CITY OF MINOT

2015 Water Quality Report

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CITY OF MINOT
515 2nd Avenue SW
Minot, ND 58701

Terms For This Report

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

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health.

mg/L (milligram per liter): Or part per million; the parts of contaminant per million parts of water. Roughly equivalent to one drop per 10 gallons of water.

MRDLG (Maximum Residual Disinfectant 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.

ND (Not Detected): Or below the detectable level of the test procedure.

NTU (Nephelometric Turbidity Units): A measure of how clean the water is, caused by suspended matter in the water.

pCi/l (picocuries per liter): A measure of radioactivity.

ppm (parts per million): Or milligrams per liter, roughly equal to one drop per 10 gallons of water or one minute in two years.

ppb (parts per billion): Or micrograms per liter, roughly equal to one drop in 10 thousand gallons of water or one minute in two thousand years.

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

Table of Detected Regulated Contaminants

CONTAMINANT	MCLG	MCL	LEVEL OR RANGE	DATE TESTED	SOURCE OF CONTAMINANT
INORGANIC CONTAMINANTS					
Arsenic (ppb)	0	10	3.41	5/10	Erosion of natural products; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.00795	6/10	Erosion of natural deposits
Chromium (ppb)	100	100	2.1	6/10	Erosion of natural deposits
Fluoride (ppm)	4	4	0.80 0.54 to 0.96	Monthly	Erosion of natural deposits and added as a nutritional supplement
Nitrate + Nitrite (ppm)	10	10	0.14	2/15	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	50	50	4.54	6/10	Erosion of natural deposits
RADIOACTIVE CONTAMINANTS					
Gross Alpha (pCi/l) Inc RA Exc RN&U	15	15	1.52	11/09	Erosion of natural deposits
Radium, combined (226,228) (pCi/l)	0	5	0.00919	11/09	Erosion of natural deposits
Uranium, Combined (ppb)	0	30	0.722	11/09	Erosion of natural deposits
DISINFECTION BYPRODUCTS					
Total Haloacetic Acids (ppb)	-	60	10 3.97 to 11.53	3/15 Quarterly	Byproduct of drinking water chlorination
Total Trihalo-methanes (ppb)	-	80	42 29.08 to 50.31	9/15 Quarterly	Byproduct of drinking water chlorination
DISINFECTANTS					
Chloramine (ppm)	MRDLG 4	MRDL 4.0	2.2 1.95 to 2.4	7/15 Monthly	Water additive used to control microbes
OTHER CONTAMINANTS					
Copper (ppm)	1.3	AL = 1.3	0.038	7/15	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	0	AL = 15	7**	7/15	Corrosion of household plumbing systems

**2 sites exceeded AL.

An open letter to our water customers...

Where Does Our Water Come From?

The City of Minot is considered a ground water system, consisting of two sources: the Sundre Aquifer and the Minot Aquifer. We used about 65% Sundre water and about 35% Minot well water in the year 2015.

The Safe Drinking Water Act

The Safe Drinking Water Act was first passed in 1977. It was amended in 1986 and again in 1996. As part of the 1996 amendments all customers must receive a report on the quality of their drinking water.

This report covers the calendar year 2015. We will share with you the results of the latest tests performed on our water and discuss pertinent subjects such as water sources, water quality, and a description of terms used. There will also be a list of names and telephone numbers you can call for more information.

If you own or manage an apartment complex or have renters, we encourage you to share this report with them. If you have questions regarding this report please call the Water Treatment Plant at 857-4760 or the Public Works Department at 857-4140.

You may also attend the Minot City Council Public Works Committee meetings if you have concerns about water quality. Meeting times and dates can be obtained by contacting the City Clerk's office at 857-4752.

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 transplant, 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 bacteriological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

All regulated substances which have been detected in our water are listed in the table on the back side of this brochure. All are well within the established limit. In addition, we test for radionucleides, turbidity (clarity), total coliform, and disinfection by-products.

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.

In 2015, we were required to test for lead and copper.

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 Minot 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 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.

Wellhead Protection

The City of Minot is participating in North Dakota's Wellhead Protection Program. The City of Minot has completed the delineation and contaminant/land use inventory elements. Based on information from these elements, our source water has been determined to be moderately susceptible to potential contaminants. Copies of the Wellhead Protection Program plan and other relevant information regarding this program can be obtained from Engineers Office or Public Works during normal office hours.

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 chemicals, 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, EPA prescribes regulations which 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.

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 **Safe Drinking Water Hotline (800-426-4791).**

UCMR3 Results

The City of Minot was selected by EPA to sample for 21 unregulated contaminates during 2014/2015. Samples were taken four times from both the Entry point to the distribution (Water Treatment Plant) 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 this sampling. Results are from Entry Point to the Distribution and Maximum Residence Time in the Distribution.

		Entry Point to Distribution		*Maximum Residence Time in Distribution*	
Unregulated Contaminant	Minimum Reporting Level (ug/L)	Average Value (ug/L)	Range of Detection (ug/L)	Average Value (ug/L)	Range of Detection (ug/L)
Chromium	0.20	1.48	1.40 to 1.70	1.48	1.20 to 1.80
Molybdenum	1.00	6.60	6.10 to 7.00	6.80	6.20 to 8.10
Strontium	0.30	154.43	105.40 to 188.70	144.75	111.00 to 168.30
Vanadium	0.20	3.33	2.60 to 4.00	3.58	2.80 to 4.10
Chromium (VI)	0.03	1.38	1.27 to 1.56	1.41	1.28 to 1.57

The Safe Drinking Water Act and the Environmental Protection Agency deal only with the health aspects of water. There are a number of components common in all water in which most people are interested. Among these are the minerals, most of which are beneficial, and there are also some aesthetic qualities. Because we have 14 different water sources, these components can vary, but an average of them is listed to the right.

If you wish more information you can call the Minot Water Treatment Plant at **857-4760.**

Hardness ..... 150 mg/l
8.8 grains per gallon
Total dissolved solids ..... 733 mg/l
Conductivity ..... 1220 umhos/cm
Sodium ..... 223 mg/l
Fluoride ..... 0.83 mg/l
pH 9.2
Calcium ..... 53 mg/l

If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Debbie Chappo at (701) 852-0333.