

# **Annual Drinking Water Quality Report**

## **Hebron, North Dakota**

### **2021**

We're pleased to present to you 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 treated surface water purchased from the Southwest Water Authority (SWA). The source of SWA water is Lake Sakakawea. The SWA then delivers the partially treated water to a lime-softening treatment plant at Dickinson. The water is then clarified, softened, filtered, and disinfected before being delivered to our customers.

The North Dakota Department of Environmental Quality has prepared a Source Water Assessment for the city of Hebron and the Southwest Water Authority. Information regarding this program is available upon request.

The Southwest Water Authority, 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 contaminants. No significant sources of contamination have been identified.

If you have any questions about this report or concerning your water utility, please contact Chad Stern, Public Works Superintendent, at (701) 878-4600. 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 on the second Monday of each month at 7:00 PM in the Hebron Community Center. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Chad at the number listed above.

The City of Hebron would appreciate it if large volume water customers would please post copies of this *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 Hebron routinely monitors for contaminants in your drinking water according to Federal and State laws. The following tables show the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2021. 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, 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 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 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.

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've 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 (µg/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.

IDSE – Initial Distribution Systems Evaluations.

Obsvns – Observations/field at 100 Power.

## TEST RESULTS FOR THE CITY OF HEBRON

<u>Contaminant</u>	<u>MCL G</u>	<u>MCL</u>	<u>Level Detected</u>	<u>Units</u>	<u>Range</u>	<u>Date (year)</u>	<u>Violation Yes/No Other Info</u>	<u>Likely Source of Contamination</u>
<b>Lead/Copper</b>								
Lead	0	AL= 15	No Detect	ppb	NA	2020	0 sites exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits
Copper	1.3	AL= 1.3	0.0962	ppm	NA	2020	0 sites exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
<b>Microbiological Contaminants</b>								
Turbidity*	NA	TT=3	0.24	NTU	NA	2021	100% of samples met Turbidity Limits	Soil runoff
<b>Inorganic Contaminants</b>								
Barium	2	2	0.0126	ppm	NA	2016	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	0.92	ppm	NA	2016	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate-Nitrite	10	10	0.073	ppm	NA	2021	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Radioactive Contaminants</b>								
Gross Alpha, including Ra, excluding Rn U	15	15	0.359	ppb	NA	2018	No	Erosion of natural deposits
<b>Disinfection Byproducts</b>								
Total Halo acetic Acids (HAA5)	NA	60	12	ppb	NA	1/31/21	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs)	NA	80	9	ppb	NA	1/31/21	No	By-product of drinking water chlorination
<b>Disinfectants</b>								
Chloramines	MRD LG =4	MRDL =4.0	2.6	ppm	2.36- 2.8	2021	No	Water additive used to control microbes
<b>Total Organic Carbon Removal</b>								
Alkalinity, Source	NA	NA	171	mg/l	162- 171	2021	N/A	Natural erosion, certain plant activities, certain industrial wastewater discharges
Total Organic Carbon, (TOC) - Finished	NA	TT	4.4	ppm	1.99- 4.4	2021	N/A	Naturally present in the environment
Total Organic Carbon, (TOC)- Source	NA	TT	5.05	ppm	2.97- 5.05	2021	N/A	Naturally present in the environment
<b>Unregulated Contaminants</b>								
Bicarbonate as HCO <sub>3</sub>	NA	NA	209	ppm	197- 209	2021	N/A	N/A
Alkalinity, Carbonate	N/A	N/A	3	Ppm	ND-3	2021		

Bromide (ppm)	N/A	N/A	33	ppm	27-33	2019	N/A	N/A
Calcium	N/A	N/A	36.8	ppm	N/A	2016	N/A	N/A
Chloride	N/A	N/A	13.8	ppm	N/A	2016	N/A	N/A
Conductivity @ 25 C UMHOS/CM	N/A	N/A	621	umho/ cm	N/A	2016	N/A	N/A
Hardness, Total (As CaCO3)	N/A	N/A	155	ppm	N/A	2016	N/A	N/A
Magnesium	N/A	N/A	15.2	ppm	N/A	2016	N/A	N/A
PH	N/A	N/A	8.76	PH	N/A	2016	N/A	N/A
Potassium	N/A	N/A	4.4	ppm	N/A	2016	N/A	N/A
Sodium	N/A	N/A	71.8	ppm	N/A	2016	N/A	N/A
Sodium Adsorption Ratio	N/A	N/A	2.51	obsvns	N/A	2016	N/A	N/A
TDS	N/A	N/A	391	ppm	N/A	2016	N/A	N/A

\*Turbidity is a measure of the cloudiness of the water. The SWWA monitors it because it is a good indicator of the effectiveness of their filtration system. 100% of samples met turbidity limits.

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.

#### Source Water Microbiological Monitoring

SWA has a program of testing its untreated water supply for Cryptosporidium, Giardia and E. Coliform as part of Round 2 of the Long Term 2 Enhanced Surface Water Treatment Rule.

- Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. SWA monitoring did not detect any presence in the source water.
- Giardia is a microbial parasite found in surface in source water. SWA monitoring did not detect any presence in the source water.
- Filtration, as used at the Dickinson Water Treatment Plant, effectively removes Giardia.
- E. Coliform is a pathogenic bacteria commonly found in surface water originates in the intestinal tract of warm blooded animals. Our monitoring did not detect any presence in the source water.

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 Hebron 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>.

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).

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).**

Please call Chad Stern, Public Works Superintendent, at (701) 878-4600 if you have questions concerning your water system.