

## *Annual Drinking Water Quality Report Traill Rural Water District 2017*

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 ground water from the Galesburg Aquifer. Our eight wells are located between the cities of Clifford and Portland. The well water is treated at our iron and manganese removal treatment plant.

Traill Rural Water District is participating in the North Dakota Wellhead Protection Program. Relevant information on the Wellhead Protection plan is available during normal business hours at our Clifford office. The North Dakota Department of Health has prepared a Source Water Assessment for Traill Rural Water District. Information on this program is available to the public during normal business hours at our Clifford office. 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 susceptible to potential contaminants. No significant sources of contamination have been identified.

Traill Rural Water District is pleased to report that our drinking water is safe and meets federal and state requirements.

This report shows our water quality and what it means.

If you have questions regarding this report, please contact Traill Rural Water District Interim Manager Neil Breidenbach at 26 Plummer Street South, PO Box 25, Clifford, ND58016, or 1-701-488-2536. Questions can also be answered at our regularly scheduled monthly council meeting held the second Thursday of each month at 7:30 A.M. at the utility office in Clifford. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Neil Breidenbach at the number listed above.

Traill Rural Water District would appreciate it if large volume water customers would please post copies of the 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.

Traill Rural Water District routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2017. 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 radioactive 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, 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 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 that must provide the same protection for public health.

<b>TEST RESULTS FOR TRAIL RURAL WATER DISTRICT</b>								
<u>Contaminant</u>	<u>MCLG</u>	<u>MCL</u>	<u>Level Detected</u>	<u>Unit Measurement</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>								
1. Copper	1.3	AL=1.3	1.01	ppm	N/A	2015	*2 sites exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits
2. Lead	0	AL=15	3	ppb	N/A	2015	*1 site exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits
<b>Disinfectants</b>								
3. Chlorine	MRDL = 4	MRDL=4.0	0.8	ppm	0.6066 to 0.85	2017		Water additive used to control microbes
<b>Stage 2 Disinfection Byproducts</b>								
4. Total Haloacetic Acids (HAA5)	System-Wide	60	No Detect	ppb	N/A	2017	No	By-product of drinking water disinfection.

5.Total Trihalomethanes (TTHM)	System-Wide	80	1	ppb	N/A	2017	No	By-product of drinking water chlorination.
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\* 1 sites exceeded the lead action levels in 2016 & 2 sites exceeded the copper action levels in 2016. 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.

TEST RESULTS FOR THE CITY OF MAYVILLE								
Contaminant	MCL G	MCL	Level Detected	Unit Measurement	Range	Date (year)	Violation Yes/No Other Info	Likely Source of Contamination
<b>Lead/ Copper</b>								
1. Copper	1.3	AL=1.3	1.26 90 <sup>th</sup> % Value	ppm	N/A	2016	*No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
2. Lead	0	AL=15	12.9 90 <sup>th</sup> % Value	ppb	N/A	2016	*No	Corrosion of household plumbing systems, erosion of natural deposits
<b>Disinfectants</b>								
3. Chlorine	MRDL G=4	MRDL =4.0	0.8	ppm	0.535 to 0.84	2017	No	Water additive used to control microbes

### Stage 2 Disinfection Byproducts

4. Total Haloacetic Acids (HAA5)	System-Wide	60	1	ppb	N/A	2017	No	By-product of drinking water disinfection.
5.Total Trihalomethanes (TTHM)	System-Wide	80	4	ppb	N/A	2017	No	By-product of drinking water chlorination.
<b>Inorganic Contaminants</b>								
6. Nitrate-Nitrite	10	10	0.36	ppm	N/A	2017	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
7. Barium	2	2	0.00986	ppm	N/A	2017	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
8. Fluoride	4	4	0.699	ppm	N/A	2017	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

9. Arsenic	0	10	3.31	ppb	N/A	2015	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
<b>Unregulated Contaminants</b>								
10. Alkalinity, Total			80.7	ppm	N/A	2017		
11. Bicarbonate As HCO3			98	ppm	N/A	2017		
12. Calcium			27.1	ppm	N/A	2017		
13. Conductivity @ 25CUMHOS/CM			265	Umho/cm	N/A	2017		
14. Chloride			3.24	ppm	N/A	2017		
15. Hardness, Total (AS CAC03)			105	ppm	N/A	2017		
16. Magnesium			9.1	ppm	N/A	2017		
17. Nickel			0.00131	ppm	N/A	2017		
18. PH			7.2	ppm	N/A	2017		
19. Potassium			2.1	ppm	N/A	2017		
20. Sodium			7.2	ppm	N/A	2017		
21. Sodium Adsorption Ratio			0.31	obsvns	N/A	2017		
22. Sulfate			46.9	ppm	41.5 – 46.9	2017		
23. TDS			141	ppm	N/A	2017		
24. Zinc			0.0104	ppm	N/A	2017		

\* 1 site exceeded the lead action levels in 2016  
1 site exceeded the cooper action levels in 2016

<b>TEST RESULTS FOR THE CITY OF HILLSBORO</b>								
<b>Contaminant</b>	<b>MCL G</b>	<b>MCL</b>	<b>Level Detected</b>	<b>Unit Measurement</b>	<b>Range</b>	<b>Date (year)</b>	<b>Violation Yes/No Other Info</b>	<b>Likely Source of Contamination</b>
<b>Lead/ Copper</b>								
1. Copper	1.3	AL=1.3	0.499 90 <sup>th</sup> % Value	ppm	N/A	2016	*No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
2. Lead	0	AL=15	No Detect 90 <sup>th</sup> % Value	ppb	N/A	2016	*No	Corrosion of household plumbing systems, erosion of natural deposits
<b>Disinfectants</b>								

3. Chlorine	MRDL G=4	MRDL =4.0	0.7	ppm	0.49 to 0.83	2017	No	Water additive used to control microbes
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## Stage 2 Disinfection Byproducts

4. Total Haloacetic Acids (HAA5)	System-Wide	60	1	ppb	N/A	2017	No	By-product of drinking water disinfection.
5. Total Trihalomethanes (TTHM)	System-Wide	80	3	ppb	N/A	2017	No	By-product of drinking water chlorination.

## Inorganic Contaminants

6. Nitrate-Nitrite	10	10	0.26	ppm	N/A	2017	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
7. Arsenic	0	10	2.01	ppb	N/A	2016		Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
8. Barium	2	2	0.0039	ppm	N/A	2017	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
9. Fluoride	4	4	0.753	ppm	N/A	2017	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

## Unregulated Contaminants

10. Alkalinity, Total			58.5	ppm	N/A	2017		
11. Bicarbonate As HCO <sub>3</sub>			71	ppm	N/A	2017		
12. Calcium			16.4	ppm	N/A	2017		
13. Conductivity @ 25CUMHOS/CM			182	Umho/cm	N/A	2017		
14. Chloride			2.55	ppm	N/A	2017		
15. Hardness, Total (AS CAC03)			61	ppm	N/A	2017		
16. Magnesium			4.8	ppm	N/A	2017		
17. PH			7.04	ppm	N/A	2017		
18. Potassium			1.4	ppm	N/A	2017		
19. Sodium			9.6	ppm	N/A	2017		
20. Sodium Adsorption Ratio			0.54	obsvns	N/A	2017		
21. Sulfate			24.5	ppm	23.2 – 24.5	2017		
22. TDS			96	ppm	N/A	2017		

23. Zinc			0.00808	ppm	N/A	2017		
<b>Radioactive Contaminants</b>								
7. Gross Alpha, incldng RA, Exclndg RN & U	15	15	1.09	PCi/l	N/A	2017	No	Erosion of natural deposits
8. Radium, Combined (226, 228)	5		1.95	PCi/l	N/A	2017	No	Erosion of natural deposits
9. Uranium, Combined	30		0.85	ppb	N/A	2017	No	Erosion of natural deposits

\* No sites exceeded the lead or copper levels action levels in 2016.

**In the table on page 2, 3, & 4 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- (N/A)*

*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.

EPA requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table on pages 2 and 3, are the only contaminants detected in your drinking water.

We’re proud that your drinking water meets or exceeds all Federal and State requirements. We

have learned through our monitoring and testing that some contaminants have been detected. The EPA has determined that your water IS SAFE at these levels.

Unregulated contaminants are those for which the 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.

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).**

If present, elevated levels of lead can cause serious health problems, especially for pregnant woman and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Traill Rural Water District 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>.

Please call our office at (701) 488-2536 if you have questions concerning your drinking water.

Traill Rural Water District 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.

This report is also available on our web page at [www.traillruralwater.com](http://www.traillruralwater.com).