

# **Annual Drinking Water Quality Report**

## **City of Beach, North Dakota**

### **2019**

We are 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 the Southwest Water Authority (SWA).

The North Dakota Department of Health has prepared a Source Water Assessment for the City of Beach and the Southwest Water Authority. Information regarding this program is available upon request. The source water assessment is complete and available at SWA. (Contact the SWA office for more information.)

The City of Beach and Southwest Water Authority 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.

This report shows our water quality and what it means.

If you have any questions about this report or concerning your water utility, please contact Kimberly Gaugler, City Auditor, @ 701-872-4103. 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 Monday of every month at 7:00 p.m. If you are aware of non-English speaking individuals who need help with the appropriate language translation, please call Kimberly at the number listed above.

The City of Beach 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 Beach 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>, 2019.

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 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.

To ensure that tap water is safe to drink, EPA prescribes regulations which limit the number 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 have provided the following definitions:

**(NA)** - Not applicable

**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.

**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.

| <b>2019 Test results for the city of Beach, ND &amp; Southwest Water Authority</b> |             |            |                                       |             |                  |             |                                    |                                                                                                                           |
|------------------------------------------------------------------------------------|-------------|------------|---------------------------------------|-------------|------------------|-------------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <u>Contaminant</u>                                                                 | <u>MCLG</u> | <u>MCL</u> | <u>Level Detected</u>                 | <u>Unit</u> | <u>Range</u>     | <u>Date</u> | <u>Violation Yes/No Other Info</u> | <u>Likely Source of Contamination</u>                                                                                     |
| <b>Inorganic Contaminants</b>                                                      |             |            |                                       |             |                  |             |                                    |                                                                                                                           |
| Barium                                                                             | 2           | 2          | 0.0126                                | ppm         | N/A              | 2016        | No                                 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits                                |
| Fluoride                                                                           | 4           | 4          | 0.92                                  | ppm         | N/A              | 2016        | No                                 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nitrate-Nitrite                                                                    | 10          | 10         | 0.081                                 | ppm         | N/A              | 2019        | No                                 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits                               |
| <b>Lead/Copper</b>                                                                 |             |            |                                       |             |                  |             |                                    |                                                                                                                           |
| Copper                                                                             | 1.3         | AL=1.3     | 0.0503<br>90 <sup>th</sup> % value    | ppm         | N/A              | 2017        | 0 Sites Exceeded AL                | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives                    |
| Lead*                                                                              | 0           | AL=15      | No Detect<br>90 <sup>th</sup> % value | ppb         | N/A              | 2017        | 0 Sites Exceeded AL                | Corrosion of household plumbing systems, erosion of natural deposits                                                      |
| <b>Total Organic Carbon Removal</b>                                                |             |            |                                       |             |                  |             |                                    |                                                                                                                           |
| Alkalinity, Source Water                                                           | N/A         | N/A        | 163                                   | Mg/l        | 140.00 to 163.00 | 2019        | No                                 | By-product of drinking water chlorination                                                                                 |
| Total Organic Carbon, Finished Water                                               | N/A         | TT         | 2.85                                  | Mg/l        | 2.14 to 2.85     | 2019        | No                                 | By-product of drinking water chlorination                                                                                 |
| Total Organic Carbon, Source Water                                                 | N/A         | TT         | 3.92                                  | Mg/l        | 3.28 to 3.92     | 2019        | No                                 | By-product of drinking water chlorination                                                                                 |
| <b>Disinfectants</b>                                                               |             |            |                                       |             |                  |             |                                    |                                                                                                                           |
| Chloramines                                                                        | MRDLG =4    | MRDL =4.0  | 2.3                                   | ppm         | 1.5 to 3.1       | 2019        | No                                 | Water additive used to control microbes                                                                                   |
| <b>Microbial Contaminants</b>                                                      |             |            |                                       |             |                  |             |                                    |                                                                                                                           |
| Turbidity**                                                                        | N/A         | TT=.3      | 0.17                                  | NTU         | N/A              | 2019        | No                                 | Soil Runoff                                                                                                               |
| <b>Stage 2 Disinfection By-Products (System-Wide)</b>                              |             |            |                                       |             |                  |             |                                    |                                                                                                                           |
| HAA5                                                                               | N/A         | 60         | 18                                    | ppb         | N/A              | 2019        | No                                 | Water additive used to control microbes                                                                                   |
| TTHM                                                                               | N/A         | 80         | 12                                    | ppb         | N/A              | 2019        | No                                 | Water additive used to control microbes                                                                                   |
| <b>Unregulated Contaminants</b>                                                    |             |            |                                       |             |                  |             |                                    |                                                                                                                           |
| Bicarbonate as HCO <sub>3</sub>                                                    | N/A         | N/A        | 199                                   | ppm         | 170 to 199       | 2019        | No                                 | N/A                                                                                                                       |
| Bromide                                                                            | N/A         | N/A        | 33                                    | ppm         | 27 to 33         | 2019        | No                                 | N/A                                                                                                                       |
| <b>Radioactive Contaminants</b>                                                    |             |            |                                       |             |                  |             |                                    |                                                                                                                           |
| Gross Alpha, Including RA, Excluding RN & U                                        | 15          | 15         | 0.359                                 | pCi/l       | N/A              | 2018        | No                                 | Erosion of natural deposits                                                                                               |

## Surface Water Treatment Rule Monitoring Data:

Lowest Monthly Percentage of Samples Meeting Turbidity Limits = 100%

Highest Single Measurement = 0.17

## Source Water Microbiological Monitoring:

SWA has a program of testing its untreated water supply for Cryptosporidium, Giardia & E-Coli as part of round 2 of the Long Term 2 Enhanced Surface Water Treatment Rule.

- Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes Cryptosporidium. The most used filtration methods cannot guarantee 100% removal. SWA monitoring did not detect any presence in the source water.
- Giardia is a microbial parasite commonly found in source water. SWA monitoring did not detect any presence in the source water.
- E. Coliform is a pathogenic parasite commonly found in surface water & originates in the intestinal tract of warm-blooded animals. In the 10 samples taken, only 3 detected any presence in the source water with the highest measuring 55 MPN/100ml. Disinfection and filtration effectively removes Giardia.
- To obtain information about these tests you may contact Grace Rixon-Handford, Water Treatment Plant Manager or Sandy Burwick, SWA CFO/Office Administrator at 1-888-425-0241 or e-mail us at [swa@swwater.com](mailto:swa@swwater.com)

**\*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 Beach 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 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 at <http://www.epa.gov/safewater/lead>.**

**\*\*Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. 100% of samples met turbidity limits.**

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 effects can be obtained by calling the EPA'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.

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

We work 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.

Please call our office @ 701-872-4103 if you have questions about your city's water system.