



Big Sioux Community Water System, Inc.

Annual Drinking Water Quality Report

JANUARY 1, 2017 — DECEMBER 31, 2017

INTRODUCTION

The Big Sioux Community Water System has supplied 17 consecutive years of safe drinking water to the public it serves and has been awarded the Secretary's Award for Drinking Water Excellence by the South Dakota Department of Environment and Natural Resources. This report is a snapshot of the quality of the water that we provided last year. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies. We are required by the U.S. Environmental Protection Agency (EPA) to test our water frequently for the presence and concentrations of more than 90 different chemicals or chemical compounds. The South Dakota Department of Environment and Natural Resources (DENR) reviews all of our testing data to ensure that 1) we are providing safe drinking water to our customers, and 2) we are complying with EPA regulations.

We hope you fully understand the information contained in this report. If you have any questions, you are welcome to attend our Board meetings (held the 3rd Wednesday of the month) or please contact:

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WHERE DOES OUR WATER COME FROM?

The source of our drinking water is ground water from the Big Sioux Aquifer. The Big Sioux Aquifer is a shallow sand and gravel aquifer. We have eight wells located within the Big Sioux River valley in central Moody County, SD. The wells are approximately 40 feet deep. Well-head protection ordinances are in place in Moody County, and efforts are ongoing to protect our raw water quality. We also purchase water from Minnehaha Community Water Corporation who also pumps water from wells in the Big Sioux aquifer.

WHY DO WE TEST OUR DRINKING WATER?

The water we pump from our wells originally comes from the surface, and very slowly seeps down into the aquifer. As water travels over the surface of the land or through the ground, it can dissolve naturally occurring minerals, and pick up substances resulting from the presence of animals or from human activity. Too much of any substance, either naturally occurring or resulting from human activities, can be considered a contaminant.

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 chemicals or compounds**, 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 storm-water runoff, and residential uses.
- **Organic chemicals or compounds**, 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, septic systems and agriculture.
- **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. 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).

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 (800-426-4791).

SUMMARY OF RESULTS:

Of the 90+ chemical parameters tested for, the table below represents all that we were required to report.

Fluoride levels are consistent with the amount we add to promote healthy teeth. Nitrate levels are consistent with area land-use, and well below the MCL. Lead and Copper levels, a function of plumbing fixtures, are very low due to the chemical stability of the water we produce. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to two minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

DEFINITION OF TERMS

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 — one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

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

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.

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.

OUR DRINKING WATER MEETS OR EXCEEDS FEDERAL AND STATE REQUIREMENTS

2017 WATER QUALITY TEST RESULTS

Substance	90% Level	Test Sites > Action Level	Date Tested	Highest Level Allowed (AL)	Ideal Goal	Units	Major Source of Contaminant
Copper	0.0	0	10/25/17	AL=1.3	0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	0	0	10/25/17	AL=15	0	ppb	Corrosion of household plumbing systems; erosion of natural deposits.

Substance	Highest Level Detected	Range	Date Tested	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Units	Major Source of Contaminant
Fluoride	0.93	0.46 - 0.93	07/10/17	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Fluoride *	0.83	0.61 - 0.83	04/13/17	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Haloacetic Acids (RAA)	2.15		08/08/17	60	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.
Haloacetic Acids (RAA) *	2.67		08/29/17	60	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.
Nitrate (as Nitrogen)	4.5		09/26/17	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nitrate (as Nitrogen) *	0.8		04/12/17	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Total trihalomethanes (RAA)	20.0		08/08/17	80	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.
Total trihalomethanes (RAA) *	7.61		08/29/17	80	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.

* Minnehaha Community Water Corp (0432) test result.