

2019 Annual Drinking Water Quality Report

Bowman, North Dakota

We're 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. Our water source is from the Foxhill and Hell Creek Aquifer. We have five (5) wells with depths from 1050' to 1150'.

Community water systems are required to fully inform citizens about the source and quality of their drinking water; however, events since September 11, 2001 also required that disclosure of public information does not threaten the security of water systems.

The City of Bowman is participating in North Dakota's Wellhead Protection Program. Copies of the Wellhead Protection Program plan and other relevant information regarding this program can be obtained from the City Auditor during normal office hours.

Our public water system, in cooperation with the North Dakota Department of Health (NDDOH), 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 NDDOH has determined that our source water is not likely susceptible to potential contaminants.

"I'm pleased to report that our drinking water is safe and meets federal and state requirements", said Bill Mason, Water Superintendent.

This report shows our water quality and what it means. We want our valued customers to be informed about their water utility, so if a customer has any questions please contact Water Superintendent, Bill Mason at 701.523.5771 or attend a regular scheduled City Commission meeting held on the 1st & 3rd Tuesday of every month at 4:00 PM at City Hall. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call City Hall at 701-523-3309.

The City of Bowman would be appreciative 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. We will make a "Good Faith" effort for this report to be available to all residents.

The City of Bowman 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, 2019. 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, though representative, is more than one year old.

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 effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791)

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, industrial or domestic wastewater discharges, oil production, mining or farming.

Pesticides and herbicides, which 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, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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/Center 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 (1-800-426-4791).

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 located under the table.

	MCLG	MCL	Level Detected	Unit	Range	Year	Violation Yes / No	Likely Source of Contamination
Lead/Copper								
Copper 90 th Percentile	0	AL=1.3	.36 90 th % Value	ppm	NA	2018	0 Sites Exceed AL	Corrosion of household plumbing systems, erosion of natural deposits;
Lead 90 th Percentile	0	AL=15	2.45 90 th % Value	ppb	NA	2018	0 Sites Exceed AL	Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives
Inorganic Contaminants								
Barium	2	2	0.148	ppm	0.813 to .148	2016	NO	Discharge of drilling wastes, Discharge from metal refineries, erosion of natural deposits
Chromium	100	100	2.6	ppb	ND to 2.6	2016	NO	Discharge from steel and pulp mills; erosion from natural deposits
Fluoride	4	4	2.02	ppm	1.83 to 2.02	2016	NO	Erosion of natural deposits, water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Synthetic Organic Contaminants including Pesticides and Herbicides								
Pentachlorophenol	0	1	0.022	ppb	ND to 0.022	2017	NO	Discharge from wood preserving factories
Radioactive Contaminants								
Gross Alpha include RA/ exclude RN & U	15	15	.47	pci/l	NA	2018	NO	Erosion of natural deposits
Radium Combined (226,228)	0	5	.61	pci/l	NA	2018	NO	Erosion of natural deposits
Unregulated Contaminants								
Alkalinity, Carbonate			23	ppm	NA	2016	NO	NA
Alkalinity, Total			619	ppm	NA	2016	NO	NA
Bicarbonate As HCO3			708	ppm	NA	2016	NO	NA
Chloride			36.4	ppm	NA	2016	NO	NA
Conductivity @ 25 CUMHOS/CM			1660	Umho/ cm	NA	2016	NO	NA
Hardness Total (ASCACO3)			9	ppm	NA	2016	NO	NA
Iron			0.079	ppm	NA	2016	NO	NA
Nickel			0.0127	ppm	ND -0.0127	2016	NO	NA
PH			8.7	ph	NA	2016	NO	NA
Potassium			1.1	ppm	NA	2016	NO	NA
Sodium			379	ppm	NA	2016	NO	NA
Sodium Adsorption ratio			54.6	obdvn	NA	2016	NO	NA
TDS			1000	ppm	NA	2016	NO	NA
Zinc			0.0418	ppm	NA	2016	NO	NA

	MCLG	MCL	Level Detected	Unit	Range	Year	Violation Yes /No	Likely Source of Contamination
Stage 1 Disinfection By-products								
Total Haloacetic Acids	NA	60	11	ppb	7.36 to 13.53	2019	NO	By-product of drinking water disinfection
HAA5								
Trihalomethans	NA	80	33	ppb	23.17 to 38.17	2019	NO	
Disinfectants								
Chlorine	MRDL = 4.0	MRDLG = 4.0	0.4	ppm	0.09 to 0.38	2019	NO	Water additive used to control microbes

Abbreviations: **ppb** -parts per billion or micrograms per liter; **ppm** -parts per million or milligrams per liter; **ppt** – part per trillion or nanograms per liter; **NA** – not applicable; **ND** – none detected; **umho/cm** – micromhos per centimeter (a measure of conductivity) ; **pCi/L** ~ *picocuries per liter* (measure of the radioactivity in water)

AL ~ Action Level is a concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

TT ~ Treatment Technique is a treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

MCL ~ Maximum Contaminant Level is “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.

MCLG ~ Maximum Contaminant Level Goal - 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.

MRDL ~ Maximum Residual Disinfectant Level is 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 is 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.

Range – is the detection of the lowest to highest result value recorded during required monitoring timeframe for systems with multiple entry points.

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 line and home plumbing. City of Bowman is responsible for providing high quality drinking water, but cannot control the variety of materials used 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. Unregulated contaminants are those for which 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.

What does this mean? 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 effects

(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. (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.

Copper: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

Lead: 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. City of Bowman 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>.

TTHMs: Some people who drink water containing trihalomethanes in excess of MCL over many years experience problems with their kidneys, liver or central nervous systems, and may have increased risk of getting cancer.

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

Please call City Hall at 701.523.3309 if you have questions.

The CITY OF BOWMAN works around the clock to provide top quality water to every tap. We ask that all customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

THIS REPORT IS AVAILABLE AT CITY HALL AND AT WWW.BOWNANND.COM