

ALPINE LAKES RANCH WC 2019 Drinking Water Quality Report For Calendar Year 2018

Public Water System ID: CO0104090

Esta es información importante. Si no la pueden leer, necesitan que alguien se la traduzca.

We are pleased to present to you this year's water quality report. Our constant goal is to provide you with a safe and dependable supply of drinking water. Please contact Loyd Robeson at 970-264-0606 with any questions or for public participation opportunities that may affect water quality.

General Information

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 (1-800-426-4791) or by visiting <http://water.epa.gov/drink/contaminants>.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and microbiological contaminants call the EPA Safe Drinking Water Hotline at (1-800-426-4791).

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. Contaminants that may be present in source water include:

- Microbial contaminants:** viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants:** salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides:** may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
- Radioactive contaminants:** can be naturally occurring or be the result of oil and gas production and mining activities.
- Organic chemical contaminants:** including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.

In order to ensure that tap water is safe to drink, the Colorado Department of Public Health and Environment prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Lead in Drinking Water

If present, elevated levels of lead can cause serious health problems (especially for pregnant women and young children). It is possible that lead levels at your home may be higher than other homes in the community as a result of materials used in your home's plumbing. If you are concerned about lead in your water, you may wish to have your water tested. 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. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

Source Water Assessment and Protection (SWAP)

The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment Report for our water supply. For general information or to obtain a copy of the report please visit www.colorado.gov/cdphe/ccr. The report is located under "Guidance: Source Water Assessment Reports". Search the table using 104090, ALPINE LAKES RANCH WC, or by contacting Loyd Robeson at 970-264-0606. The Source Water Assessment Report provides a screening-level evaluation of potential contamination that **could** occur. It **does not** mean that the contamination **has or will** occur. We can use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help us ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan. Potential sources of contamination in our source water area are:

Natural mineral deposits, residential onsite wastewater systems (septic systems), livestock, and runoff from agricultural operations (e.g., control of noxious weeds).

Our Water Sources

<u>Sources (Water Type - Source Type)</u>	<u>Potential Source(s) of Contamination</u>
ALPINE MEADOWS UPPER WELL (Groundwater-Well) ALPINE MEADOWS LOWER WELL (Groundwater-Well) HEADQUARTERS 1 WELL (Groundwater-Well) HEADQUARTERS 2 WELL (Groundwater-Well) ELK RIDGE 1 WELL (Groundwater-Well) ELK RIDGE 2 WELL (Groundwater-Well) WELL NO 4 (Groundwater-Well) WELL NO 5 (Groundwater-Well) HAULED WATER FROM WELL ON WHEELS 234837 (Surface Water-Non-Piped, Purchased) HAULED WATER FROM WATER RUNNER 204833 (Surface Water-Non-Piped, Purchased)	<p>SWAP REPORT for Alpine Lakes Ranch Water Company was reviewed by John Colbert from CDPHE and no Potential Source(s) of Contamination were identified.</p>

Terms and Abbreviations

- **Maximum Contaminant Level (MCL)** – The highest level of a contaminant allowed in drinking water.
- **Treatment Technique (TT)** – A required process intended to reduce the level of a contaminant in drinking water.
- **Health-Based** – A violation of either a MCL or TT.
- **Non-Health-Based** – A violation that is not a MCL or TT.
- **Action Level (AL)** – The concentration of a contaminant which, if exceeded, triggers treatment and other regulatory requirements.
- **Maximum Residual Disinfectant Level (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 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 Residual Disinfectant Level Goal (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.
- **Violation (No Abbreviation)** – Failure to meet a Colorado Primary Drinking Water Regulation.
- **Formal Enforcement Action (No Abbreviation)** – Escalated action taken by the State (due to the risk to public health, or number or severity of violations) to bring a non-compliant water system back into compliance.
- **Variance and Exemptions (V/E)** – Department permission not to meet a MCL or treatment technique under certain conditions.
- **Gross Alpha (No Abbreviation)** – Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222, and uranium.
- **Picocuries per liter (pCi/L)** – Measure of the radioactivity in water.
- **Nephelometric Turbidity Unit (NTU)** – Measure of the clarity or cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the typical person.
- **Compliance Value (No Abbreviation)** – Single or calculated value used to determine if regulatory contaminant level (e.g. MCL) is met. Examples of calculated values are the 90th Percentile, Running Annual Average (RAA) and Locational Running Annual Average (LRAA).
- **Average (x-bar)** – Typical value.
- **Range (R)** – Lowest value to the highest value.
- **Sample Size (n)** – Number or count of values (i.e. number of water samples collected).
- **Parts per million = Milligrams per liter (ppm = mg/L)** – One part per million corresponds to one minute in two years or a single penny in \$10,000.
- **Parts per billion = Micrograms per liter (ppb = ug/L)** – One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- **Not Applicable (N/A)** – Does not apply or not available.

- **Level 1 Assessment** – 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 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 water system on multiple occasions.

Detected Contaminants

ALPINE LAKES RANCH WC routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table(s) show all detections found in the period of January 1 to December 31, 2018 unless otherwise noted. The State of Colorado 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, or the system is not considered vulnerable to this type of contamination. Therefore, some of our data, though representative, may be more than one year old. Violations and Formal Enforcement Actions, if any, are reported in the next section of this report.

Note: Only detected contaminants sampled within the last 5 years appear in this report. If no tables appear in this section then no contaminants were detected in the last round of monitoring.

Disinfectants Sampled in the Distribution System						
TT Requirement: At least 95% of samples per period (month or quarter) must be at least 0.2 ppm <u>OR</u> If sample size is less than 40 no more than 1 sample is below 0.2 ppm						
Typical Sources: Water additive used to control microbes						
Disinfectant Name	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL
Chlorine	December, 2018	<u>Lowest period</u> percentage of samples meeting TT requirement: 100%	0	1	No	4.0 ppm

Assessments for Microorganism Contaminants Sampled in the Distribution System		
Contaminant Name	TT Requirement	TT Violation
Total Coliform	We were required to conduct an assessment of our system due to one of the following: More than 5.0% positive samples per period (If sample size is greater than or equal to 40) <u>OR</u> More than 1 positive sample per period (If sample size is less than 40) <u>OR</u> Repeat samples not collected after positive sample.	No

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct 1 Level 1 assessment. 1 Level 1 assessment was completed. In addition, we were required to take 1 corrective actions and we completed 1 of these actions.

Lead and Copper Sampled in the Distribution System								
Contaminant Name	Time Period	90 th Percentile	Sample Size	Unit of Measure	90 th Percentile AL	Sample Sites Above AL	90 th Percentile AL Exceedance	Typical Sources
Copper	08/07/2018 to 08/07/2018	0.48	5	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Lead	08/07/2018 to 08/07/2018	2.2	5	ppb	15	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
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Disinfection Byproducts Sampled in the Distribution System

Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Total Haloacetic Acids (HAA5)	2018	28.5	28.5 to 28.5	1	ppb	60	N/A	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	2018	67.9	67.9 to 67.9	1	ppb	80	N/A	No	Byproduct of drinking water disinfection

Radionuclides Sampled at the Entry Point to the Distribution System

Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Gross Alpha	2018	2.8	2.8 to 2.8	1	pCi/L	15	0	No	Erosion of natural deposits
Combined Radium	2018	0.72	0.72 to 0.72	1	pCi/L	5	0	No	Erosion of natural deposits
Gross Beta Particle Activity	2015	4.23	3.7 to 5.2	3	pCi/L*	50	0	No	Decay of natural and man-made deposits

*The MCL for Gross Beta Particle Activity is 4 mrem/year. Since there is no simple conversion between mrem/year and pCi/L EPA considers 50 pCi/L to be the level of concern for Gross Beta Particle Activity.

Inorganic Contaminants Sampled at the Entry Point to the Distribution System

Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Barium	2018	0.09	0.09 to 0.09	1	ppm	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	2018	0.3	0.3 to 0.3	1	ppm	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	2018	0.13	0 to 0.31	3	ppm	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Secondary Contaminants**

**Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin, or tooth discoloration) or

aesthetic effects (such as taste, odor, or color) in drinking water.

Contaminant Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	Secondary Standard
Sodium	2018	157	157 to 157	1	ppm	N/A

Violations, Significant Deficiencies, Backflow/Cross-Connection, and Formal Enforcement Actions

No Violations or Formal Enforcement Actions

Additional Information

Additional information provided by Alpine Lakes Ranch Water Co.:

Corrosion Control Program

Prior to 2007 ALRWATCO measured lead and copper levels in drinking water collected from 10 homes in Alpine Lakes Ranch. This testing was required by the Lead and Copper Rule established by the U.S. Environmental Protection and the State of Colorado. Copper was detected in some homes at a level above the 1.3 ppm (parts-per-million) Action Level (AL). Lead content was below its AL. Since all homes in Alpine Lakes Ranch were built in the late 1990's or later (after lead solder was banned from plumbing installations), the presence of elevated copper has been attributed to corrosion of residential plumbing by the water supplied from the wells in Alpine Lakes Ranch. Well water tested in February 2005 and again in February 2006 contained lead and copper below levels mandated by CDPHE. In 2008 ALRWATCO was directed to implement additional water treatment to reduce the corrosive character of Alpine Lakes Ranch water and thereby reduce the copper content of drinking water below the 1.3 ppm (parts-per-million) Action Level. Specific actions to accomplish this objective include:

- The corrosiveness of Alpine Lakes Ranch water was modeled by a local engineering firm (Briliam Engineering) and determined to be slightly corrosive.
- Briliam identified an appropriate approach for corrosion control in which 1 part-per-million residual concentration of orthophosphate is maintained in the water system to prevent copper release from metal in the water system and in residences. The corrosion control material is approved for use in potable water supplies and is certified by the National Sanitation Foundation (NSF).

The water system was found to be in compliance with the Lead and Copper rule after testing was completed in June of 2009. The corrosion control inhibitor will continue to be maintained in the system.

Residential Cisterns

Many property owners in Alpine Lakes Ranch installed residential cisterns when they built their homes. While cisterns bring a number of benefits, they also introduce potential avenues for contamination of drinking water. Consequently, the Water Quality Control Division of Colorado Department of Public Health and Environment (CDPHE) expects that Alpine Lakes Ranch Water Company (ALRWATCO) will make available the following services to owners of residential cisterns:

- A annual notice of required bacteriological testing and a list of qualified companies that can perform the test for water originating from each residential cistern, unless a property owner waives that testing. Note: If bacteriological contamination is detected in an initial test and a retest, then the qualified company should inspect the cistern to determine if the contamination may have been introduced due to the physical condition of the cistern.
- Information on proper procedures to disinfect a cistern.

Information concerning residential cisterns, testing, and disinfection is available on the company website www.alrwatco.com or you can contact a member of the ALRWATCO Board of Directors.