2014 Annual Drinking Water Quality Report

Spanish (Espanol)

Este informe contiene informacion muy importante sobre la calidad de su agua potable. Por favor lea este informe o comuniquese con alguien que pueda traducir la informacion.

Is my water safe?

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.

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).**

Where does my water come from?

Our water source is the Missouri River. The water plant is located near Lewis & Clark Bridge southwest of Williston on US 85.

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, softening, 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, and charcoal to 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. Finally your water is passed through UV (ultra-violet) light to inactivate Cryptosporidium.

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 577-7104.**

Why are there contaminents 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: microbial contaminants, such as viruses and bacteria, that 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; and 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 that 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.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

Storm Water Pollution and Prevention

All storm water that runs down the gutter or enters the City's drainage system eventually reaches the waters of the Missouri River and Lake Sakakawea. Anything that we put into the drainage system can adversely affect the quality of these receiving waters and limit our ability to use and enjoy them. The City of Williston is permitted by the North Dakota Department of Health/EPA for storm water discharges.
You as a citizen can help prevent storm water pollution by:

- Recycle used motor oil. The City maintains a waste oil disposal site near the northwest corner of the Public Works Shop at 809 5th Street East.
- Check your vehicle for leaks.
- Never dump any dirt or chemicals into a street, gutter, drainage ditch, or storm drain.
- Use pesticides and fertilizers sparingly and according to manufacturer's recommendations.
- Vegetate bare spots in your yard and hard surface your driveway and parking areas to prevent erosion into the drainage system.
- Pick up trash and litter.

You may report instance of potential storm water pollution to the **Williston Public Works by calling 701-577-6368.**

Monitoring and reporting of compliance data violations

City of Williston is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During November 2014 we did not complete all our microbiological monitoring or testing and therefore cannot be sure of the quality of our drinking water during that time.

A minimum of twenty (20) acceptable samples were to be submitted to a certified laboratory for microbiological analysis. Records show 19 acceptable samples were submitted for November 2014.

City of Williston regrets that this error in meeting monitoring requirements occurred. It is recognized that a complete monitoring program is of great value in making certain that safe drinking water is provided to all consumers. Steps have been taken to ensure that adequate monitoring will be performed in the future.

Please share this information with all the other people who drink this water, especially those who may not receive this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting in a public place or distributing copies by hand or mail**. For further information, please contact: City of Williston at 701-577-7104.**

Monitoring and reporting of compliance data violations

The City of Williston Did Not Meet Monitoring /Reporting Requirements for
Chlorine/Chloramine Residuals 10/1/2014 to 12/31/2014

The Environmental Protection agency and the North Dakota Department of Health require that a specific number of chlorine/chloramine residual samples be taken and reported per quarter. Records show that the City of Williston did not collect/report the required chlorine/chloramine residual samples that were to be taken at the same time and location as total coliform samples for October, November, and December 2014; and therefore cannot be sure of the quality of our drinking water at that time. Please share this information with all the other people who drink this water, especially those who may not receive this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail. As our customer, you have the right to know what happened and what we are doing to correct this situation.

The City of Williston regrets that this error on meeting monitoring/reporting requirements of the Stage 2 Disinfectants/Disinfection Byproducts Rule occurred. It is recognized that a complete monitoring program is of great value in making certain that safe drinking water is provided to all customers. Steps have been taken to ensure that adequate monitoring/reporting will be performed in the future. During the Month of November, one of the twenty required total coliform samples was missed. Upon collection of these samples a Total Chlorine Residual is taken, having missed the sample, we also missed the required residual. On the day that that sample was missed 5 other samples/residuals had been collected and tested, all were good. We have now developed a system of checks and balances to make sure this error does not occur in the future.

For further information, please contact: The City of Williston at 701-577-7104.

Special monitoring requirements violations

Violation: Failure to Maintain Microbial Treatment (LT2 Surface Water Treatment Rule): June 2014. The City of Williston's water system is required to maintain a specified level of treatment through filtration and disinfection to address Cryptosporidium. During the time period June 13 to June 21, 2014 the drinking water produced by our system did not fully meet these requirements. Bacteria, viruses, parasites, and Cryptosporidium are disease-causing microorganisms tha may be found in our raw (untreated) water source. These organisms can cause symptoms such as nausea, cramps, diarrhea and associated headaches. These symptoms; however, are not cause only by organisms in drinking water but also by other factors. The system was returned to full capacity the morning of June 21. Additional steps have been taken to assure that alarms are initiated when an off spec event occurs. Previous Public Notification of this violation was performed as required.

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. City of Williston is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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.

Water Quality Data Table

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 or MRDLG	MCL, TT, or MRDL	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Disinfectants & Disinfectant By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Chloramine (as Cl2) (mg/L)	4	4	1.9	1.64	2.2	2014	No	Water additive used to control microbes
Total Organic Carbon – Finished	NA	TT	3.8	2.1	3.8	3/31/ 2014	No	Naturally present in the environment
Total Organic Carbon -Source			6	3.6	6			
Alkalinity- Source (MG/L)			192	110	192	12/31/ 2014		
TTHMs [Total Trihalomethanes] (ppb)	NA	80	23	9.59	33.71	2014	No	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	NA	60	9	ND	13.8	2014	No	By-product of drinking water chlorination
Inorganic Contaminants								
Barium (ppm)	2	2	0.0177	NA		2010	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	.80	.67-.93		2014	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizerand aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	0.3	NA		2014	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite [measured as Nitrogen] (ppm)	1	1	0.3	NA		2014	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Microbiological Contaminants								
Turbidity (NTU)	NA	0.3	.27	100	NA	2014	No	Soil runoff
100% of the samples were below the TT value of 0.3. A value less than 95% constitutes a TT violation. The highest single measurement was 0.27. Any measurement in excess of 1 is a violation unless otherwise approved by the state.								

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	0.0221	2014	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	15	0	2014	0	No	Corrosion of household plumbing systems; Erosion of natural

Additional Monitoring

The City of Williston was selected by EPA to sample for 21 Unregulated Contaminants during 2014. Samples were taken 3 times between 5/20/14 and 11/17/14 from the Williston Water Treatment Plant Point of Entry to the distribution system and the Maximum Residence time sampling point. 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. Should you have any questions please contact our office. The following unregulated contaminants were the only contaminants detected during the sampling.

Name	Minimum Reporting Level (ug/L)	Range		Average Value at Sampling Site
		Low	High	
chromium (total chromium) (ppb) - Point of Entry - Maximum Residence Time	0.2	0.22 .34	0.53 .56	.4 .46
molybdenum (ppb) - Point of Entry - Maximum Residence Time	1	2.1 2.3	3 2.6	2.56 2.43
strontium (ppb) - Point of Entry - Maximum Residence Time	.3	340 280	560 380	440 360
vanadium (ppb) - Point of Entry - Maximum Residence Time	.2	0.4 .64	0.88 .99	.61 .67
chromium-6 (hexavalent chromium) (ppb) - Point of Entry - Maximum Residence Time	.03	0.23 .38	0.5 .39	.39 .38

Unit Descriptions	
Term	**Definition**
mg/L	mg/L: Number of milligrams of substance in one liter of water
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
NTU	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	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	**Definition**
MCLG	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	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	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	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	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	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	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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

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