

Annual Drinking Water Quality Report-2022

City of Hillsboro, North Dakota

The City of Hillsboro, as required by the federal Safe Drinking Water Act (SDWA), has prepared and is distributing to our customers this year's Annual Drinking Water Quality Report. This report is designed to inform you about the safe clean water we deliver to you every day. 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. We are committed to ensuring the quality of your water.

Our water source is groundwater taken from two locations. The first site is located west of Hillsboro and consists of 3 wells in the Hillsboro Aquifer. The remaining water is pumped from a transfer station owned by East Central Water District located near Clifford, ND. Their well field is in the Galesburg Aquifer. The raw water is then treated through a RO membrane softening plant, stored in a 625,000-gallon clear well, and pumped into Hillsboro to a 250,000-gallon overhead storage tank. We also supply treated water to ECWD's customers.

The City of Hillsboro is a participant in the State Wellhead Protection Program. It contains information on our well site, delineation, and our source water assessment. The protection report along with other relevant information is available at our city offices.

We are pleased to report our drinking water is safe and meets federal and state requirements.

If you have any questions about this report or concerning your water utility, please contact Jim Anderson at 636-4860. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held at 6:30 p.m. on the first and third Mondays of each month at the Hillsboro Community Center. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Jim Anderson at the number listed above.

The City of Hillsboro would appreciate it if large volume water customers, such as apartment complexes, hospitals, schools, or business', post copies of the CCR 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 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:

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

(B) *Inorganic contaminants*, such as salts and metals, which can be naturally occurring or result from urban stormwater, industrial or domestic wastewater discharges, oil production, mining or farming.

(C) *Pesticides and herbicides*, which come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

(D) *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.

(E) *Radioactive contaminants*, which 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 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 the 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 (1-800-426-4791).

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 women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Hillsboro 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 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>.

The City of Hillsboro routinely monitors 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 1st to December 31st, 2022. The data presented is for 2022 or the most recent year in accordance with state and federal regulations.

In these 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:

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 (MCL) - The "Maximum Allowed" 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 (MCLG) - The "Goal" 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.

Range of Detections - The lowest to the highest value recorded during the monitoring timeframe.

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

ppm- parts per million, or milligrams per liter (mg/l) **ppb**- parts per billion, or micrograms per liter (g/l)
umho/cm=micromhos per centimeter (measure of conductivity) **obsvns**= observations/field at 100 Power
N/D- non detect **N/A**- non applicable

Table of Detected Regulated Contaminants

Contaminant (Units)	MCLG	MCL	Highest Comp. Level	Range of Detections	Date Obtained	Other Information	Likely Source of Contamination
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Lead/Copper

Copper (ppm) 10 Samples	1.3	AL= 1.3	0.604 90 th %tile	NA	9/14/2022	0 of 10 Samples Exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) 10 Samples	0	AL=15	1.8 90 th %tile	NA	9/14/2022	0 of 10 Samples Exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits

Inorganic Contaminants

Fluoride (ppm)	4	4	0.6	N/A	3/27/2023	No Violation	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate-Nitrite as N (ppm)	10	10	0.143	N/A	5/10/2022	No Violation	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Disinfectants

Chlorine (ppm)	MRDLG =4	MRDL =4	0.8	0.561 to 1.05	8/31/2022	No Violations	Water additive used to control microbes
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Table of Detected Regulated Contaminants

Contaminant (Units)	MCLG	MCL	Highest Comp. Level	Range of Detections	Date Obtained	Other Information	Likely Source of Contamination
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Disinfection Byproducts

Total Haloacetic Acids [HAA5] (ppb)	0	60	No Detect	N/A	12/31/22 System Wide	No Violation	By-product of drinking water chlorination
Total Trihalomethanes [TTHM] (ppb)	0	80	2	N/A	12/31/22 System Wide	No Violation	By-product of drinking water chlorination

Radioactive Contaminants

Gross Alpha, Including RA Excluding RN&U (pCi/l)	15	15	1.09	NA	6/19/17	No Violation	Erosion of natural deposits
Radium 226,228 Combined (pCi/l)	0	5	1.95	NA	6/19/17	No Violation	Erosion of natural deposits
Uranium Combined (ppb)	0	30	0.85	NA	6/19/17	No Violation	Erosion of natural deposits

[MRDLG] Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant below which there is known or expected risk to health.

MRDLGs do not reflect the benefits of the use of disinfectants to control of 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.

Table of Detected Unregulated Contaminants

Contaminant	Highest Comp. Level/Units	Date Obtained
Alkalinity	54 ppm	4/3/2023
Bicarbonate as HCO ₃	65 ppm	4/3/2023
Calcium	10.2 ppm	4/3/2023
Chloride	1.9 ppm	4/3/2023
Conductivity @ 25 Umhos/cm	132 umho/cm	4/3/2023
Hardness, Total (as CaCo ₃)	37 ppm/2.18 gpg	4/3/2023
Magnesium	2.8 ppm	4/3/2023
pH	6.80 pH	4/3/2023
Potassium	< 1.0 ppm	4/3/2023
Sodium	9.4 ppm	4/3/2023
Sodium Adsorption	.67 obsvns	4/3/2023
Sulfate	16.9 ppm	4/3/2023
TDS	70 ppm	4/3/2023

This is a list of Unregulated Contaminants in our system that are not health related but do affect the aesthetic quality of our water. 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.

Violation: For the 3rd quarter of 2022, (July-August-September) the City of Hillsboro failed to comply with the reporting requirements of the Disinfectants and Disinfection By-products Rule. This rule requires us to monitor monthly chlorine levels and report them to the Department of Environmental Quality on a quarterly basis. Since the required report was not submitted on time, we are unsure of the level of disinfectant during that time. Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort. The City of Hillsboro has taken steps to correct this violation of the Disinfectants and Disinfection By-products Rule by returning to a normal reporting schedule.

These chlorine residual samples were taken, levels were within the Disinfectants/Disinfection Byproducts Rule required range and recorded. The total coliform samples taken at the same time tested absent/negative of coliforms. Unfortunately, the results were not reported on time for the 3rd quarter of 2022.

Our public water system, in cooperation with the North Dakota Dept. of Environmental Health, has completed the delineation and contaminant/land use inventory elements of the North Dakota Protection Program. Based on the information from these elements, the North Dakota Dept. of Environmental Health has determined that our source water is **moderately** susceptible to potential contaminants.

In our continuing efforts to maintain a safe and dependable water supply it has been necessary to make improvements to our water system. In 1999 the City of Hillsboro along with AE2S began a study to address problems and deficiencies. A facility plan for Water Supply and Treatment System Improvements was developed. In 2006 Hillsboro started its first of three phases with a Water Distribution Project. It included replacement of older, small water mains and looping of dead ends. In 2010 Phase 2 was completed. Our original 90,000 gallon Water Tower was demolished, and a new 250,000 tower was erected. The final phase, a Membrane Softening Filtration Plant, has been online since 2014. Hillsboro owns and operates it. We along with the City of Mayville have teamed up with East Central Water District to develop a "Regional Water Supply System."

The new treatment process allows us to remove the majority of both regulated and unregulated contaminants. We are presently treating water to a total hardness of 40 ppm (2-3 grains /gallon) with a pH of 7.

Thank you for allowing us to provide your family with clean, quality water this year. 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 future.

Please call our offices if you have questions.
Public Works Shop 701-636-4860
City Hall 701-636-4620

Thank you,
City of Hillsboro

Commissioners

Nicole Evans
Paul Geray
Mike Kress
Levi Reese
Dave Sather

Auditor

Ashley Frederick

Public Works Director

Jim Anderson