

ANNUAL WATER QUALITY REPORT

Reporting Year 2022

Presented By

Ruidoso Water System



Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2022. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and water infrastructure improvements while continuing to serve the needs of all our water users.



Water Department Accomplishments in 2022



- No violations.
- Rehabilitation of the Alto Crest water treatment plant.
- Completion of numerous mitigation projects due to the McBride Fire.
- Rehabilitation of Brown and Fault Wells.
- Town and Country Water/Sewer and Street Rehabilitation/Replacement Project.
- Two Rivers Park Restoration Project.
- Fabrication of new country club pump house building and installation of three-phase pump and variable frequency drive.
- Installation of three-phase pumps and variable frequency drives at Doghouse, Black Forest, and Reservoir pump houses.
- Annual inspection of the Alto and Grindstone Dams by Office of the State Engineer Dam Safety Bureau.
- Grindstone Dam spillway and dam concrete repair assessment and design.
- Grindstone and Alto Lake Dam outlet works inspection and survey.
- Tank restoration phase 1 design.
- Annual emergency generator inspection/service at Grindstone and Alto Crest water treatment plants.
- Annual calibration of meters and lab equipment at Grindstone and Alto Crest water treatment plants.
- Quarterly meter testing/inspections on production meters.
- Pipe painting and labeling project at Grindstone clearwell.
- Influent piping recoated and installed pipe labeled at Alto Crest water treatment plant.
- Biannual Grindstone Dam crest surveys.
- Installation of three mud valve actuators at the Alto Crest water treatment plant.

Source Water Assessment

A source water assessment was completed for our system in 2005. The purpose of the assessment was to determine the susceptibility of each drinking water source to potential contaminant sources. The report includes background information and a relative susceptibility rating of higher, moderate, or lower. It is important to understand that a susceptibility rating of higher does not imply poor water quality, only the system's potential to become contaminated within the assessment area.

A Source Water Protection Plan (SWPP) was prepared and completed in 2014 by the Village of Ruidoso and the New Mexico Environment Department Drinking Water Bureau. The SWPP is currently being updated. In addition to establishing measures to monitor and protect Ruidoso's sources of drinking water, this plan also assembles valuable information about hydrogeology and water sources into a single document that can serve as an important reference in the future. The SWPP and assessment report are available at www.ruidoso-nm.gov.

Important Health Information

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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines

on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please contact Randy Koehn, Water Production Manager, at (575) 973-5866.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 may also come from gas stations, urban stormwater runoff, and septic systems; Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Where Does My Water Come From?

Water supply for the Village of Ruidoso is delivered from a combination of surface and groundwater sources in the Ruidoso and Eagle Creek watersheds. Consequently, the village's ability to produce surface water from these sources is greatly affected by temperature and precipitation and can significantly change from year to year. The Village of Ruidoso works diligently to deliver safe drinking water in a systematic approach, balancing all sources of water supply. Water delivered in 2022 complied with all safe drinking water standards.

Water Treatment Process

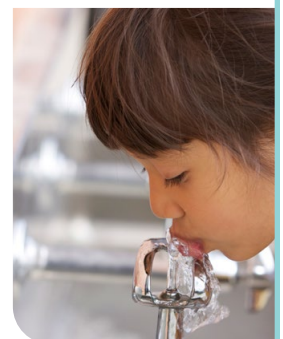
Your water is treated in a treatment train (a series of processes applied in a sequence) that includes coagulation, flocculation, sedimentation, filtration, and disinfection. Coagulation removes dirt and other particles suspended in the source water by adding chemicals (coagulants) to form tiny, sticky particles called floc, which attract the dirt particles. Flocculation (the formation of larger flocs from smaller flocs) is achieved using gentle, constant mixing. The heavy particles settle naturally out of the water in a sedimentation basin. The clear water then moves to the filtration process, where it passes through sand, gravel, charcoal, or other filters that remove even smaller particles.



Chlorine is added again as a precaution to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water before it is stored and distributed to homes and businesses in the community. We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.

Additional Information for Lead

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. We are responsible for providing high-quality drinking water, but we 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 two 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 at (800) 426-4791 or www.epa.gov/safewater/lead.



Water Quality Data Table

In order to ensure that tap water is safe to drink, U.S. EPA prescribes regulations which limit the amount of substances in water provided by public water systems. The table below lists all substances detected during the calendar year. Although we tested for many more substances, only the substances listed below were found in your water. Remember, detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels. We are pleased to report that your drinking water meets or exceeds all federal and state requirements.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2019	15	0	3	ND–3	No	Erosion of natural deposits
Barium (ppm)	2022	2	2	0.068	0.02–0.068	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beta/Photon Emitters (pCi/L)	2019	50 ¹	0	2.9	ND–2.9	No	Decay of natural and human-made deposits
Chlorine (ppm)	2022	[4]	[4]	1	0.7–1	No	Water additive used to control microbes
Combined Radium (pCi/L)	2019	5	0	0.87	0.06–0.87	No	Erosion of natural deposits
Fluoride (ppm)	2022	4	4	1.2	0.31–1.2	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2022	60	NA	30.1	1.2–34.3	No	By-product of drinking water disinfection
Selenium (ppb)	2022	50	50	1.6	ND–1.6	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2022	80 ²	NA	76.5	9.32–94.5	No	By-product of drinking water disinfection
Turbidity ³ (NTU)	2022	TT	NA	0.28	0.01–0.28	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2022	TT = 100% of samples meet the limit	NA	100	NA	No	Soil runoff
Uranium (ppb)	2019	30	0	4	ND–4	No	Erosion of natural deposits
Tap water samples were collected for lead and copper analyses from sample sites throughout the community							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2020	1.3	1.3	0.2	0/30	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2020	15	0	6.4	0/30	No	Lead service lines; corrosion of household plumbing systems, including fittings and fixtures; erosion of natural deposits

¹The MCL for beta particles is 4 millirems per year. U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.

²Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.

³Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system. 100% of samples were below the TT value of 0.3 NTU. A value lower than 95% constitutes a TT violation. The highest single measurement was 0.28 NTU. Any measurement in excess of 1 NTU is a violation unless otherwise approved by the state.

Count on Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete regularly include:

- Operating and maintaining equipment to purify and clarify water.
- Monitoring and inspecting machinery, meters, gauges, and operating conditions.
- Conducting tests and inspections on water and evaluating the results.
- Maintaining optimal water chemistry.
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels.
- Documenting and reporting test results and system operations to regulatory agencies.
- Serving our community through customer support, education, and outreach.

So the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.



Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

MCL (Maximum Contaminant Level): 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 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.

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 (Maximum Residual Disinfectant Level Goal): 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.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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