

# 2022 WATER QUALITY REPORT FOR SIOUX CITY WATER SUPPLY

## 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. SIOUX CITY WATER SUPPLY 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>.

## SOURCE WATER ASSESSMENT INFORMATION

This water supply obtains its water from the sand and gravel of the Alluvial aquifer. The Alluvial aquifer was determined to be highly susceptible to contamination because the characteristics of the aquifer and overlying materials provide little protection from contamination at the land surface. The Alluvial wells will be highly susceptible to surface contaminants such as leaking underground storage tanks, contaminant spills, and excess fertilizer application. A detailed evaluation of your source water was completed by the Iowa Department of Natural Resources and is available from the Water Operator at 712-224-5010.

This water supply obtains its water from the sand and gravel and sandstone of the Alluvial-Dakota aquifer. The Alluvial-Dakota aquifer was determined to be highly susceptible to contamination because the characteristics of the aquifer and overlying materials provide little protection from contamination at the land surface. The Alluvial-Dakota wells will be highly susceptible to surface contaminants such as leaking underground storage tanks, contaminant spills, and excess fertilizer application. A detailed evaluation of your source water was completed by the Iowa Department of Natural Resources, and is available from the Water Operator at 712-224-5010.

This water supply obtains water from one or more surface waters. Surface water sources are susceptible to sources of contamination within the drainage basin.

Surface Water Name	Susceptibility
Missouri River	high

## OTHER INFORMATION

Turbidity is an indicator of treatment filter performance and is regulated as a treatment technique.

## CONTACT INFORMATION

For questions regarding this information or how you can get involved in decisions regarding the water system, please contact SIOUX CITY WATER SUPPLY at 712-224-5010.

The table below shows the primary contaminants found in our drinking water in 2022. All of the regulated substances in our drinking water were well within the limits EPA has set to ensure the safety of tap water. Sioux City tested for many health-related contaminants in addition to those included in the table. No other regulated contaminants were detected in our treated water.

### 2022 Water Quality Data-Primary (Health-Related) Contaminants Zenith Water Plant

#### Regulated Contaminants

Microbiological Contaminants	Detected Amount	Range	MCL	MCLG	Units	Possible Sources of Contaminants	Notes
Turbidity	0.353	.070-.353	MCLG	N/A	NTU	Soil Runoff.	99.35% below 0.3 NTU
Inorganic & Organic Compounds							
Arsenic	2	N/A	10	0	ppb	Erosion of natural deposits Runoff from orchards Runoff from glass and electronic production wastes	
Sodium (A)	64	N/A	N/A	N/A	ppm	Erosion of natural deposits. Added to water during treatment process	
Nitrate	0.39	N/A	N/A	10	ppm	Erosion of natural deposits and runoff	
Total Organic Carbon - Average % Removed	4.67	( 0- 21.43)	TT	N/A		Naturally present in the environment	
Barium	0.05		2	2	ppm	Discharge from metal refineries	
Disinfection							
Total Trihalomethanes	70	(56-100)	80	N/A	ppb	By-product of drinking water disinfection	
Total Haloacetic Acids	26	(23-34)	60	N/A	ppb	By-product of drinking water disinfection	
Disinfectant	Detected	Range	MRDL	MRDLG	Units		
Chlorine (Cl2)	2.21	1.98-2.21	4	4	ppm	Water additive used to control microbes	
Radiochemical Contaminants	Detected Amount	Range	MCL	MCLG	Units	Possible Sources of Contaminants	
Alpha Emitters	5.5		15	0	pCi/L	Erosion of natural deposits	
Combined Radium	1.5		5	0	pCi/L	Erosion of natural deposits	
Cryptosporidium	No detects in previous sampling						
Giardia	No detects in previous sampling						
Lead & Copper	Action Level	90th Percentile			Units	Possible Sources of Contaminants	
Lead (B)	3	(ND - 6)			ppb	Corrosion of household plumbing systems	
Copper	0.43	(ND - 0.66)			ppm	Corrosion of household plumbing systems	

(A) There is not a federal or state standard for sodium. Monitoring is required to provide information to consumers that are concerned about sodium intake due to dietary precautions. While our water is relatively low in sodium, water softeners that use Sodium raises the level considerably. If you are cutting back on sodium, try attaching your water softener to only hot water lines, or not attaching the kitchen faucet to the softener.

(B) 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 Sioux City Water Plant 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 request 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>.

#### Key to the Water Quality Table

**AL**-Action Level. The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow.

**Disinfection By-Products**-Compounds formed when the chlorine added to water reacts with the natural organic material in water.

**MCL**-Maximum Contaminant Level. The highest level of a contaminant that is legally allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

**MCLG**-Maximum Contaminant Level goal. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

**MRDL**-Maximum Residual Disinfectant Level. 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

**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.

**NA**-Not applicable.

**NTU**-Nephelometric Turbidity Units. Measurement of the cloudiness of water.

**PCi/L**-Piocuries per Liter. Measurement of the radioactivity in water.

**PPB**-Parts per billion. Equal to one microgram per liter (ug/L), or the equivalent of one cent in \$10,000,000.

**PPM**-Parts per million. Equal to one milligram per liter (mg/L), or the equivalent of one cent in \$10,000.

**Radiochemical Contaminants**-Elements that undergo a process of natural decay during which they emit radiation such as alpha emitters.

**Total Coliforms**- Group of bacteria which are not harmful themselves but, if present in water, may indicate contamination with other harmful bacteria.

**TT**-Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water.

**Turbidity**-Refers to the cloudiness of water caused by substances such as iron, silt or algae. While turbidity itself has no health effects, high turbidity could interfere with the disinfection of water, or could indicated problems with the filtration system at the water plant.

**IDSE**-Initial Distribution System Evaluation

## 2022 Water Quality Data-Primary (Health-Related) Contaminants Southbridge Water Plant

### Regulated

#### Contaminants

Microbiological Contaminants	Detected Amount	Range	MCL	MCLG	Units	Possible Sources of Contaminants	Notes
Turbidity	0.102	.031-.102	TT/0.5	N/A	NTU	Soil Runoff.	99.97% below 0.1 NTU
Inorganic & Organic Compounds							
Fluoride	0.97	.60-.97	4	4	ppm	See Sources of Contaminants above	
Sodium (A)	68	N/A	N/A	N/A	ppm	Erosion of natural deposits.	
Barium	0.05		2	2	ppm	Discharge from metal refineries	
Contaminants							
Cryptosporidium	No detects in previous sampling						
Giardia	No detects in previous sampling						
Disinfectant	Detected	Range	MRDL	MRDLG	Units	Possible Sources of Contaminants	Notes
Chlorine (Cl <sub>2</sub> )	2.173	1.892-2.173	4	4	ppm	Water additive used to control microbes	
Radiochemical Contaminants	Detected Amount	Range	MCL	MCLG	Units	Possible Sources of Contaminants	Notes
Alpha Emitters	2.2	N/A	15	0	pCi/L	Erosion of natural deposits	
PFOA	6.1	5.2-6.1	0.004	N/A	ng/l	Samples taken by IDNR as a special sampling project	
PFOS	4.9	3.8-4.9	0.02	N/A	ng/l	Samples taken by IDNR as a special sampling project	

## 2022 Water Quality Data-Primary (Health-Related) Contaminants Distribution System

### Regulated

#### Contaminants

Disinfectant	Detected	Range	MRDL	MRDLG	Units	Possible Sources of Contaminants	Notes
Chlorine (Cl <sub>2</sub> )	1.6	(ND-3.7)	4	4	ppm	Water additive used to control microbes	
		S					
Total Coliform Bacteria	2	N/A	N/A	RTCR	TT	***See Note Below	two positive samples

\*\*\*Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other waterborne pathogens may be present, or that a potential pathway exists through which contamination may enter the drinking water