

BACK-TO-BACK!



Back-to-Back Awards Displayed by
Fargo Water Treatment Plant Operators
**Zach Fossen
& Josee Bitzan**

Fargo's Drinking Water Named Best Tasting in North Dakota Two Years Straight

For the second year in a row, The City of Fargo's drinking water has won the title of best tasting in North Dakota.

In a blind taste test, attendees at the 95th annual North Dakota Water & Pollution Control Conference sampled drinking water from municipalities around the state and selected Valley City, McVille and Fargo as the top three contenders. A panel of judges made the final decision, with Fargo receiving the top prize. Fargo, which also won in 2022, has been the only city to earn the award in back-to-back years. The City of Fargo previously won back-to-back titles in 2002 and 2003.

Water Utility Director Troy Hall said the awards are the result of a team effort by The City of Fargo departments, including Public Works, Engineering, Water Utility, Finance and Administration, among others.

"I think it's a real credit to the dedication of our water treatment staff," said Hall, who helped oversee the construction of Fargo's improved Water Treatment Plant, which became fully operational in 2019. "It's also a real credit to the City Commission, both past and present, who have supported making improvements to our water infrastructure."



**BEST
TASTING
WATER!**

'22 '23

2023 WATER QUALITY REPORT

Troy B. Hall
Water Utility Director

Daniel L. Portlock
Water Utility Engineer

Brian A. Ward
WTP Superintendent

The City of Fargo Water Treatment Plant is issuing this report to inform customers about the quality of water produced and distributed in 2023.

If you are a large-volume user, please distribute a copy of this water Quality Report to consumers who do not receive a bill.

If you have questions about Fargo drinking water, please contact the Water Treatment Plant at 701-241-1469.

If you are aware of non-English speaking individuals who need help with the appropriate language translation, please contact the Communications & Governmental Affairs Team at 701-241-1310.

If you would like opportunities for public participation in decisions that affect water quality, please attend Fargo City Commission meetings, which are held every two weeks. Please visit the City of Fargo web site for exact meeting dates and times.

www.fargond.gov/city-government/departments/city-commission



AESTHETIC WATER QUALITY AVERAGES FOR 2023

Total Hardness > 126 (ppm) or 7.37 grains/gallon

Total Dissolved Solids > 325 (ppm)

Iron > Less than 0.01 (ppm)

Manganese > Less than 0.01 (ppm)

pH > 9.14

WHAT YOU NEED TO KNOW ABOUT DRINKING WATER REGULATIONS

The sources of drinking water (both tap 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.

In order to ensure tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) 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 indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking water Hotline (800-426-4791) or visiting their website.

<https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-information>

Before the City of Fargo delivers water to your home it is thoroughly tested. All regulatory testing is performed in certified laboratories. In addition, the Fargo Water Treatment Plant is staffed with Certified Operators and Environmental Laboratory Technicians who are monitoring and testing your water to ensure that drinking water standards enforced by the North Dakota Department of Environmental Quality (NDDEQ) are maintained.

The Fargo water treatment plant complies with the EPA Safe Drinking Water Act by routinely testing for contaminants. The contaminants detected and values are listed in the Monitoring Results Tables. Certain contaminants require testing less than once per year. The concentrations of these contaminants are not expected to vary significantly from year to year. This data, while still representative of the water quality, is more than a year old and is also listed in the Monitoring Tables. In 2023, there were no contaminants that exceeded the Maximum Contaminant level (MCL), which is the highest level of a substance allowed in drinking water as set forth by the EPA.

Contaminants that may be present in source water:

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 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 agriculture, urban storm water 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 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.



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. These people should seek advice about drinking water from their health care providers. 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).

Lead and Copper

The (MCL) for lead and copper is known as the Action Level (AL). This is the concentration which, if exceeded, triggers treatment or other requirements a water system must follow. Ninety percent of all samples tested must be below this concentration. During 2023, no sample site on the City of Fargo water distribution system tested above the AL for lead and copper.

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. The City of Fargo Water Treatment Plant is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. **Use water from the cold tap for drinking and cooking. 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 drinking 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 (800-426-4791) or at:

<http://www.epa.gov/safewater/lead>



KEY TO THE TABLES

(MCLG) Maximum Contaminant Level Goal: The level of contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

(MCL) Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

(MRDLG) Maximum Residual Disinfection Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's 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.

Highest Compliance Level: The highest level of contaminant used to determine compliance with a National Primary Drinking Water Regulation.

Range of Detections: The lowest to the highest result value recorded during the required monitoring timeframe for systems with multiple entry points.

ABBREVIATIONS

ppb - parts per billion

ppm - parts per million

pCi/L - picocuries per liter (a measure of radioactivity)

umho/cm - micromhos per centimeter (unit of measurement for conductivity)

AL – action level

N/A – not applicable

EP – entry point

ND - none detected

NTU – nephelometric turbidity units

TT – treatment technique

TOC – total organic carbon

WTP – water treatment plant

LSWTP – lime softening water treatment plant

MWTP – membrane water treatment plant

MGD – million gallons per day

TURBIDITY is a measure of water clarity monitored at the City of Fargo Water Treatment Plant. Certain treatment techniques (TT) are required to reduce the level in the drinking water. Regulations require turbidity to be < 0.15 NTU at the effluent of the Fargo Membrane Water Treatment Plant (MWTP) and < 0.30 NTU at the effluent of the Fargo Lime Softening Water Treatment Plant (LSWTP) 95% of the time and < 1.0 NTU 100% of the time. Turbidity has no health effects, but can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms such as bacteria, viruses, and parasites that can cause nausea, cramps, diarrhea and associated headaches.

MICROBIAL CONTAMINANTS

Turbidity	Treatment Technique (TT)	< 1.0 (NTU) (100%)	(MWTP) < 0.15 (NTU) (95%) (LSWTP) < 0.3 (NTU) (95%)	Level Detected (NTU)	Range (NTU)
(MWTP) Effluent	Ultra Filtration; Reverse Osmosis; Disinfection	100% of samples	100 % of samples	0.124 7/31/2023	0.026 to 0.124
(LSWTP) Effluent	Filtration; Disinfection	100% of samples	100% of samples	0.143 11/16/2023	0.028 to 0.143

LEAD AND COPPER

Substance (monitored at tap) (units) test date	AL	90th Percentile	Sites Exceeding AL	Major Source of Contaminant
Copper (ppm) 7/25/2023	1.3	0.0687	0 of 50 sites	Corrosion of household plumbing systems Erosion of natural deposits
Lead (ppb) 7/25/2023	15	2.34	0 of 50 sites	Corrosion of household plumbing systems Erosion of natural deposits

INORGANIC CONTAMINANTS

Substance (monitored at tap) (units) test date	MCL	MCLG	Highest Compliance Level	Major Source of Contaminant
Nitrate - Nitrite (ppm) 4/10/2023	10	10	0.191	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

DISINFECTANTS

Substance (monitored at tap) (units) test date	MRDL	MRDLG	Highest Compliance Level	Range	Major Source of Contaminant
Chloramine (ppm) 1/31/2023	4	4	3	2.73 to 2.86	Water additive used to control microbes

Substance (monitored at tap) (units) test date	MCL	MCLG	Highest Compliance Level	Range	Major Source of Contaminant
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UNREGULATED CONTAMINANTS

Alkalinity, Carbonate (ppm) 12/19/2023	N/A	N/A	14	ND - 14	Naturally present when water passes through rock and soil which contains carbonate, bicarbonate, and hydroxide compounds
Bicarbonate as HCO ₃ (ppm) 12/19/2023	N/A	N/A	504	53 - 504	Naturally present when water passes through rock and soil which contains carbonate, bicarbonate, and hydroxide compounds
Bromide (ppm) 12/11/2023	N/A	N/A	320	24 - 320	Discharge from oil and gas production and coal-fired steam electric power plants Erosion of natural deposits
Calcium (ppm) 12/19/2023	N/A	N/A	54.5	19.9 – 54.5	Naturally present when water passes through rock and soil. It may dissolve from rocks such as limestone, marble, calcite, dolomite, gypsum, fluorite and apatite
Conductivity @ 25 C (umho/cm) 12/19/2023	N/A	N/A	773	326 - 773	Conductive ions from dissolved salts and inorganic materials such as alkalis, chlorides, sulfides and carbonate compounds naturally present in water
Orthophosphate (ppm) 12/19/2023	N/A	N/A	0.299	0.009 – 0.299	Water additive used to inhibit corrosion
pH 12/19/2023	N/A	N/A	9.14	7.78 – 9.14	Measure of how acidic or basic water is
Total Dissolved Solids (ppm) 12/19/2023	N/A	N/A	479	202 - 479	Organic and inorganic materials either naturally occurring or man-made that are dissolved in water

TOTAL ORGANIC CARBON REMOVAL

Alkalinity - Source (ppm) 3/31/2023	N/A	N/A	413	155 to 413	Naturally present when water passes through rock and soil which contains carbonate, bicarbonate, and hydroxide compounds
Total Organic Carbon (TOC) - Finished (ppm) 11/30/2023	N/Aa	N/A	5.2	1.21 to 5.2	Naturally present in the environment
Total Organic Carbon (TOC) - Source (ppm) 11/30/2023	N/A	N/A	14.9	6.23 to 14.9	Naturally present in the environment

Substance (monitored at tap) (units) test date	MCL	MCLG	Highest Compliance Level	Range	Major Source of Contaminant
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DISINFECTION BYPRODUCTS

Bromate - Finished (ppb) 1/31/2023	10	0	1	ND to 1.8	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (ppb) 3/31/2023	60	N/A	10	1.12 to 11.91	By-product of drinking water disinfection
Total Trihalomethanes (TTHMs) (ppb) 6/30/2023	80	N/A	13	ND to 11.81	By-product of drinking water disinfection

Once every five years the EPA issues a list of unregulated contaminants to be monitored by public water systems. The City of Fargo was selected by the EPA to sample for thirty (30) unregulated contaminants during 2023. Samples were taken four times from the entry point (EP) to the distribution system, as required.

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Further information regarding unregulated contaminant monitoring can be obtained from the EPA at <https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule>, North Dakota Department of Environmental Quality at <https://deq.nd.gov/MF/DWP/>, or by contacting the City of Fargo Water Treatment Plant.

UCMR 5 UNREGULATED CONTAMINANT DETECTIONS

Lithium (ppb) 1/23/2023	16	Lithium (Li) is a natural element that is found in rocks, soils and water in varying concentrations throughout the world. Drinking water also frequently contains some lithium, in a range of concentrations depending on the amounts in the groundwater source and surface waters under the influence of groundwater. Industrial sources of lithium contamination in water can include lithium mining, manufacturing of batteries and other products as well as battery recycling. These industrial sources are not common in the United States and not yet a serious concern.	
Lithium (ppb) 4/11/2023	36.4		
Lithium (ppb) 7/10/2023	22.9		
Lithium (ppb) 10/09/2023	40		
Range of values (ppb)	16 - 40	Average value at sample point (EP) Entry Point to distribution system (ppb)	28.83



Our Water Supply and Drought Management

The primary water source for the City of Fargo Water Plant is the Red River. A water intake and pump station is located just east of our facility in proximity to the Midtown Dam. The City has alternate sources of water which include the Sheyenne River and water storage at Lake Ashtabula. The Sheyenne intake and pumping station is used approximately 30% of the time and is located between the communities of West Fargo and Horace. Each pumping facility can be used independently or combined to provide source water flow into each of our treatment facilities. We focus on utilizing these sources wisely to minimize operating and treatment costs while optimizing water quality for our customers.

The City of Fargo owns 52% of the stored water rights to Lake Ashtabula. This allocation was a result of the City of Fargo helping to fund the construction of the Baldhill Dam north of Valley City. During a drought, with Corps of Engineers approval, water from Lake Ashtabula can be released into the Sheyenne River to help meet Fargo's water needs. This lake (used in 1976, '84, and '88), along with water restrictions, and conservation, can help provide Fargo's emergency water needs for approximately two years.

The City of Fargo has a drought management plan that monitors water flow, river levels and the precipitation index. The City has adopted an ordinance that mandates citizen participation during drought to reduce the impact to all water users. For more information about the drought management plan visit:

<https://fargond.gov/city-government/departments/water-treatment/drought-plan>

Source Water Protection

The City of Fargo public water system, in cooperation with the North Dakota Department of Environmental Quality, has completed the delineation and contaminant/land use inventory elements of the North Dakota Source Water Protection Program. Based on the information from these elements, the North Dakota Department of Environmental Quality has determined our source water is moderately susceptible to potential contaminants.

You can learn more about the North Dakota Source Water Protection Program online at:

https://deq.nd.gov/WQ/1_Groundwater/1_SW.aspx





The City of Fargo Water Treatment Plant Recognized with Facility of the Year Award at National Membrane Conference

The award recognizes a facility that uses membrane technology in an environmentally friendly manner.

FARGO, NORTH DAKOTA – The City of Fargo Water Treatment Plant was recently honored with the Membrane Facility of the Year Award at the Membrane Technology Conference 2024 in West Palm Beach, Florida. The national award recognizes an outstanding water/wastewater facility that uses membrane technology with high efficiency in an environmentally friendly approach. Membrane technology utilizes pressure or a vacuum to force water through a system that filters out particles or dissolved materials from drinking water.

The award is based on several technical criteria, including high efficiency that conserves energy or water, novel challenges or concepts, public and educational outreach and operational compliance. Five other systems were nominated for the award this year: the City of Santa Monica, California; Orange County Water District, California; Quail Valley Utility District, Texas; Town of Jupiter Utilities, Florida; and the City of Moss Point, Mississippi. A panel of judges in the membrane industry ranked the submissions, and the Fargo Membrane Water Treatment Plant (MWTP) was named the winner on March 6, 2024, at the annual conference. In addition to this award, the MWTP has contributed to Fargo being voted best tasting drinking water in North Dakota in 2022 and 2023.

The Fargo Membrane Water Treatment Plant was commissioned in 2018 and has a capacity to produce 15 million gallons per day of drinking water. The plant's

technology includes ultrafiltration membranes, reverse osmosis membranes, instrumentation for continuous monitoring of water quality and designed efficiencies for chemical usage and treatment costs. After completion of a water treatment master plan in 2010, membrane technology was proven through pilot testing. The Fargo MWTP was then designed and constructed to meet future water demands and to address source water that is challenging to treat. Fargo uses the Red and Sheyenne rivers as source water that is treated to attain drinking water standards.

The annual Membrane Technology Conference is sponsored jointly between the American Membrane Technology Association (AMTA) and the American Water Works Association (AWWA). AMTA is a membrane processes association for the United States, Canada, Mexico and Central America. AWWA is an international, nonprofit, scientific and educational society dedicated to providing total water solutions assuring the effective management of water. ➤



AWARD CRITERIA

- High Efficiency
- Environmental Footprint
- Challenges/Concepts
- Safety Record
- Operational Compliance
- Public & Educational Outreach