

# Quality Water Report Beulah, North Dakota 2017

We are very pleased to provide you with this year's *Quality Water Report*. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is to provide you with a safe and dependable supply of drinking water. Our water source is ground water. Our ground water is obtained from the Knife River Aquifer. We use a lime softening treatment plant that can treat 1575 gallons per minute.

The City of Beulah is participating in North Dakota's Wellhead Protection Program. The North Dakota Department of Health has prepared a Source Water Assessment for Beulah. Information on these programs is available to the public upon request.

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 "moderately susceptible" to potential contaminants. No significant sources of contamination have been identified.

"I am pleased to report that our drinking water is safe and meets Federal and State requirements," says Water Commissioner Brant Keller. If you have any questions about this report or concerning your water utility, please contact the Water Department at (701-873-4608), or Heather Ferebee, City Auditor (701-873-4637). We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on first and third Mondays of each month at 7:00 PM, Beulah City Hall. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Heather at the number listed above.

The City of Beulah would appreciate it if large volume water customers would please post copies of this *Quality Water 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.

The City of Beulah routinely monitors for contaminants in your drinking water according to Federal and State laws. The following 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 the 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.

The sources of drinking water (both tap water and bottle 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:

**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 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.

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we have provided the following definitions:

*Not Applicable (NA)*

*None Detected (ND)*

*Obsvns* - Observations/field at 100 Power

*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 ( $\mu\text{g/l}$ )* - 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.

*Micromhos per centimeter (umho/cm)* - micromhos per centimeter is a measure of conductivity.

*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 (MCL)* - 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 (MCLG)* - 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.

*Highest Compliance Level* - The highest level of that contaminant used to determine compliance with a National Primacy Drinking Water Regulation.

*Range of Detections* – The lowest to the highest result value recorded during the required monitoring timeframe for systems with multiple entry points.

<b>2017 TEST RESULTS FOR THE CITY OF BEULAH</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>								
Copper	1.3	AL=1.3	0.0324 90 <sup>th</sup> % Value	ppm	NA	2017	0 Sites Exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits
Lead	0	AL=15	1.34 90 <sup>th</sup> % Value	ppb	NA	2017	0 Sites Exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits
<b>Inorganic Contaminants</b>								
Arsenic	0	10	5.11	ppb	NA	2016	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2	2	.00525	ppm	NA	2016	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	.82	ppm	NA	2016	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate-Nitrite	10	10	.04	ppm	NA	2017	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Synthetic Organic Contaminants including Pesticides and Herbicides</b>								
Pentachlorophenol	0	1	.03	ppb	NA	2017	No	Discharge from wood preserving factories
<b>Disinfectants</b>								
Chlorine	MRDLG =4	MRDL =4.0	2	ppm	0 to 2.53	2017	No	Water additive used to control microbes
<b>Stage 2 Disinfection Byproducts</b>								
Total Trihalomethanes (TTHMs)	NA	80	14	ppb	NA	2017	No	By-product of drinking water disinfection
HAA5 (Haloacetic Acid)	NA	60	8	ppb	NA	2017	No	By-product of drinking water disinfection

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 effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

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

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. The City of Beulah 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>.

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.

Thank you for allowing us to provide your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements sometimes require rate structure adjustments.

The City of Beulah works diligently to provide top quality water to every tap. We ask that all our customers help us protect our water resources, which are the heart of our community, our way of life, and our children's future.