

# Annual Drinking Water Quality Report

## Gladstone, North Dakota

### 2023

We are very pleased to provide you with this year's *Annual Drinking Water Quality Report*. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is to provide you with a safe and dependable supply of drinking water. The City of Gladstone purchases their water from Southwest Water Authority (SWA).

The City of Gladstone is participating in North Dakota's Wellhead Protection Program. A copy of this program is available upon request. The North Dakota Department of Environmental Quality has prepared a Source Water Assessment for Gladstone. Information regarding this program is also available upon request.

Our 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 that our source water is "moderately susceptible" to potential contaminant sources. They also noted that "historically, SWA has effectively treated this source water to meet drinking water standards."

If you have any questions about this report or concerning your water utility, you are welcome to attend SWA's regularly scheduled meetings which are held the first Monday of each month. For information on the agenda or time, please contact 1-888-425-0241 or email [swa@swwater.com](mailto:swa@swwater.com). The City of Gladstone also holds monthly meetings on the first Monday of each month at 6:00PM. Please contact Maria Kolling, Auditor, at 701-483-4523 for agenda information. We want our valued customers to be informed about their water utility. If you are aware of non-English speaking individuals who need help with the appropriate language translations, please call Maria Kolling at the number listed above.

The City of Gladstone would appreciate if large volume water customers would please post copies of the *Annual Drinking Water Quality Report* in conspicuous locations or distribute them to tenants, residents, patients, students, and/or employees, so individuals who consume the water, but do not receive a water bill, can learn about our water system.

The City of Gladstone and Southwest Water Authority routinely monitor for contaminants in your drinking water according to Federal and State laws. The following table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2023.

As authorized and approved by EPA, the state has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of our data [e.g., for inorganic contaminants], though representative, is more than one year old.

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.

## **Contaminants that may be present in source water include:**

**Microbial contaminants**, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

**Inorganic contaminants**, such as salts and metals, 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** 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, 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** can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations, which limit the number 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.

In the following tables you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we have provided the following definitions:

### **Not Applicable (NA)**

**Parts per million (ppm)** or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion (ppb)** or Micrograms per liter ( $\mu\text{g/l}$ )- one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**Picocuries per liter (pCi/l)** - picocuries per liter is a measure of the radioactivity in water.

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

**Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

**Maximum Contaminant Level** - The “Maximum Allowed” (MCL) is 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.

**Maximum Contaminant Level Goal** - The “Goal” (MCLG) is 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.

**Maximum Residual Disinfectant Level (MRDL)** – 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.

**Maximum Residual Disinfectant Level Goal (MRDLG)** – 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.

## 2023 Test Results for the city of Gladstone, ND & Southwest Water Authority

Contaminant	MCLG	MCL	Level Detected	Units	Range	Date (year)	Violation Yes/No Other Info	Likely Source of Contamination
<b>Lead/Copper</b>								
Lead*	0	AL=15	ND 90 <sup>th</sup> % Value	ppb	N/A	2022	0 sites exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits
Copper	1.3	AL=1.3	0.206 90 <sup>th</sup> % Value	ppm	N/A	2022	0 sites exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
<b>Microbiological Contaminants</b>								
Turbidity**	N/A	TT=3	0.18	NTU	N/A	2023	100% of samples met Turbidity Limits	Soil runoff
<b>Inorganic Contaminants</b>								
Nitrate-Nitrite	10	10	0.09	ppm	N/A	2023	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Stage 2 Disinfection By-Products</b>								
HAA5	N/A	60	18	ppb	10.73 to 28.3	2023	No	By-product of drinking water chlorination
TTHM	N/A	80	11	ppb	7.05 to 13.8	2023	No	By-product of drinking water chlorination
<b>Disinfectants</b>								
Chloramines	MRDLG =4	MRDL =4.0	3.1	ppm	0.1 to 4.4	2023	No	Water additive used to control microbes
<b>Unregulated Contaminants</b>								
Bicarbonate as HCO3	N/A	N/A	208	ppm	174 to 208	2023	No	N/A
<b>Total Organic Carbon Removal</b>								
Alkalinity-Source	N/A	N/A	171	MG/L	143.00 to 171.00	2023	No	Natural erosion, certain plant activities, certain industrial wastewater discharges
Carbon, Total Organic (TOC) Finished	N/A	N/A	2.81	MG/L	2.05 to 2.81	2023	No	Naturally present in the environment
Carbon, Total Organic (TOC) Source	N/A	N/A	4.12	MG/L	3.17 to 4.12	2023	No	Naturally present in the environment

### Surface Water Treatment Rule Monitoring Data:

Lowest Monthly Percentage of Samples Meeting Turbidity Limits= 100%

Highest Single Measurement = 0.18

**\*Violation: Disinfection By-products Rule – Failure to Monitor/Report (Major) 4<sup>th</sup> quarter of 2023.** This rule requires us to monitor monthly chlorine levels and report them to the Department of Environmental Quality on a quarterly basis. During the 4<sup>th</sup> quarter of 2023 (October, November, December) the required number of samples were not taken, or the report was not submitted on time; therefore, we are unsure of the level of disinfectant during that time. Some people who use water containing chlorine well more than the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well more than MRDL could experience stomach discomfort. The City of Gladstone has taken steps to correct this violation of the Disinfectants and Disinfection By-products Rule by returning to a routine monitoring and reporting schedule.

**\*Violation: Revised Total Coliform Rule (RTCR) – Failure to Routine Monitor (Major) October 2023.** Our water system is required to sample Total Coliform bacteria monthly. We failed to collect the required number of total coliform samples during the month of October 2023 and are therefore unsure of the quality of the water at that time. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. The City of Gladstone has taken steps to correct this violation of the Revised Total Coliform Rule by returning to a routine testing schedule.

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.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant woman and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Gladstone 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 or at <http://www.epa.gov/safewater/lead>. EPA requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table above are the only contaminants detected in your drinking water.

Thank you for allowing us to provide your family with clean, quality water this year. To maintain a safe and dependable water supply, we sometimes need to make improvements that will benefit all our customers. These improvements sometimes require rate structure adjustments.

Southwest Water Authority and the City of Gladstone work around the clock to provide top quality water to every tap. We 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.

Please contact Maria Kolling, Auditor, at 701-483-4523 or [auditor@gladstonend.org](mailto:auditor@gladstonend.org) with any questions.

