



# ANNUAL WATER QUALITY REPORT

Reporting Year 2023



*Presented By*






## Our Commitment Continues

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your sources of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

### 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 on a regular basis 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.

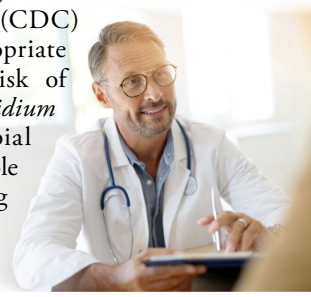
So, the next time you turn on your faucet, think of the skilled professionals in the Village of Ruidoso who stand behind each drop.

### Lead in Home Plumbing

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 [epa.gov/safewater/lead](http://epa.gov/safewater/lead).

### 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. Environmental Protection Agency (EPA)/Centers for Disease Control and Prevention (CDC) 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 [water.epa.gov/drink/hotline](http://water.epa.gov/drink/hotline).



### 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 that 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 as a precaution to kill bacteria and other microorganisms (viruses and cysts) 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.

### 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.

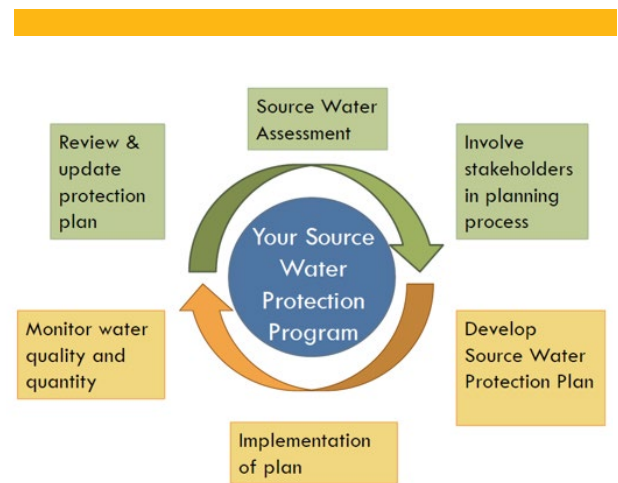
For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## 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 higher susceptibility rating does not imply poor water quality, only the system's potential to become contaminated within the assessment area.

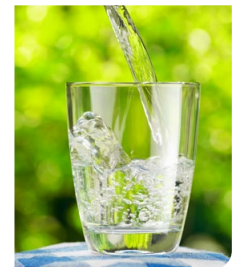
A Source Water Protection Plan (SWPP) was prepared and completed in 2014 by the Village of Ruidoso and the New Mexico Environmental Department Drinking Water Bureau. The SWPP is currently being updated. In addition to establishing measures to monitor and protect Ruidoso's sources of drinking water, this plan also assembles valuable information about Ruidoso's 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 [ruidoso-nm.gov](http://ruidoso-nm.gov).

### SOURCE WATER PROTECTION PLANNING PROCESS



## 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 drinking 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 2023 complied with all safe drinking water standards.



## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that 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.

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.

We participated in the fifth stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR5) program by performing additional tests on our drinking water. UCMR5 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water to determine if it needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2023	15	0	6.9	ND–6.9	No	Erosion of natural deposits
Barium (ppm)	2023	2	2	0.075	0.026–0.075	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters (pCi/L)	2023	50 <sup>1</sup>	0	4.1	ND–4.1	No	Decay of natural and human-made deposits
Chlorine (ppm)	2023	[4]	[4]	1	1.0–1.0	No	Water additive used to control microbes
Combined Radium (pCi/L)	2023	5	0	0.83	0.04–0.83	No	Erosion of natural deposits
Fluoride (ppm)	2023	4	4	1.13	0.32–1.13	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2023	60	NA	27.9	1.28–33.0	No	By-product of drinking water disinfection
Nitrate (ppm)	2023	10	10	0.53	0.2–0.53	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2023	80	NA	71.5	7.68–73.0	No	By-product of drinking water disinfection
Turbidity <sup>2</sup> (NTU)	2023	0.3	NA	0.65	NA	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2023	0.3	NA	100%	NA	No	Soil runoff
Uranium (ppb)	2023	30	0	5	ND–5	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)	2023	1.3	1.3	0.2	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2023	15	0	4.1	0/30	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

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

<sup>2</sup>Turbidity 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.

## Water Department Accomplishments in 2023

- No violations.
- Grindstone Canyon Dam Principal Spillway and North Dam Crest Concrete Repair Project.
- Approval of the Grindstone Canyon Dam and Alto Lake Dam Outlet Works Video Survey Observation Report by Office of the State Engineer, Dam Safety Bureau.
- Sedimentation and rock removal from 48-inch-diameter line at Grindstone Dam.
- Installation of a new camera system at Grindstone water treatment plant.
- Rehabilitation of Filter 1 at Grindstone water treatment plant.
- Replacement of #1 pump/motor at Alto Crest water treatment plant.
- Rehabilitation of the interior of Alto pumphouse.
- Installation of new clearwell mixer at Alto Crest water treatment plant.
- Installation of tank mixers at Grindstone storage tanks.
- Annual inspections of Alto and Grindstone Dams by Office of the State Engineer, Dam Safety Bureau.
- Annual Grindstone Dam Crest survey.
- Annual Grindstone Reservoir water quality testing.
- North Fork Control Building addition.
- Installation of three-phase pumps and variable frequency drive at Klamath pumphouse.
- System upgraded to permanent mag design at Green and Hollywood Wells to increase pumping efficiency.
- Installation of new submersible pump/motor and replacement of 420 feet of four-inch-diameter pipe at North Fork Well 4.



- Installation of submersible pump/motor and replacement of 509 feet of four-inch-diameter pipe at North Fork Well 3.
- Installation of new submersible pump/motor at Well A-1.
- Installation of transducers at critical wells.
- Installation of supervisory control and data acquisition (SCADA) at all critical water storage tanks, pressure-reducing valves, wells, pumphouses, and water treatment plants.
- Installation of 480 feet of six-inch-diameter water line, seven water taps, and one fire hydrant on Mary Drive.
- Annual emergency generator inspection and 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 testing and inspection of production meters.
- Water sample collection for lead and copper analyses from 30 sites throughout the community.
- Quarterly sampling for fifth phase of U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR5).

## 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.