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Dakota Dunes SD 57049

Dakota Dunes CID

2015 Drinking Water Report

It's your tap water!



EPA ID: 2093



Water Quality

Last year, the Dakota Dunes CID monitored your drinking water for possible contaminants. 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 2,750 customers an average of 702,000 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 Dakota Dunes CID public water supply system is low.

For more information about your water and information on opportunities to participate in public meetings, call (605)232-4211 and ask for Kim Hoffman.

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 Dakota Dunes CID 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 2015 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, 2015. 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.

2015 Table of Detected Contaminants For Dakota Dunes CID (EPA ID 2093)

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

Units:

- *MFL: million fibers per liter
- *pCi/l: picocuries per liter(a measure of radioactivity)
- *mrem/year: millirems per year(a measure of radiation absorbed by the body)
- *ppm: parts per million, or milligrams per liter(mg/l)
- *ppb: parts per billion, or micrograms per liter(ug/l)
- *ppt: parts per trillion, or nanograms per liter
- *ppq: parts per quadrillion, or picograms per liter
- *ppm: 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	0.2	0	08/29/13	AL=1.3	0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	10	0	08/26/13	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
Alpha emitters	6	ND - 6	05/13/13	15	0	pCi/l	Erosion of natural deposits.
Barium	0.017		11/17/14	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium	1.4		11/17/14	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride	1.49	1.19 - 1.49	11/23/15	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Haloacetic Acids	9.55		11/03/15	60	0	ppb	By-product of drinking water chlorination.
Nitrate (as Nitrogen)	0.8		08/04/15	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Selenium	1.2		11/17/14	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Total Coliform Bacteria	1	positive samples		1	0	ppsm	Naturally present in the environment.
Total trihalomethanes	54.3		11/03/15	80	0	ppb	By-product of drinking water chlorination.

Please direct questions regarding this information to Mr Pat Freeman with the Dakota Dunes CID public water system at (605)232-4211.

* Iowa test result.

The table below shows the primary contaminants found in our drinking water in 2015. 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.

2015 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	0.71	.05-7.1	TT/0.5	N/A	NTU	Soil Runoff.	99.58% Below 0.03 NTU
Inorganic & Organic Compounds							
Fluoride	1.15	.31-1.15	4	4	ppm	Erosion of natural deposits Water additive which promotes strong teeth, discharge from fertilizers and Aluminum factories. Erosion of natural deposits. Added to water during treatment process	
Sodium (A)	79	N/A	N/A	N/A	ppm	Naturally present in the environment	
Total Organic Carbon - Average % Removed	23.08%	0.00-23.08	TT	N/A		Discharge from metal refineries	
Barium	0.05		2	2	ppm		
Disinfection							
Total Trihalomethanes	77	44-130	80	N/A	ppb	By-product of drinking water disinfection	
Total Haloacetic Acids	27	19-34	60	N/A	ppb	By-product of drinking water disinfection	
Disinfectant							
Chlorine (Cl2)	5	.740-5.000	4	4	ppm	Water additive used to control microbes	
Radiochemical							
Contaminants							
Alpha Emitters	3.5		15	0	pCi/L	Erosion of natural deposits	
Combined Radium	0.8		5	0	pCi/L	Erosion of natural deposits	
Lead & Copper	Action Level	90th Percentile			Units	Possible Sources of Contaminants	
Lead (B)	15	8			ppb	Corrosion of household plumbing systems	
Copper	1.3	1.10			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-Picuries 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.

2015 Water Quality Data-Primary (Health-Related) Contaminants Southbridge Water Plant

Regulated Contaminants

Contaminant	Detected Amount	Range	MCL	MCLG	Units	Possible Sources of Contaminants	Notes
Microbiological Contaminants							
Turbidity	0.97	.04-.97	TT/0.5	N/A	NTU	Soil Runoff.	99.2% Below 0.03 NTU
Inorganic & Organic Compounds							
Sodium (A)	66	N/A	N/A	N/A	ppm	Erosion of natural deposits.	
Contaminants							
Cryptosporidium	Cryptosporidium is being analyzed on a monthly basis. No detects have been found.						
Giardia	Giardia is being analyzed on a monthly basis. No detects have been found.						
Disinfectant							
Chlorine (Cl2)	2.9	.644-2.900	MRDL 4	MRDLG 4	Units ppm	Water additive used to control microbes	
Radiochemical Contaminants							
Alpha Emitters	2.2	N/A	15	0	pCi/L	Erosion of natural deposits	