



2017 Annual Drinking Water Quality Report

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

Spanish (Español)

Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúscalo o hable con alguien que lo entienda bien.



A photograph of a sunset over a wide river. The sun is low on the horizon, creating a bright orange and yellow glow that reflects on the water's surface. The sky is a mix of orange, red, and dark blue. In the background, there are dark silhouettes of hills or mountains.

Where does my water come from?

Our water source is the Missouri River. The Williston Regional Water Treatment Plant is located near the Lewis & Clark Bridge south of Williston on US Highway 85.

HOW CAN I GET INVOLVED?

If you own or manage an apartment complex or have renters, we encourage you to share this report with them. If you have any questions about this report or concerning your water treatment plant, **please contact Jeff Bryson, Water Treatment Plant Superintendent, Williston Regional Water Treatment Plant at (701)577-7104.** We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of the regularly scheduled City Commission meetings. **They are held on the 2nd and 4th Tuesday of every month at 6:00 p.m. If you would like extra copies of our report please call City Hall at 577-8100 or Public Works at 577-6368.** If you are or are aware of non-English speaking individuals who need help with the appropriate language translation, please phone City Hall at 577-8100 or Public Works at 577-6368.

DESCRIPTION OF WATER TREATMENT PROCESS

Your water is treated in a “treatment train” (a series of processes applied in a sequence) that includes coagulation, flocculation, sedimentation, filtration, and disinfection. Coagulation removes dirt and other particles suspended in the source water by adding chemicals (coagulants) to form tiny sticky particles called “floc,” which attract the dirt particles. Flocculation (the formation of larger flocs from smaller flocs) is achieved using gentle, constant mixing. The heavy particles settle naturally out of the water in an Actiflo sedimentation basin. The clear water then moves to the softening basin where it is mixed with lime to remove excess hardness. The softened water then moves through the filtration process where the water passes through sand, gravel, charcoal or other filters that remove even smaller particles. A small amount of chlorine and ammonia are combined to form Chloramines which is used to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water before water is stored and distributed to homes and businesses in the community.

Water Quality Data Table

PWSID No. ND5301012

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	.04	2017	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb) (µg/L)	0	15	1.48	2017	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Contaminants	Sample Date	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range		Violation	Typical Source
					Low	High		
Inorganic Contaminants								
Barium (ppm)	2016	2	2	0.0143	NA		No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium (ppb)	2016	100	100	1.17	NA		No	Discharge from steel and pulp mills; Erosion of natural deposits.
Fluoride (ppm)	2016	4	4	0.81	NA		No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate/Nitrite (ppm) [measured as Nitrogen]	2017	10	10	0.15	NA		No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	3/9/2016	50	50	1.44	NA		No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Microbiological Contaminants								
Turbidity (NTU)	2017	NA	TT = 0.3	0.17	NA	NA	No	Soil Runoff
100% of the samples were below the TT value of .3. A value less than 95% constitutes a TT violation. The highest single measurement was .17. Any measurement in excess of 1 is a violation unless otherwise approved by the state.								

Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Chloramine (as Cl ₂) (mg/L)	2017	4	4	2.2	2.01	2.36	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb) (µg/L)	2017	NA	60	11	2.09	10.06	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs) (ppb) (µg/L)	2017	NA	80	20	11.31	25.14	No	By-product of drinking water disinfection

Total Carbon Removal								
Total Organic Carbon (TOC)-Finished	3/31/2017	NA	TT	4	1.9	4.0	No	Naturally present in the environment
Total Organic Carbon (TOC)-Source	3/31/2017	NA	TT	7.9	3.1	7.9	No	Naturally present in the environment
Alkalinity (MG/L)	2/28/2017			178	100.00	178.00		

Radioactive Contaminants								
Radium (combined 226/228) (pCi/L)	2017	0	5	.78	NA	NA	No	Erosion of natural deposits
Gross Alpha, including RA, Excluding RN & U		15 pCi/l	15 pCi/l	3.9 pCi/l			No	Erosion of natural deposits

Synthetic Organic Contaminants including pesticides and herbicides								
Pentachlorophenol (ppb)	2017	0	1	.03	NA	NA	No	Discharge from wood preserving factories

TERMS AND DEFINITIONS

ug/L: Number of micrograms of substance in one liter of water

ppm: parts per million, or milligrams per liter (mg/L)

ppb: parts per billion, or micrograms per liter (µg/L)

mg/L: Number of milligrams of substance in one liter of water

pCi/L: picocuries per liter (a measure of radioactivity)

NTU: Nephelometric Turbidity Units. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

NA: Not applicable

ND: Not detected

NR: Monitoring not required, but recommended.

MCLG: Maximum Contaminant Level Goal: 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.

MCL: Maximum Contaminant Level: 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.

TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

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

Variances and Exemptions: State or EPA permission not to meet a MCL or a treatment technique under certain conditions.

MRDLG: Maximum residual disinfection 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.

NR: Monitored Not Regulated

MPL: State Assigned Maximum Permissible Level

Do I need to take special precautions?

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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the **Safe Water Drinking Hotline (800-426-4791)**.

Source water assessment and its availability

Recent amendments to the Safe Drinking Water Act require the North Dakota Department of Health to complete a source water Assessment (SWA) for the City of Williston. 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 those elements, the North Dakota Department of Health has determined that our source water is moderately susceptible to potential contaminants. **Information about the SWA can be obtained by calling the Williston Water Treatment Plant at 701-577-7104.**

Why are there contaminants in my 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791). The sources of drinking water (both tap water 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 byproducts 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 regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Additional Information for 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. Williston Regional Water Treatment Plant is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. Use water from 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>.

Source Water Monitoring			
Microbial Contaminant	Total	Average	Range
Cryptosporidium, oocysts/L	.6	0.025	0-.2
Giardia, cysts	59	2.46	0-19
Ecoli, per 100ml	916.4	38.18	0->200.5
Turbidity, ntu	n/a	140	7.2 - 696.4

Results of Cryptosporidium Monitoring

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water. The City of Williston's finished drinking water has shown no signs of these microbial contaminants and is safe to drink.



For more information please contact: Jeffrey Bryson
4806 Highway 85, Williston, ND 58801 • 701-577-7104

SOURCE WATER PROTECTION TIPS

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

STORM WATER POLLUTION NOTICE

Williston's stormwater runoff drains directly to our local rivers without treatment. Many contaminants can be collected by stormwater before it enters a drain. Do your part to keep our community's environment healthy by keeping pollutants such as motor oils, paints, pesticides and fertilizers from entering our storm sewers.

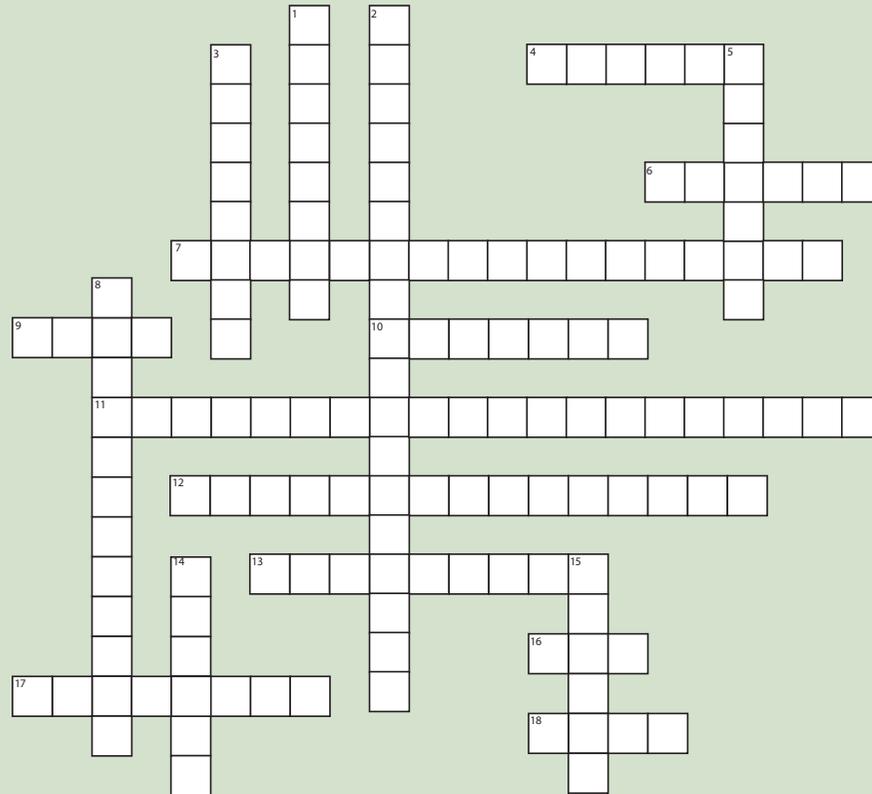


Cross Connection CONTROL SURVEY

The purpose of this survey is to determine whether a cross-connection may exist at your home or business. A cross connection is an unprotected or improper connection to a public water distribution system that may cause contamination or pollution to enter the system. We are responsible for enforcing cross-connection control regulations and insuring that no contaminants can, under any flow conditions, enter the distribution system. If you have any of the devices listed below please contact us so that we can discuss the issue, and if needed, survey your connection and assist you in isolating it if that is necessary.

- **Boiler/ Radiant heater** (water heaters not included)
- **Underground lawn sprinkler system**
- **Decorative pond**
- **Pool or hot tub** (whirlpool tubs not included)
- **Watering trough**
- **Additional source(s) of water on the property**

WILLISTON'S WATER CROSSWORD



Across

4. What's the Water Treatment Plant Superintendent's last name?
6. Discharge of drilling wastes?
7. What Act requires a Source Water Assessment?
9. Sticky particles are called what?
10. Heavy particles settle out in this basin?
11. Byproduct of disinfection?
12. An unprotected or improper connection?
13. This type of contamination comes from stormwater runoff?
16. State Assigned Maximum Permissible Limit?
17. What is one kind of contaminant found in water?
18. Elevated levels of this can cause health problems?

Down

1. Cryptosporidium is a microbial?
2. Naturally present in the environment?
3. Extra copies of this report can be found at?
5. Runoff from fertilizer use?
8. This also contains contaminants?
14. Contaminant caused by corrosion of natural deposits?
15. Corrosion from household plumbing causes this type of contaminant?

Down: 1. pathogen, 2. totalorganiccarbon, 3. cityhall, 5. nitrate, 8. bottledwater, 14. radium, 15. copper
Across: 4. Bryson, 6. barium, 7. safe(r)drinkingwater, 9. flocc, 10. actflo, 11. totaltrihalomethanes, 12. crossconnection, 13. inorganic, 16. mpl, 17. chemical, 18. lead