Big Sioux Community Water System Drinking Water Information

(System Information, Sampling Requirements, and Compliance Report)

Secretary Award For Drinking Water Excellence

Population Served: 9,348

System Population: 5,337

Certified Operator: Mr Dave Bennett
23343 479th Ave
Egan, SD 57024

Work Phone: (605)997-2098
Home Phone:
Cell Phone:
Fax:
Email: bscws@bigsiouxcws.com

Financial Contact: Mr Martin Jarrett
23343 479th Ave
Egan, SD 57024

Work Phone: (605)997-2098
Home Phone:
Cell Phone:
Fax:
Email: bscws@bigsiouxcws.com

Other Contacts: Mr Martin Jarrett
23343 479th Ave
Egan, SD 57024

Work Phone:
Home Phone:
Cell Phone:
Fax:
Email: bscws@bigsiouxcws.com

Last Inspection: October 11, 2016

Type of System: Community

Area Served: Brookings, Lake, Moody County

Number of Service Connections: 2,135

Contamination Risk: moderate

Water Purchased From: Minnehaha Community Water Corp (0432)

PWS Owner Type: Private Ownership

Service Area: Rural Water System/Colonies

Contract Laboratory: Sioux Falls Health Laboratory

Monitoring/Reporting - Entry Point

Big Sioux Community Water System **EPA ID: 0429**

SAMPLING

Entry point: Brandt Plant

	Chemical	Sampling Frequency	Waivers	Taken Last	Due Next	Notes
1	Inorganic Chemicals					
	A. Antimony	Triennially	No	Sep-17		
	B. Arsenic	Triennially	No	Sep-17		
	C. Barium	Triennially	No	Sep-17		
	D. Beryllium	Triennially	No	Sep-17		
	E. Cadmium	Triennially	No	Sep-17		
	F. Chromium	Triennially	No	Sep-17		
	G. Cyanide		Yes			State-wide waiver
	H. Fluoride		No			This system fluoridates
	I. Mercury	Triennially	No	Sep-17		
	J. Nickel	Triennially	No	Sep-17		
	K. Selenium	Triennially	No	Sep-17		
	L. Thallium	Triennially	No	Sep-17		
2	Radiological Chemicals	Every six years	N/A			
3	VOC Chemicals	Quarterly	No		2018	No Sampling Data
4	SOC Chemicals					
	A. Method 515.1	Triennially	No	*bad date*	2018	
	B. Method 524	Triennially	No	*bad date*	2018	
	C. Method 525	Triennially	No	*bad date*	2018	
	D. Method 531.1	Triennially	No	*bad date*	2018	
	E. Method 547	Triennially	No	*bad date*	2018	
	F. Method 548	Triennially	No	*bad date*	2018	
	G. Method 549	Triennially	No	*bad date*	2018	
5	Nitrate	Annually	N/A	Sep-17		
6	Nitrite	Triennially	N/A	Sep-17		

(These values are calculated from available data. Check correspondence for verification.)

Monitoring/Reporting - Entry Point

Big Sioux Community Water System **EPA ID: 0429**

SAMPLING

Entry point: Egan Plant

	Chemical	Sampling Frequency	Waivers	Taken Last	Due Next	Notes
1	Inorganic Chemicals					
	A. Antimony	Every nine years	Yes	Apr-12		
	B. Arsenic	Every nine years	Yes	Apr-12		
	C. Barium	Every nine years	Yes	Apr-12		
	D. Beryllium	Every nine years	Yes	Apr-12		
	E. Cadmium	Every nine years	Yes	Apr-12		
	F. Chromium	Every nine years	Yes	Apr-12		
	G. Cyanide		Yes			State-wide waiver
	H. Fluoride		No			This system fluoridates
	I. Mercury	Every nine years	Yes	Apr-12		
	J. Nickel	Every nine years	Yes	Apr-12		
	K. Selenium	Every nine years	Yes	Apr-12		
	L. Thallium	Every nine years	Yes	Apr-12		
2	Radiological Chemicals	Every nine years	N/A			
3	VOC Chemicals	Quarterly	No	May-15	2018	
4	SOC Chemicals					
	A. Method 515.1	Triennially	No	Sep-15	2018	
	B. Method 524	Triennially	No	Sep-15	2018	
	C. Method 525	Triennially	No	Sep-15	2018	
	D. Method 531.1	Triennially	No	Sep-15	2018	
	E. Method 547	Triennially	No	Sep-15	2018	
	F. Method 548	Triennially	No	Sep-15	2018	
	G. Method 549	Triennially	No	Sep-15	2018	
5	Nitrate	Annually-1st Qtr	N/A	Jan-18		
6	Nitrite	Triennially	N/A	Feb-16		

(These values are calculated from available data. Check correspondence for verification.)

Bacteriological Monitoring

Bacteriological sampling and analysis: January 1, 2017 to January 1, 2018

A	Samples submitted:	75
B	Samples required:	Six Samples Each Month.
C	Survey samples:	0
D	Safe samples:	75
E	Unsafe samples:	0
F	Repeat samples:	0
H	Groundwater Samples:	

Lead and Copper Monitoring

(These values are calculated from available data. Check correspondence for verification.)

A	Date Last Tested:	October 25, 2017	
B	Samples required:	40	
C	Sampling Frequency	Every Six Months	
D	Date Due Next		
E	Lead - 90% Level	1.4	Action Level - 15 ug/l
F	Copper 90% Level	0.02	Action Level - 1.3 mg/l

Disinfectant Residual Monitoring

Residual sampling and analysis: January 1, 2017 to January 1, 2018

A	Samples submitted:	75	
B	Samples required:	Six Samples Each Month.	
C	Last Qtr Cl Residual:	1.57	mg/l
D	Running Annual Average:	1.29	mg/l
E	Date of last DBP test:	August 8, 2017	
F	THM - Qtr Average:	13.02	ug/l
G	Haa5 - Qtr Average:	1.08	ug/l

Asbestos

A	Date of last test:	Waiver - Testing Not Required	
B	Asbestos Result:		million fibers per liter

Comments

Violations and Significant Deficiencies

Big Sioux Community Water System **EPA ID: 0429**

Violations From January 1, 2013 To January 1, 2018

Violation Type	Parameter	Date	Status
No Violations			

Significant Deficiency	Date Identified	Date Corrected

EPA ID#: 0429 System Name: Big Sioux Community Water System

Sampler- Mr Dave Bennett Work Phone-(605)997-2098
Title- Operations Manager
Address- 23343 479th Ave
Egan SD 57024

Location- City: Egan County: Brookings, Lake, Moody
Service Area- Other residential areas
PWS Owner Type- Private Ownership
Water Supply Type- Groundwater Supply

Population Served- 5,337 Service Connections- 2,135

Sources for Big Sioux Community Water System

Source	Name	Year Built	Depth (feet)	Diameter (inches)	Availability	Type	Vulnerability	Treatment
01	#1-EGAN	1974	37	12	Permanent	Groundwater	Vulnerable	Treatment At Plant
02	#2-EGAN	1974	40	12	Permanent	Groundwater	Vulnerable	Treatment At Plant
03	#3-EGAN	1974	40	12	Permanent	Groundwater	Vulnerable	Treatment At Plant
04	#4-EGAN	1985	40	12	Permanent	Groundwater	Vulnerable	Treatment At Plant
05	#1 BRANDT-ABANDONED	1984	46	10		Groundwater	Vulnerable	Treatment At Plant
06	EGAN PLANT				Permanent	Treatment Plant	Non-Vulnerable	Aeration Coagulation, Softening - Lime Polymers Disinfection - Gas Chlorine Filtration - Gravity Mixing Device Recarbonation Sedimentation Fluoridation - H2SiF6
07	#5-ABANDONED	1996				Groundwater	Non-Vulnerable	No Treatment
08	#7-EGAN	2002	40	12	Permanent	Groundwater	Non-Vulnerable	Treatment At Plant
17	#5 EGAN	1996	40	12	Permanent	Groundwater	Non-Vulnerable	Treatment At Plant
18	#6 EGAN	2001	40	12	Permanent	Groundwater	Non-Vulnerable	Treatment At Plant
20	#2 BLP-ETHANOL PLANT	2001	50		Emergency	Groundwater	Non-Vulnerable	No Treatment
21	#3 BLP-ETHANOL PLANT	2001	50		Emergency	Groundwater	Non-Vulnerable	No Treatment
22	#4 BLP-ETHANOL PLANT	2002	50		Emergency	Groundwater	Non-Vulnerable	No Treatment
23	#5 BLP-ETHANOL PLANT	2002	70		Emergency	Groundwater	Non-Vulnerable	No Treatment
24	BRANDT PLANT				Permanent	Treatment Plant	Non-Vulnerable	Aeration Coagulation, Softening - Soda Ash Disinfection - Gas Chlorine Filtration - Green Sand RO Recarbonation Sedimentation Fluoridation - H2SiF6

Date Of This Report: August 29, 2017

EPA ID#: 0429 System Name: Big Sioux Community Water System

Source	Name	Year Built	Depth (feet)	Diameter (inches)	Availability	Type	Vulnerability	Treatment
25	#8-EGAN	2004	38	12	Permanent	Groundwater	Non-Vulnerable	Treatment At Plant
27	BRANDT PLANT WELL	2009	44	12	Permanent	Groundwater	Non-Vulnerable	Treatment At Plant
28	#1-SOUTHWEST	2008	40	12	Permanent	Groundwater	Non-Vulnerable	Treatment At Plant
29	#2-NORTHWEST	2008	40	12	Permanent	Groundwater	Non-Vulnerable	Treatment At Plant
30	#3-NORTH CENTRAL	2008	30	12	Permanent	Groundwater	Non-Vulnerable	Treatment At Plant
31	#4-NORTHEAST	2008	29	12	Permanent	Groundwater	Non-Vulnerable	Treatment At Plant
33	MINNEHAHA RWS	2016			Permanent	Purchased Groundwater	Non-Vulnerable	Water Treated By Seller - Purchased Surface Only

Date Of This Report: August 29, 2017

EPA ID#: 0429 System Name: Big Sioux Community Water System

Common Ion Data

(All chemical data are reported in milligrams per liter (mg/l) except pH and Langlier Index)

Please refer to Private Well Data for more information about these test results.

Source	Type	Date	TDS	Conductance	pH	Alk-M	Alk-P	Na	K	Ca	Mg	Fe	Mn	Cl	SO4	HCO3	CO3	Hardness	Langlier	NO3	F
02	Raw	03/05/96	541	770	7.50	239	0	17	2.5	111.0	33.3	0.06	0.07	27.0	173	287	0	414	+0.36	4.1	0.33
02	Raw	03/17/99	537	802	7.44	252	0	16	2.2	103.0	30.8	0.02	0.07	12.6	150	307	0	384	+0.30	4.7	0.33
06	Raw	06/27/05	714	1020	7.82	259	0	29	4.7	126.0	40.5	0.10	0.24	35.0	240	316	0	481	+0.74	1.6	0.29
06	Raw	09/01/10	734	1070	7.87	277	0	30	4.7	138.0	52.0	0.03	0.08	28.0	284	338	0	558	+0.86	2.6	0.32
Averages			632	916	7.66	257	0	23	3.5	119.5	39.2	0.05	0.12	25.7	212	312	0	459		3.3	0.32

Source	Type	Date	TDS	Conductance	pH	Alk-M	Alk-P	Na	K	Ca	Mg	Fe	Mn	Cl	SO4	HCO3	CO3	Hardness	Langlier	NO3	F
06	Treated	11/17/93	557	856	7.88	241	0	17	3.4	118.0	35.2	0.02	0.14	19.0	204	294	0	439	+0.89	7.0	1.24
05	Treated	10/02/91	528	809	7.86	261	0	13	4.7	107.0	37.6	0.60	0.04	21.6	135	318	0	422	+0.43	2.7	0.77
06	Treated	03/05/96	0	0	0.00	0	0	0	0.0	0.0	0.0	0.06	0.02	0.0	0	0	0	0	0.00	0.0	0.00
06	Treated	03/17/99	364	516	8.71	34	4	16	3.5	34.8	29.8	0.03	0.02	16.4	177	32	5	210	+0.26	4.2	1.19
06	Treated	06/27/05	442	636	7.92	38	0	25	3.8	43.7	36.1	0.03	0.02	35.0	210	46	0	258	-0.40	2.1	1.31
06	Treated	06/19/08	359	525	8.62	40	0	26	5.1	43.3	38.8	0.03	0.02	36.0	172	49	0	268	+0.34	1.7	1.34
06	Treated	09/01/10	484	730	8.56	41	0	30	5.1	53.1	38.7	0.03	0.02	29.0	274	50	0	292	+0.35	2.8	1.26
24	Treated	09/01/10	391	619	7.35	176	0	11	3.0	70.7	29.3	0.16	0.03	8.0	122	215	0	297	-0.08	5.0	1.36
24	Treated	07/17/13	288	453	7.31	133	0	7	1.9	54.5	22.1	0.03	0.02	11.0	76	162	0	227	-0.33	4.1	1.06
06	Treated	07/17/13	606	902	7.82	236	0	27	4.3	109.0	45.6	0.03	0.03	15.0	213	288	0	460	+0.66	1.7	1.40
24	Treated	07/17/13	288	453	7.31	133	0	7	1.9	54.5	22.1	0.03	0.02	11.0	76	162	0	227	-0.33	4.1	1.06
06	Treated	07/17/13	606	902	7.82	236	0	27	4.3	109.0	45.7	0.03	0.03	15.0	213	288	0	460	+0.66	1.7	1.40
06	Treated	10/11/16	426	644	8.46	47	0	27	4.1	36.2	39.3	0.00	0.00	26.0	227	57	0	252	+0.16	1.2	0.65
Averages			411	619	7.36	124	0	18	3.5	64.1	32.3	0.08	0.03	18.7	161	151	0	293		2.9	1.08

Date Of This Report: August 29, 2017

You can contact us by calling
(605)997-2098 or write us at
23343 479th Ave
Egan SD 57024

Big Sioux Community Water System

2017 Drinking Water Report

It's your tap water!

EPA ID: 0429

Water Quality

Secretary's Award

The Big Sioux Community Water System has supplied seventeen 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 brochure 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.

Water Source

We serve more than 5,337 customers an average of 2,030,000 gallons of water per day. Our water is groundwater that we produce from local wells. The state has performed an assessment of our source water and they have determined that the relative susceptibility rating for the Big Sioux Community Water System public water supply system is medium.

For more information about your water and information on opportunities to participate in public meetings, call (605)997-2098 and ask for Martin Jarrett.

Additional Information

The sources of drinking water (both tap water 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 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 stormwater 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.

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 microbial contaminants can be obtained by calling the Environment Protection Agency's 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. The Big Sioux Community Water System public water supply system 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*.

Detected Contaminants

The attached table lists all the drinking water contaminants that we detected during the 2017 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2017 The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

2017 Table of Detected Contaminants For Big Sioux Community Water System (EPA ID 0429)

Terms and abbreviations used in this table:

** 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.*

** 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.*

** Action Level(AL): the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. For Lead and Copper, 90% of the samples must be below the AL.*

** Treatment Technique(TT): A required process intended to reduce the level of a contaminant in drinking water. For turbidity, 95% of samples must be less than 0.3 NTU*

** Running Annual Average(RAA): Compliance is calculated using the running annual average of samples from designated monitoring locations.*

Units:

**MFL: million fibers per liter*

**pCi/l: picocuries per liter(a measure of radioactivity)*

**ppt: parts per trillion, or nanograms per liter*

**mrem/year: millirems per year(a measure of radiation absorbed by the body)*

**ppm: parts per million, or milligrams per liter(mg/l)*

**ppq: parts per quadrillion, or picograms per liter*

**NTU: Nephelometric Turbidity Units*

**ppb: parts per billion, or micrograms per liter(ug/l)*

**pspm: positive samples per month*

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.

Please direct questions regarding this information to Mr Dave Bennett with the Big Sioux Community Water System public water system at (605)997-2098.

Substance	Highest Level Detected	Range	Date Tested	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Units	Major Source of Contaminant

*** Minnehaha Community Water Corp (0432) test result.**