

2020 WATER QUALITY REPORT (PWS #4690528)

July, 2021

A look at your local water quality:

In compliance with the 1996 Safe Drinking Water Act Amendments, *Rosebud Rural Water System* is providing our water users with this report on the quality of our drinking water. This report presents data compiled during the past twelve months from **January 1, 2020** to **December 31, 2020**. This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

RST-Rural Water Systems is pleased to inform the public that your water is “safe” and meets all federal Drinking Water Standards. During this reporting year the water was tested monthly for bacteriological contaminants, Nitrates, Synthetic Organic Chemicals, Volatile Organic Compounds, and Disinfection By-Products. All water samples were analyzed at an USEPA certified laboratory. Hard copy reports are on file at the RST-Rural Water Systems office and USEPA Region 8 office. RST-Rural Water Systems annual water quality report for Rosebud Rural Water System can be seen at <https://www.rosebudsiouxtribe-nsn.gov/reports>.

For additional information concerning this report please call RST-Rural Water Systems Director Young Colombe at (605) 747-2378.

You should know:

Some persons 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 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 risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Did you know:

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, can 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 that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled-water that 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 RST-Rural Water Systems at (605) 747-2378 or the EPA's Safe Drinking Water Hotline (800) 426-4791.

Our Water Source:

Our ground water comes from the **Ogallala Aquifer**. The Ogallala Aquifer is one of the world's largest water sources extending from Texas to Southern South Dakota. An isopach map generated indicates that the aquifer

thickness ranges from 90-190 feet with lithology comprised of siltstone to fine or medium grained sandstone with TDS lower than 500 ppm. Currently, the Rosebud Rural Water System uses five production wells to pump water from the aquifer into our system.

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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Source Water Information:

<u>Source Water Name</u>	<u>Type of Water</u>	<u>Report Status</u>	<u>Location</u>
Well 84-1	GW	Active	Rosebud
Well 84-2	GW	Active	Rosebud
Well 84-3	GW	Active	Rosebud
Well 98-8	GW	Active	Rosebud
Well 98-9	GW	Active	Rosebud

Treatment:

Our ground water system is treated with a small amount of chlorine. Chlorine is used as a disinfectant to eliminate coliform bacteria and pathogenic viruses. Public water systems are required by law to disinfect their systems to prevent water borne illnesses.

Bacteriological Monitoring:

Bacteriological monitoring is performed monthly to test for the presence of coliform bacteria, fecal coliform, and *E.coli*. Our system is required to collect six samples per month as defined by the size and population served. Our samples indicated zero contaminants during this reporting period and that the system was bacteriologically safe.

Chemical Monitoring:

Note to our water users: The USEPA requires us to monitor for certain contaminants or parameters in source waters before systems are initiated. SOC samples were required twice during a nine-year compliance period between January 1, 2011-December 31, 2019. Our system collected only one set of SOCs during the nine year sampling period which was a reportable violation. A second set of SOCs will be collected and reported shortly. VOCs were required to monitor once during a three year period between January 1, 2017-December 31, 2019. Any contaminants over the MCL reported in the initial sampling will have increased sample-monitoring schedules. Systems reporting low to zero levels may be issued a waiver and allowed to take fewer samples during the compliance period.

Lead Monitoring:

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 Rosebud Rural Water 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 drinking 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>.

Local water quality contacts:

Questions regarding your local water quality can be directed to Young Colombe at RST-Rural Water Systems (605) 747-2378. Our commitment is to provide quality water on tap to the people of the Rosebud, Soldier Creek, Parmelee, Upper Cut Meat, He Dog, Antelope/White Horse, Okreek, and Upper Grass Mountain areas.

2020 Regulated Contaminants Detected – Rosebud Rural Water 084690528

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	2020	1	0 - 1	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2020	5	4.5 - 4.5	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2020	7	6.85 - 6.85	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	11/18/2019	4	4 - 4	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	11/18/2019	0.13	0.13 - 0.13	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Beryllium	11/18/2019	4	4 - 4	4	4	ppb	N	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries.
Cadmium	11/18/2019	4	4 - 4	5	5	ppb	N	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and
Chromium	11/18/2019	0.73	0.73 - 0.73	100	100	ppb	N	Discharge from steel and pulp mills; Erosion of natural deposits.
Cyanide	11/18/2019	4	4 - 4	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
Nitrate [measured as Nitrogen]	2020	1	1.3 - 1.3	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	11/18/2019	1.17	1.17 - 1.17	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Lead and Copper

Definitions:

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	09/20/2018	1.3	1.3	0.13	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	09/20/2018	0	15	1.1	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Water Quality Test Results

Definitions: The following tables contain scientific terms and measures, some of which may require explanation.

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our watersystem on multiple occasions.

Maximum Contaminant Level or 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 or 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 residual disinfectant level or 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.

Maximum residual disinfectant level goal or 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.

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

ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

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

