200 feet of the system's water sources:

- Stormwater drain pipe
- Water treatment backwash disposal area
- Gravel pocket or French drain

This is not an inclusive list, nor does the presence of these sources of contamination suggest the water supply is at risk. It is only a list of potential contaminant sources required to be managed to protect the well. Sources of contamination in a broader area could also impact the source water. These are managed through protection plans. If you would like a copy of our assessment, please feel free to contact our office during regular business hours at the number provided in this report. Visit health.state.mn.us/communities/environment/water/docs/swa/swp01274.pdf for a map of vulnerable sources.

Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our wells and sent to the filtration plant. Second, water passes through a series of catalyzers, which allow oxidation of iron and manganese. Third, the water flows to anthracite filters that remove the oxidized contaminants. Once it passes through these, it moves on to the fourth step of the filtration process, sand filters for polishing. This is to ensure the filtration is complete. As smaller suspended particles are removed, turbidity disappears and clear water emerges. Once the water leaves the filtration building, it flows into one of two million-gallon reservoirs to be used when needed in the distribution system.

When the distribution system is in need of water, high-service pumps are used to draw from the reservoirs to fill the water towers. Chlorine is added as a precaution against any harmful bacteria that may be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Sodium hydroxide (used to adjust the final pH and alkalinity), fluoride (used to prevent tooth decay), and a corrosion inhibitor (used to protect distribution system pipes) are added before the water is pumped to the water towers and into your home or business.

Test Results

Our 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.

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.

Brainerd 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.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2025	[4]	[4]	0.37	0.18–0.81	No	Water additive used to control microbes
Combined Radium (pCi/L)	2025	5	0	0.3	NA	No	Erosion of natural deposits
Fluoride (ppm)	2025	4	4	0.61	0.56–0.69	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA5] (ppb)	2025	60	NA	34.4	1.50–39.00	No	By-product of drinking water disinfection
Nitrate (ppm)	2025	10	10	0.52	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Trihalomethanes [TTHMs] (ppb)	2025	80[1]	NA	74	10.10–81.90	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	1.09	0.05–1.31	0/60	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper [second monitoring period] (ppm)	2025	1.3	1.3	1.14	0.06–1.44	2/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2025	15	0	ND	ND–7.9	0/60	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead [second monitoring period] (ppb)	2025	15	0	2.18	ND–3.7	0/30	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.

pCi/L (picocuries per liter): A measure of radioactivity.

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).

UNREGULATED SUBSTANCES					
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	COMPARISON	TYPICAL SOURCE
Perfluorobutanesulfonic Acid [PFBS] (ppt)	2025	5.2	NA	100	NA
Perfluorobutanoic Acid [PFBA] (ppt)	2025	3.5	NA	7000	NA
Perfluoroheptanoic Acid [PFHpA] (ppt)	2024	0.33	ND–0.85	NA	NA
Perfluorohexanesulfonic Acid [PFHxS] (ppt)	2025	2.6	NA	47	NA
Perfluorooctanesulfonic Acid [PFOS] (ppt)	2025	2.2	NA	2.3	Discharge from manufacturing and industrial chemical facilities; Use of certain consumer products; Occupational exposures; Certain firefighting activities
Perfluorooctanoic Acid [PFOA] (ppt)	2025	0.6	NA	0.0079	Discharge from manufacturing and industrial chemical facilities; Use of certain consumer products; Occupational exposures; Certain firefighting activities
Perfluoropentanesulfonic Acid [PFPeS] (ppt)	2025	0.71	NA	NA	NA
Perfluoropentanoic Acid [PFPeA] (ppt)	2025	0.96	NA	NA	NA
Sodium (ppm)	2024	17.8	NA	20	NA
Sulfate (ppm)	2024	11.8	NA	500	NA

[1] Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.

Count on Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water.
- Monitoring and inspecting machinery, meters, gauges, and operating conditions.
- Conducting tests and inspections on water and evaluating the results.
- Maintaining optimal water chemistry.
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels.
- Documenting and reporting test results and system operations to regulatory agencies.
- Serving our community through customer support, education, and outreach.

So the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water and the use of chlorine are probably the most significant public health advancements in human history.

How chlorination works:

- Potent Germicide Reduction of many disease-causing microorganisms in drinking water to almost immeasurable levels.
- Taste and Odor Reduction of many disagreeable tastes and odors from foul-smelling algae secretions, sulfides, and decaying vegetation.
- Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.
- Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.