

# 2007 WATER QUALITY REPORT FOR SERGEANT BLUFF

This report contains important information regarding the water quality in our water system. The source of our water is groundwater. Our groundwater is drawn from the Cretaceous (Dakota Sandstone) aquifers. We also receive water from Sioux City. Our water quality testing shows the following results:

CONTAMINANT	MCLG	MCL	DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION	VIOLATION	SOURCE
Lead (ppb)	0	AL=15	6 Two samples exceeded AL	2006	ND - 25	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	1.3	AL=1.3	0.24	2006	ND – 0.47	No	Corrosion of household plumbing systems; Erosion of natural deposits
Chlorine (ppm)	MRDLG =4.0	MRDL=4.0	1.22	2007	1.01 – 1.47	No	Water additive used to control microbes
Fluoride (ppm)	4	4	0.47	12/13/2005		No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Sodium (ppm)	N/A	N/A	20	12/13/2005		No	Erosion of natural deposits; Added to water during treatment process
TTHM (ppb) [Total trihalomethanes]	N/A	80	36	2007	25 – 52	No	By-products of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	N/A	60	10	2007	ND – 18	No	By-products of drinking water disinfection
Arsenic (ppb)	0	10	1	12/13/2005		No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes
Barium (ppm)	2	2	0.08	12/13/2005		No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Combined radium (pCi/L)	0	5	2.7	8/21/2006		No	Erosion of natural deposits

## Sioux City water quality testing shows the following:

Arsenic (ppb)	0	10	2	6/22/2005		No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes
Combined radium (pCi/L)	0	5	0.8	6/16/2004		No	Erosion of natural deposits
Alpha emitters (pCi/L)	0	15	3.5	4/9/2007		No	Erosion of natural deposits
Fluoride (ppm)	4	4	0.9	6/22/2005		No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Turbidity (NTU)	N/A	TT <0.3	0.270 100% less than 0.3	2007	0.027 – 0.27	No	Soil runoff

Nitrate [as N] (ppm)	10	10	0.5	2007		No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	N/A	N/A	59	6/18/2007		No	Erosion of natural deposits; Added to water during treatment process
Barium (ppm)	2	2	0.05	6/22/2005		No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Trichloroethylene (ppb)	0	5	0.5	4/9/2007		No	Discharge from metal degreasing sites and other factories

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

## DEFINITIONS

- 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.
- ppb -- parts per billion.
- ppm -- parts per million.
- pCi/L – picocuries per liter
- N/A – Not applicable
- ND -- Not detected
- Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.
- Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- 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.
- 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.

## GENERAL INFORMATION

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 posed a health risk. More information about contaminants or 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 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. Sergeant Bluff is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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 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>.

## CONTAMINANT VIOLATIONS

None

## **ADDITIONAL HEALTH INFORMATION**

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 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

## **OTHER VIOLATIONS**

None

## **SOURCE WATER ASSESSMENT INFORMATION**

The Sergeant Bluff water supply obtains its water from the Cretaceous (Dakota Sandstone) aquifer. The Cretaceous (Dakota Sandstone) aquifer was determined to be not susceptible to contamination because the characteristics of the aquifer and overlying materials prevent easy access of contaminants to the aquifer. The wells will not be susceptible to most contaminant sources except through pathways to the aquifer such as abandoned or poorly maintained wells. A detailed evaluation of your source water was completed by the IDNR, and is available from the Water Department at 943-9602.

The Sioux /City water supply obtains its water from the Cretaceous (Dakota Sandstone) aquifer, the alluvial aquifer, and from a radial collector well that is influenced groundwater by the Missouri River. The aquifer was determined to be susceptible to contamination because the characteristics of the aquifer and overlying materials allow contaminants to move through the aquifer fairly quickly. The wells will be most susceptible to activities such as: dry cleaners, gas stations, industrial sites, and municipal wastewater discharges. A detailed evaluation of your source water was completed by the IDNR, and is available from the Water Department at 279-6150.

## **OTHER INFORMATION**

Our water utility is making every effort to protect the water system from potential security threats. You, as customers, can also help. If you see any suspicious activity near the water tower, treatment plant, wells or fire hydrants, please contact us at Municipal Utilities Office at 943-9602, or City Hall at 943-4244, or the local police/sheriff department. We appreciate your assistance in protecting the water system.

## **CONTACT INFORMATION**

For questions regarding this information, please contact John Robinson at 943-9602 during the following hours: 7:00 AM to 4:00 PM.

Decisions regarding the water system are made at the City Council meetings held on the second and fourth Tuesdays at 5:30PM. at City Hall and are open to the public.