2022 ANNUAL DRINKING WATER QUALITY REPORT

Reported: June 10, 2023

PINE GROVE COMMUNITY WATER ASSOCIATION (PGCWA)

23884 Hart Ranch Road West
Rapid City, SD 57702

We are pleased to present to you the Annual Water Quality Report for the calendar year 2022. This report is designed to inform you about the quality of the water and services we deliver to you every day. Our continuous goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to constantly improve the water system and protect our water resource. We are committed to ensuring that only the highest quality water is delivered to your home.

The Pine Grove Community Water Association consists of one (1) well that draws water from the Madison Aquifer. In addition to the cisterns located at each residence, the system also includes one ninety-six thousand (96,000) gallon water reservoir (upgraded from 64,000 gallons in 2010) and roughly thirty (30) miles of main water line. There were one hundred and forty-three (143) active taps on the system in 2022. The system produced an average of 43,500 gallons of water every day in 2022. The State of South Dakota has performed an assessment of our source water and has determined that the relative susceptibility rating for the Pine Grove public water supply is medium. I'm pleased to report that our drinking water is safe and meets or exceeds ***all*** federal and state drinking water requirements.

If you have any questions about this report or concerns about your water utility, please contact Gerry Broer, President of the Pine Grove Community Water Association at 605-390-1967 or Kurt Slentz, operator at 605-545-2882**.** We want the association members to be informed about their water utility. If you want to learn more about your water utility please do not hesitate to give us a call. If you wish to attend any of the regularly scheduled Pine Grove Water meetings, these meetings are held on the third Tuesday of each month at 7:00 PM in the Rockerville Community Center located in Rockerville on Highway 16. All members are encouraged to attend these meetings.

One question you as a customer may ask is: Is the water safe to drink? <u>Absolutely! The Pine Grove Community Water System provides some of the best potable water in the State of South Dakota.</u>

The Pine Grove Community Water Association routinely monitors for substances in your drinking water according to Federal and State laws and regulations. Table 1 below summarizes the substances that the system is required, by law, to monitor in the water that you drink. Table 2 summarizes the *detected substances* of our monitoring for the period of 2019-2022. Detected substances are those substances that were *detected* during routine water testing. Substances *not* detected *will not* appear in this summary. Annual laboratory costs for Pine Grove's drinking water quality monitoring program have been averaging $800.00 per year. Pine Grove water has been assigned an EPA ID number of 0948 (SD4600948). This number is used in all correspondences with the State Office of Drinking Water for water quality issues and testing. All records of testing are retained for a period of not less than ten (10) years. Please contact Kurt Slentz for copies of any water testing or any other water quality questions. Results for the year 2022 can be found on the Pine Grove website; https://pinegrovewater.myruralwater.com/all-forms-and-reports.

As water travels over the land or underground it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some of these constituents. It's important to remember that the presence of these natural constituents does not necessarily pose a health risk.

Chlorine is a disinfectant that is used to eliminate bacteria and pathogens in the water. **<u>At this time, we do not routinely chlorinate the water delivered to your home.</u>** However, we do expect to begin chlorinating the system regularly sometime in the near future. The addition of chlorine will reduce the chance of contamination of the water by bacteria or pathogens. Chlorine could also add some taste and odor to the water. Chlorine addition would also increase the likelihood of trihalomethanes being formed in the water. At this time, we are in compliance with the drinking water bacteria regulations without the addition of this chemical. Because each member has a cistern, information from the State of South Dakota for cistern maintenance is included at the end of this report. **Please review this information; *<u>it is up to each homeowner to maintain their cistern.</u>***

The Pine Grove Community Water System was inspected by the SDDENR, Office of Drinking Water, in June 2022. The inspection did not find any deficiencies in our system. Results of this inspection/survey can be obtained by calling Gerry Broer or Kurt Slentz. The system is expected to be inspected again in 2025.

Table 1 - Required Monitoring for the Pine Grove Community Water System

Total Coliform - One sample is taken, per month, at various locations throughout the water system. The State of South Dakota and the US Environmental Protection Agency (EPA) set drinking water standards and have determined that the presence of total coliforms is a possible health concern. Total coliforms are common in the environment and are generally not harmful themselves. The presence of total coliform bacteria *in drinking water* is an indicator that the water may be contaminated with disease-causing bacteria or that the well may be susceptible to outside contamination.

Inorganic Chemicals - Samples are taken every 3 years for groundwater sources (our well) and annually for surface water sources. These chemicals include Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cyanide, Mercury, Nickel, Selenium, Thallium, and Fluoride. Some sources of contamination include discharge from petroleum refineries, discharge of drilling wastes, discharge from metal refineries, corrosion of galvanized pipes, discharge from mines, and erosion of natural deposits. Inorganic chemicals were tested in 2021; no analyte exceeded the regulatory maximum contaminate limit (MCL).

Asbestos - One representative sample taken from the distribution system every 9 years. A likely source of contamination is the decay of asbestos cement water mains and erosion of natural deposits. Pine Grove has been granted a waiver for asbestos because our water is non-corrosive and our system contains no asbestos pipe.

Nitrite - One sample is taken at each source every three years. Sources of contamination include runoff from fertilizer use, leaching from septic tanks, sewage, and erosion of natural deposits.

Nitrate – Samples are taken annually on groundwater sources and every quarter on surface water sources. Sources of contamination include runoff from fertilizer use, leaching from septic tanks, sewage, and erosion of natural deposits. **The 02-16-2022 test for nitrate detected nitrate at 0.627 mg/L.**

Radiological - One representative sample is taken every nine (9) years. A likely source of contamination is decay and erosion of natural deposits. Radionuclides were tested in 2022; none of the radionuclides exceeded regulatory limits.

Synthetic Organic Contaminants (SOC's) including Pesticides and Herbicides - Samples are taken at each groundwater source every 3 years. Sources of contamination include discharge from chemical factories, leaching of certain soils, leaching from insecticides, and runoff from herbicides. Pine Grove has applied for and has been granted a waiver for some of the SOCs on the groundwater source because this source is not as susceptible to contamination. As with most SOC waivers in the Black Hills, this waiver was rescinded in 2005. SOC's were sampled and tested in 2022; **no SOC's were detected in 2022**. Testing for SOCs is scheduled again for 2025.

Total Trihalomethanes (TTHM) - One representative sample taken annually for groundwater. Surface water is sampled quarterly. The source of contamination is the by-product of drinking water chlorination. Pine Grove is not required to test for trihalomethanes because we do not chlorinate the water at this time. A voluntary TTHM test was conducted in January 2021 to ascertain any TTHM concentrations during chlorination activities. This test showed a TTHM concentration of <2.00 ppb. The highest level of TTHM that is allowed in drinking water (the "MCL") is 80 ppb.

Turbidity - The contamination source is usually soil runoff. Pine Grove is a groundwater system and does not test for turbidity.

Volatile Organic Contaminants (VOCs) including Regulated and Unregulated - Samples are taken at each groundwater source every 3 years. Surface water is sampled yearly. Likely sources of contamination include discharge from factories, leaching from gas storage tanks and landfills, discharge from chemical plants, discharge from industrial plants and petroleum refineries. Pine Grove tested for VOCs in 2022. **None of the regulated VOCs were detected in 2022.**

Lead and Copper – 5 representative samples are taken from designated residences every three years. Sources of contamination include corrosion of household plumbing systems and erosion of natural deposits. Pine Grove tested for lead and copper in 2022. Lead and copper testing did not exceed the regulatory guidelines for the 90th percentile in 2022 for either lead or copper.

Table 2 - Detected substances for Pine Grove's 2022 Water Quality Report

TEST RESULTS

Substance	Violation Y/N	Unit	MCL	MCLG	Highest Level Detected	Range	Major Sources of Contamination
Microbiological							
1. Total Coliform Bacteria **No Violations in 2022.**	N	Present/ Absent	Absent	0	presence of coliform bacteria in 5% of monthly samples	NA	Naturally present in the environment
Inorganic							
2. Fluoride (Tested 01-10-2021)	N	ppm	4	2	0.328	0-1	Erosion of natural deposits; water additive, which promotes strong teeth.
3. Lead * (Tested 09-16-2022)	N	ppb	AL=15	0	11 (90%) #	0-5	Corrosion of household plumbing systems; Erosion of natural deposits.
4. Copper** (Tested 09-16-2022)	N	ppm	AL=1.3	0	0.1 (90%) #	0.020 -0.89	Corrosion of household plumbing systems; Erosion of natural deposits.
5. Nitrate (as Nitrogen) (Tested 02-16-2022)	N	ppm	10	10	0.627	0-1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
6. Barium (Tested 01-10-2021)	N	ppm	2	2	0.180	0-1	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
7. Alpha Emitters (Tested 03-31-2022)	N	pCi/L	15	0	1.17	0-1	Erosion of natural deposits.
8. Combined Radium (Tested 03-31-2022)	N	pCi/L	5	0	1	0-1	Erosion of natural deposits.
Volatile Organics - (tested 03-03-2022) – **no compounds detected**							
Synthetic Organic Compounds - (tested 03-10-2022) – **no compounds detected**							
Unregulated Substances - (tested 04-04-2019) – **no compounds detected**							
8. Total Dissolved Solids (Tested 04-04-2019)	N	ppm	N/A	N/A	214	N/A	Water over 250 ppm may have a bitter taste and laxative effect on persons not adapted to the water.

Key to Table 2.
ND = No Detects. Laboratory analysis indicates that the constituent is not present.
ppm = parts per million, or milligram per liter (mg/l).
ppb = parts per billion, or microgram per liter (µg/l).
ppt = parts per trillion, or nanogram per liter (ng/l).
ppq = parts per quadrillion, or picogram per liter (pg/l).
pCi/L = picocuries per liter is a measure of the radioactivity in water.
NTU = nephelometric turbidity unit is a measure of the clarity of water. Turbidity above 5 NTU is just noticeable to the average person.
V&E = Variances and Exemptions. State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
AL = Action Level or the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
TT = Treatment Technique - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
MCL = Maximum Contaminant Level - The "Maximum Allowed" (MCL) is 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.
MCLG = Maximum Contaminant Level Goal - The "Goal"(MCLG) is the level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

*Lead -Five lead samples were taken from various customer taps in 2022. The 90% (90 percentile) level was 11 ppb.
Copper - Five copper samples were taken from various customer taps in 2022. The 90% (90 percentile) level was 0.1 ppm. ***None of the samples taken exceeded the action level of 1.3ppm copper.*
- According to the State of South Dakota drinking water rules: systems collecting 5 lead and copper samples, the 90th percentile is measured by the average of the highest and the second highest concentrations.

"Coliforms" are a type of bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present in the water.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man-made. These substances can be microbes, inorganic or organic chemicals, and naturally occurring radioactive substances. All 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 the 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 at 1-800-426-4791.

Maximum Contaminant Levels for drinking water contaminants (MCLs) are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters (approximately 2.11 quarts) of water every day at the MCL level **for a lifetime** to have a **one-in-a-million chance** of having the described health effect.

Nitrates: As a precaution, we always notify physicians and health care providers in this area if there is ever a higher than normal level of nitrates in the water supply.

Lead: Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced, or reduced.

Waivers: Pine Grove was granted an asbestos waiver from the South Dakota Department of Environment and Natural Resources on 2/23/95. The waiver was renewed on September 28, 2019. This waiver was granted because Pine Grove Community Water Association water is non-corrosive and because of our system construction, which will not leach asbestos materials from the water distribution system. Pine Grove has applied for a waiver for Synthetic Organic Compounds (SOC) on our groundwater source. The groundwater source is deep in the Madison aquifer and is constructed in a manner that minimizes the threat of contamination at the wellhead. Most SOC waivers for systems in the Black Hills have been rescinded by the SDDENR. Therefore, Pine Grove tested for the entire list of SOC compounds in 2022 and will test again in 2025. A waiver for inorganic chemicals (IOC) is available to Pine Grove. The board of directors has decided to <u>not</u> waive the IOC test at this time as the test is relatively inexpensive and a very good measure of the overall water quality. IOCs were tested in 2021. Results for the 2021 IOC testing are available upon request.

In our continuing efforts to maintain a safe and dependable water supply, it may be necessary to make improvements in your water system. The costs of these improvements are reflected in the rate structure. The water distribution system is constantly being upgraded to maintain service dependability and fire protection for all of our members.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

We at the Pine Grove Community Water Association work hard to provide top-quality water to every tap. We ask that all our customers help us protect our water sources, which are at the heart of our community, our way of life, and our children's future.

Kurt R. Slentz (Cell phone: 605-545-2882)
SD Certified Operator #1528
Pine Grove Community Water Association