

2019

# ANNUAL DRINKING WATER QUALITY REPORT



## McKENZIE COUNTY WATER RESOURCE DISTRICT System 1, 2 and 4

1300 12th Street SE • Watford City, ND 58854 • Phone: 701-842-2821

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. McKenzie County Water Resource District (MCWRD) purchases water from Western Area Water Supply Authority. This water is from the Missouri River and treated at the Williston Treatment Plant near the Lewis & Clark Bridge

Our public water system, in cooperation with the North Dakota Department of Health, 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 Health has determined that our source water is **not likely susceptible** to potential contaminants. No significant sources of contamination have been identified.

This report shows our water quality and what it means. If you have any questions about this report or concerning your water utility, please contact Jeff Shaffer at 701-842-2821. 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 2nd Tuesday of every month at 8:30 a.m., in the meeting room in the Public Works Building. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Jeff or Kristy at the above number.

MCWRD 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.

MCWRD 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 1 to December 31, 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.

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, the 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.

**Obsvns** - Field at 100 power.

**IDSE** - Initial Distribution System Evaluation

## 2019 TEST RESULTS FOR MCKENZIE COUNTY WATER RESOURCE DISTRICT SYSTEMS 1, 2, 4, AND CITY OF WILLISTON

Contaminant	MCLG	MCL	Level Detected	Unit Measurement	Range	Date (Year)	Violation Yes/No Other Info	Likely Source of Contamination
<b>Copper/Lead - MCWRD Systems 1 and 4 - 2018</b>								
Copper	1.3	AL=1.3	0.084 90th% value	ppm	N/A	2018	0 sites exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives
Lead**	0	AL=15	No Detect 90th% value	ppb	N/A	2018	0 sites exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits
<b>Copper/Lead - MCWRD System 2 - 2019</b>								
Copper	1.3	AL=1.3	0.0778 90th % Value	ppm	N/A	2016	0 sites exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives
Lead**	0	AL=15	1.06 90th% value	ppb	N/A	2016	0 sites exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits
<b>Disinfectants - MCWRD Systems 1 and 4</b>								
Chloramine	MRDLG =4.0	MRDL =4.0	2.9	ppm	2.3 to 3.2	2019	No	Water additive used to control microbes
TTHM	N/A	80	18	ppb	12.48 to 25.06	2019	No	By-product of drinking water disinfection
HAA5	N/A	60	9	ppb	7.55 to 13.88	2019	No	By-product of drinking water disinfection
<b>Disinfectants - MCWRD System 2</b>								
Chloramine	MRDLG =4.0	MRDL =7.0	2.4	ppm	0.5 to 3.1	2019	No	Water additive used to control microbes
TTHM	N/A	80	24	ppb	13.76 to 42.89	2019	No	By-product of drinking water disinfection
HAA5	N/A	60	15	ppb	8.12 to -23.09	2019	No	By-product of drinking water disinfection
<b>Microbiological Contaminants - Williston</b>								
Turbidity*	N/A	TT	0.289	NTU	N/A	2019	100% of samples met turbidity limits	Soil runoff
<b>Inorganic Contaminants - Williston</b>								
Nitrate-Nitrite (as Nitrogen)	10	10	No Detect	ppm	N/A	2019	No	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits
Barium	2	2	.0143	ppm	NA	2016	No	Erosion of natural deposits, discharge of drilling wastes.
Chromium	100	100	1.17	ppb	NA	2016	No	Discharge from steel and pulp mills:erosion of natural deposits
Fluoride	4	4	.81	ppm	NA	2016	No	Erosion of natural deposits, water additive which promotes strong teeth
Selenium	50	50	1.44	ppb	NA	2016	No	Erosion of natural deposits, discharge from petroleum and metal refineries
<b>Synthetic Organic Contaminants Including Pesticides and Herbicides - Williston</b>								
Pentachlorophenol	0	1	0.03	ppm	NA	2017	No	Discharge from wood preserving factories

## 2019 TEST RESULTS FOR MCKENZIE COUNTY WATER RESOURCE DISTRICT SYSTEMS 1, 2, 4, AND CITY OF WILLISTON (cont.)

Contaminant	MCLG	MCL	Level Detected	Unit Measurement	Range	Date (Year)	Violation Yes/No Other Info	Likely Source of Contamination
<b>Radioactive Contaminants - Williston</b>								
Gross Alpha, including RA, excluding RN & U	15	15	3.9	pCi/L	N/A	2017	No	Erosion of natural deposits
Radium, combined		5	0.78	pCi/L	N/A	2017	No	Erosion of natural deposits
Uranium		30	No Detect	ppb	No Detect	2017	No	Erosion of natural deposits
<b>Total Organic Carbon Removal - Williston</b>								
Alkalinity, Source - Williston	N/A	N/A	172	mg/L	102 to 172.00	2019	No	Natural erosion, certain plant activities, certain industrial wastewater discharges
Carbon, Total Organic (TOC), Finished - Williston	N/A	TT	3.9	MG/L	2.20 to 3.90	2019	No	Naturally present in the environment
Carbon, Total Organic (TOC), Source - Williston	N/A	TT	7.9	MG/L	3.20 to 7.90	2019	No	Naturally present in the environment
<b>Unregulated Contaminants - Williston</b>								
Alkalinity, Carbonate			4	ppm	NA	2019	No	NA
Bicarbonate as HCO3			51	ppm	NA	2019	No	NA
Calcium			42.3	ppm	NA	2019	No	NA
Conductivity@ 25C UMHOS/CM			630	umho/cm	NA	2019	No	NA
Orthophosphate			.035	ppm	NA	2019	No	NA
PH			8.69	PH	NA	2019	No	NA
TDS			391	ppm	NA	2019	No	NA

## UCMR4 Monitoring

The City of Williston was selected by the EPA to sample for 20 unregulated contaminants during 2019. Samples were taken four times at each site; both at the Water Treatment Plant and from within the distribution system. 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. Should you have any questions, please contact our office.

Unregulated Contaminants Detected	Site 1 2019	Site 2 2019	Site 3 2019	Site 4 2019	Minimum Reporting Level µg/L
Dichloroacetic Acid	5.2 (Range 3.1 to 6.9)	4.8 (Range 3.3 to 5.9)	6.6 (Range 4.5 to 9.1)	7.3 (Range 3.7 to 6.8)	0.2
Trichloroacetic Acid	1.5 (Range 1.0 to 1.9)	1.5 (Range 1.0 to 1.8)	1.8 (Range 1.2 to 2.5)	1.5 (Range 1.1 to 1.9)	0.5
Bromochloroacetic Acid	2.1 (Range 1.8 to 2.4)	1.9 (Range 1.8 to 2.1)	2.3 (Range 1.9 to 2.6)	2 (Range 1.8 to 2.3)	0.3
Dibromoacetic Acid	0.56 (Range .44 to .71)	0.53 (Range 0.41 to 0.64)	0.59 (Range 0.40 to 1.1)	0.54 (Range 0.45 to 0.66)	0.3
Bromodichloroacetic Acid	0.62 (Range ND to 1.2)	0.63 (Range ND to 1.1)	0.61 (Range ND to 1.1)	0.47 (Range ND to 1.1)	0.5
Chlorodibromoacetic Acid	0.23 (Range ND to -0.56)	0.31 (Range ND to 0.53)	0.22 (Range ND to 0.56)	0.21 (Range ND to 0.50)	0.3
Unregulated Contaminants Detected	Average Raw Water Value µ/L			Minimum Reporting Level µg/L	
Bromide	0.03 (Range 0.02-0.04)			0.02	
Total Organic Carbon (TOC)	3409 (Range 3259-3741)			250	

### Surface Water Treatment Rule Monitoring Data:

Lowest Monthly Percentage of Samples Meeting Turbidity Limits = 100

Highest Single Measurement = .289

\*Turbidity is a measure of the cloudiness of the water. The city of Williston monitors it because it is a good indicator of the effectiveness of their filtration system. Turbidity is measured every four hours during treatment plant operations. 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.

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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

**Some people may be more vulnerable to contaminants in drinking water than the general population. Immune 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 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. MCWRD is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. **Use water with 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>.

MCWRD works diligently 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.

