

# Annual Drinking Water Quality Report

## Cando, North Dakota

### 2016

We're very pleased to provide you with this year's *Annual Drinking Water Quality 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, and always has been, to provide to 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.

Cando's water supply consists of three (3) wells that draw groundwater from an unnamed aquifer. The ground water is then treated at a lime softening plant and stored in either the underground or overhead reservoirs until it is used by the city. Currently the water treatment plant can treat water at a rate of 600 gpm.

The City of Cando participates in the Wellhead Protection Program, which is designed to help protect the quality of the city's ground water source. Copies of the well head protection plan are available from our office that provides more information, such as, potential sources of contamination.

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

We're pleased to report that our drinking water is safe and meets federal and state requirements.

If you have any questions about this report or concerning your water utility, please contact Nick Brehm, our Water Plant Supervisor, at (701)303-0033. 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 the first and third Mondays of the month at 8:00 p.m. in the lower level of the Audi Theatre in Cando. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Nick Brehm at the number listed above.

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

The City of Cando 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>, 2016.

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 inorganic 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 storm water, industrial or domestic wastewater discharges, oil production, mining or farming.

**Pesticides and herbicides**, which come from a variety of sources such as agriculture, urban storm water 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 storm water 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 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've provided the following definitions.

**Not applicable (NA), No Detect (ND)**

**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)** - Pico curies 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.

<b>2016 TEST RESULTS FOR THE CITY OF CANDO</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>Inorganic Contaminants</b>								
Nitrate-Nitrite	10	10	0.03	ppm	N/A	2016	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Arsenic	0	10	1.57	ppb	N/A	2016	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
<b>Lead/Copper</b>								
Copper	1.3	AL= 1.3	0.378 90 <sup>th</sup> % Value	ppm	N/A	2016	0 Sites Exceeded AL	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead*	0	AL= 15	8.35 90 <sup>th</sup> % Value	ppb	N/A	2016	0 Sites Exceeded AL	Corrosion of household plumbing systems, erosion of natural deposits
<b>Stage 2 Disinfection Byproducts (TTHM/HAA5)</b>								
HAA5	N/A	60	3	ppb	N/A	2016	No	By-product of drinking water disinfection
TTHM	N/A	80	1	ppb	N/A	2016	No	By-product of drinking water disinfection
<b>Disinfectants</b>								
Chlorine	MRDL= 4.0	MRDL =4	1.6	ppm	1.21 to 1.65	2016	No	Water additive used to control microbes

**Bacteriological Monitoring Data – TCR/RTCR**

Total Coliform Data: December had the highest number of Total Coliform Samples

Total Coliform Positives for that Month: 2

**Assessment Data – RTCR**

Type: Level 1 Date: 12/14/2016 Reason: Multiple Total Coliform Positive Samples

## 2016 Consumer Confidence Report-System Assessment Information and Corrective Actions Required Under the Revised Total Coliform Rule (RTCR)

### City of Cando; Public Water System (PWS) Number ND4800152

- Our system is required to monitor monthly for total coliform bacteria in our drinking water. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify problems and to correct any problems that were found during these assessments.
- A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- During the past year we were required to conduct one Level 1 Assessment. One Level 1 Assessment was completed.
- December had the highest number of positive Total Coliform samples. Two samples were positive for that month. The Level 1 Assessment was triggered on 12/14/2016. The assessment was completed on 1/9/2017. Corrective Actions: None required as of the end of 2016.
- Subsequent bacteriological samples have been satisfactory.

\* 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.

\*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. The City of Cando 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 expo-sure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

EPA requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table above are the only contaminants detected in your drinking water.

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.

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).**

The City of Cando 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.

