

2019 Drinking Water Consumer Confidence Report

Upper Souris Water District

System I and NAWS (City of Minot)

Spanish (Español)

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

Greetings from Upper Souris Water District!

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.

Is My Water Safe? 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?

Upper Souris Water District has two distribution systems with separate sources of water.

System I: Water supplying the northern half of System I is ground water, sourced from the Columbia aquifer and treated at our own the plant. The southern half of System I, roughly from Tolley, south through Donnybrook, east to Greene, to north and east of Carpio, is served with water produced by the City of Minot, sourced from ground water, purchased wholesale from the ND State Water Commission, and delivered via the NAWS (Northwest Area Water Supply) transmission line. This report covers both sources of water.

System II: Water supplying System II is entirely sourced from ground water by the City of Minot, via the NAWS transmission line. The System II CCR report follows this System I CCR.

Please call the District office if you have questions about the source of water at your location. Service maps are available on site for your perusal.

Source water assessment

Upper Souris Water District complies with the Environmental Protection Agency and the Safe Drinking Water Act to ensure access to the best quality, most affordable water possible. Upper Souris also participates in the North Dakota Wellhead Protection Program. In cooperation with the North Dakota Department of Environmental Quality, Upper Souris 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 Environmental Quality has determined that our source water is "Not Likely Susceptible" to potential contaminants. The detailed report is available for review at the District office in Kenmare.

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: 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.

How can I get involved?

Everyone can get involved in water conservation and protection! Water is arguably the most precious resource on earth. It must be conserved and protected. Examine your water use practices: Can water within your home or business be conserved? Are your habits a potential contributor to water pollution? The Web is a great place to learn more about conservation and protection. For ideas on conservation: www.uppersouriswater.com/conservation-tips. On protecting water resources: www.deq.nd.gov/wQ/1_Groundwater/. Educate yourself, then share your knowledge with friends and neighbors to help conserve and protect this precious resource!

Description of Water Treatment Process

Your water is treated by filtration and disinfection. Filtration removes particles suspended in the source water. Particles typically include clays and silts, natural organic matter, iron and manganese, and microorganisms. Your water is also treated by disinfection. Disinfection involves the addition of chlorine or other disinfectants to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century.

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.

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
- Pool or hot tub (whirlpool tubs not included)
- Additional source(s) of water on the property (wells not isolated can back feed)
- Decorative pond
- Watering trough
- Agriculture spray tanks directly connected with a hose have high siphoning potential

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.

Results of voluntary monitoring

Customers have been inquiring about the hardness of the water in System I. Tests have shown Total Hardness as Calcium Carbonate, or CaCO₃, to be 72.8 mg/l, or 4.26 grains/gallon.

Hardness is caused by compounds of calcium and magnesium, and by a variety of other metals.

General guidelines for classification of waters, as reported by the U.S. Geological Survey (<https://www.usgs.gov/>) are:

0 to 60 mg/L is classified as soft;
61 to 120 mg/L is moderately hard;
121 to 180 mg/L is hard;
more than 180 mg/L is very hard.

In terms of grains per gallon:
0-3 gpg is considered soft;
3-7 gpg is moderately hard;
7-11 is hard and packed with minerals;
11-15 is very hard;
15+ is extremely hard.

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. Upper Souris Water District - System 1 & The City of Minot 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>.

Additional Information for Arsenic

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

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	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
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)	4	4	3	2.3	3.65	2019	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	18	NA	NA	2019	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	16	NA	NA	2019	No	By-product of drinking water disinfection
Inorganic Contaminants								
Arsenic (ppb)	0	10	1.04	NA	NA	2016	No	Erosion of natural deposits; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	.427	NA	NA	2016	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	1.4	NA	NA	2016	No	Erosion of natural deposits; Water additive which promotes strong teeth - however, USWD does not add fluoride; Discharge from fertilizer and aluminum factories

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	.0902	2018	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	
Inorganic Contaminants								
Lead - action level at consumer taps (ppb)	0	15	0	2018	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	
Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Nitrate [measured as Nitrogen] (ppm)	10	10	.03	NA	NA	2019	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite [measured as Nitrogen] (ppm)	1	1	.03	NA	NA	2019	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	50	50	5.44	NA	NA	2016	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines

Additional Information

In an effort to ensure the safest water possible we occasionally monitor some contaminants not required by Federal regulations, as well as provide other water quality measurements, such as hardness and pH. Any unregulated contaminants found in your water are listed below, along with other information you may find useful.

Contaminants	State MCL	Your Water	Violation	Explanation and Comment
Alkalinity, Total		957 ppm	No	A measure of the buffering capacity of water; commonly occurring materials in natural waters that increase alkalinity are carbonates, bicarbonates, phosphates and hydroxides
Bicarbonate as HCO ₃		1170 ppm	No	Bicarbonate (hydrogen carbonate, HCO ₃) is not a mineral, but a component of the salts of carbonic acid. HCO ₃ plays a vital role in buffering acids. In combination with calcium and magnesium, forms carbonate hardness.
Calcium		15.9 ppm	No	

Contaminants	State MCL	Your Water	Violation	Explanation and Comment
Conductivity @ 25 degree Celsius UMHOS/CM		2260 umho/cm	No	The ability of water to pass an electrical current. Because dissolved salts and other inorganic chemicals conduct electrical current, conductivity increases as salinity increases. www.epa.gov/national-aquatic-resource-surveys/indicators-conductivity
Orthophosphate		.924 ppm	No	A common corrosion inhibitor used to prevent lead and copper from leaching
Total Dissolved Solids		1400 ppm	No	The total of all dissolved minerals; Inorganic salts (principally calcium, magnesium, potassium, sodium, bicarbonates, chlorides, and sulfates). Some dissolved mineral is desirable or the water would have no taste.
pH		8.19 pH	No	A pH of 7 is neutral; less than 7 is acidic; greater than 7 is basic / alkaline

Additional Monitoring

As part of an on-going evaluation program the EPA has required us to monitor some additional contaminants/chemicals. Information collected through the monitoring of these contaminants/chemicals will help to ensure that future decisions on drinking water standards are based on sound science.

Name	Reported Level	Range	
		Low	High
manganese (ug/L)	.024		

2019 Drinking Water Consumer Confidence Report

NAWS (City of Minot)

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
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)	4	4	3.1	2.81	3.42	2019	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	11.97	6.9	11.97	2019	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	44	31.96	38.8	2019	No	By-product of drinking water disinfection
Inorganic Contaminants								
Arsenic (ppb)	0	10	1.74	NA	NA	2016	No	Erosion of natural deposits; Runoff from glass and electronics production wastes
Barium (ppm)	2	2	.00433	NA	NA	2016	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	100	100	1.37	NA	NA	2016	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4	4	.72	NA	NA	2016	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	.11	NA	NA	2019	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite [measured as Nitrogen] (ppm)	1	1	.11	NA	NA	2019	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	50	50	1.65	NA	NA	2016	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines

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	.039	2018	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Inorganic Contaminants							
Lead - action level at consumer taps (ppb)	0	15	4.56	2018	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Unit Descriptions	
Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
mg/L	mg/L: Number of milligrams of substance in one liter of water
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

Excellent resources

For more information on interpreting these test results and getting the most out of the data, please check out the North Dakota Department of Environmental Quality web link: www.deq.nd.gov/chemistry/reports.aspx. Another excellent source of water quality information is this publication from the ND DEQ Chemistry Division: www.deq.nd.gov/publications/LS/chemistry/Mineral%20Flyer.pdf.

For more information please contact:

Upper Souris Water District
Mr. Joddy Meidinger, Manager
43601 506TH ST NW
POB 397
Kenmare, ND 58746

Office: 701-385-4093 / Fax: 701-385-4054 / Email: ruralwater@uppersouriswater.com

Upper Souris Water District Board of Directors typically meet the third Wednesday of every month at the main office in Kenmare. The public is welcome to attend. If you wish to be on the agenda, please contact the manager in writing 10 days prior to the scheduled meeting.

BULK USERS: Please display this report in a conspicuous area for residents to view. Consider mailing a hardcopy, or directing residents to the electronic version at www.uppersouriswater.com/water-quality-report.

We have made a good faith effort at notifying all our users about the availability of this report. If you should find that someone is still in need of access, either electronically, or hardcopy, please contact the main office for assistance.

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Inorganic Contaminants								
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				Low	High			
								strong teeth; Discharge from fertilizer and aluminum factories
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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

Excellent resources

For more information on interpreting these test results and getting the most out of the data, please check out the North Dakota Department of Environmental Quality web link: www.deq.nd.gov/chemistry/reports.aspx. Another excellent source of water quality information is this publication from the ND DEQ Chemistry Division: www.deq.nd.gov/publications/LS/chemistry/Mineral%20Flyer.pdf.

For more information please contact:

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Upper Souris Water District Board of Directors typically meet the third Wednesday of every month at the main office in Kenmare. The public is welcome to attend. If you wish to be on the agenda, please contact the manager in writing 10 days prior to the scheduled meeting.

BULK USERS: Please display this report in a conspicuous area for residents to view. Consider mailing a hardcopy, or directing residents to the electronic version at www.uppersouriswater.com/water-quality-report.

We have made a good faith effort at notifying all our users about the availability of this report. If you should find that someone is still in need of access, either electronically, or hardcopy, please contact the main office for assistance.