



GWR
Global Water Resources

2023 Water Quality Report

Global Water – Santa Cruz Water Company –
Red Rock

AZ04-11-160

Global Water Resources is pleased to present the annual drinking water quality report. (Consumer Confidence Report) for calendar year 2023. This report contains important information about the quality and safety of your water.

Spanish (Español)

Este informe contiene información muy importante sobre la calidad de su agua para beber. Tradúscalo o hable con alguien que lo entienda bien.

Customer Resources

Global Water's customer assistance program helps customers for the following purposes:

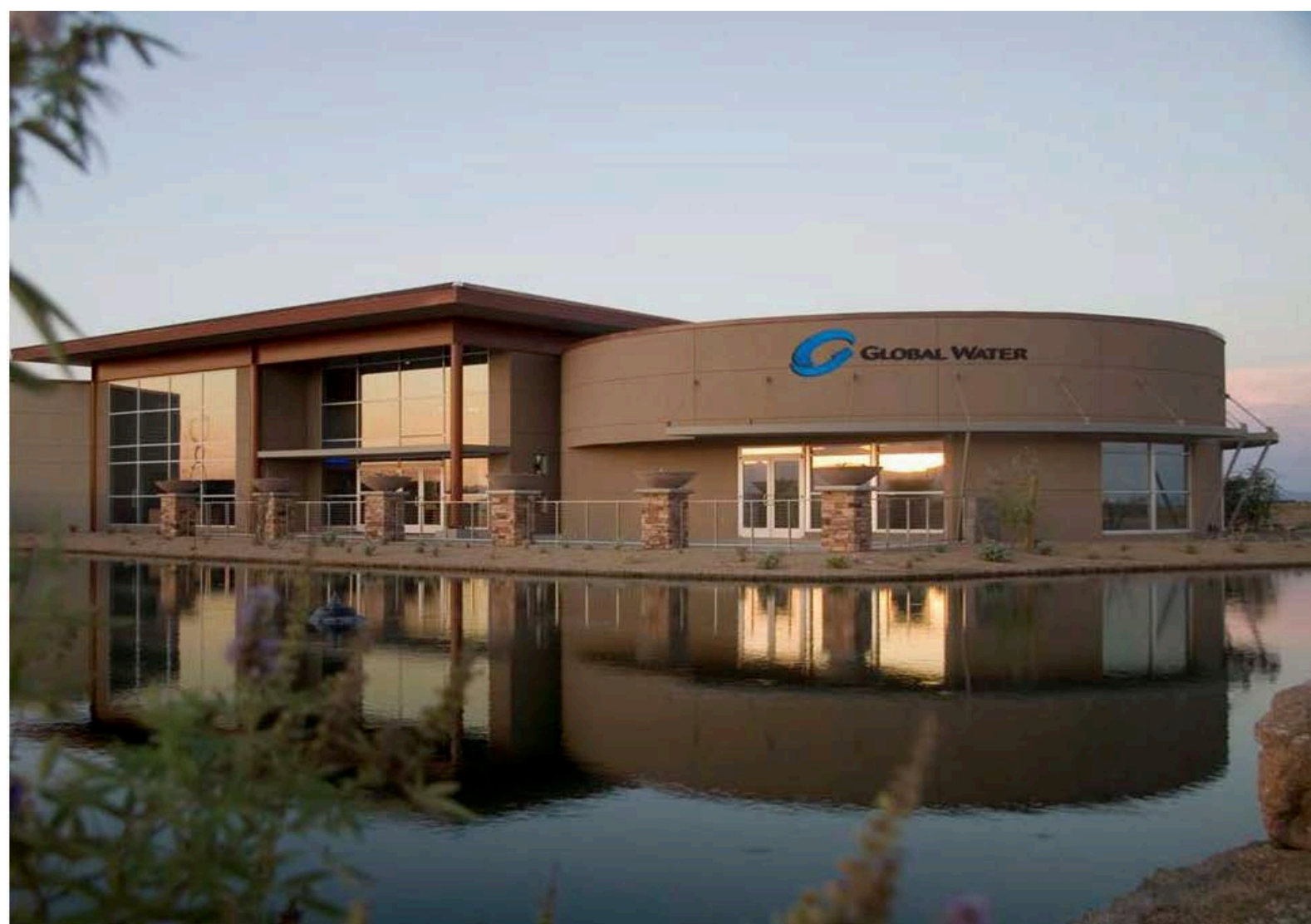
- Low-Income Assistance
- Deployed Service Member Assistance
- Disabled Veteran Assistance
- Furloughed Worker Assistance
- Medical Hardship Assistance

If you are a Global Water customer who is in need of assistance, you can find more information about our Customer Assistance Program at:

<https://www.gwresources.com/customer-assistance> or you can call us at 866-940-1102.

Customer Portal: <https://gwresources.watersmart.com/index.php/welcome>

- View and pay your bill on-line or on your smart phone.
- Set up automatic payments.
- View monthly reads.
- Manage multiple accounts.
- Provide account access to multiple people.



What is a Consumer Confidence Report (CCR)?

The purpose of a CCR is to improve public health protection by providing educational material that allows consumers to make educated decisions regarding any potential health risks pertaining to the quality, treatment, and management of their drinking water supply. To ensure that tap water is safe to drink, the United States Environmental Protection Agency (EPA) prescribes regulations which limit the concentration of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish equivalent limits for contaminants in bottled water which must provide the same protection for public health. This report provides a summary of the water quality tests and measurements taken in 2023 for this Public Water System.

To learn more about how to help protect your drinking water sources, any details provided in this report, or to attend a scheduled public meeting please contact Jon Corwin or Holly Wilson at the GWR office at (866) 940 - 1102 or visit our website at www.gwresources.com. For more information about drinking water contaminants, their regulations and potential health effects, call the EPA Safe Drinking Water Hotline at 1-800-426-4791.



Water Source and Distribution System

The water source for Global Water – Santa Cruz Water Company – Red Rock is groundwater. Currently, Red Rock uses two wells. Groundwater from these wells is pumped into one storage tank, also called a reservoir. Reservoirs are also used for continuous supply and to guarantee adequate fire protection water flows. There are 117 fire hydrants within the system that are flushed and maintained regularly. Flushing of the hydrants assures that they are operable and helps move water throughout the system while improving water quality.

Red Rock uses sodium hypochlorite for disinfection of the water. Groundwater in Arizona is low in Total Organic Carbon (TOC). When sodium hypochlorite is added to water, it reacts with TOC to form disinfection byproducts. Due to low TOC content, these byproducts are low in potable water that originates from groundwater.

Global Water Resources monitors drinking water from the source, from the entry point into the distribution system, and in some cases from the taps of individual homes.

Backflow and Cross-Connection

To protect consumers from contamination caused by backflow through unprotected cross connections, Global Water requires installation and periodic testing of backflow prevention assemblies. Water pressure in drinking water pipes both commercial or residential can suddenly drop during high water use in homes or in the distribution system (firefighting, water main break etc.) The Global Water Backflow/Cross Connection Control Program assures that these assemblies are tested and maintained as needed.

Source Water Assessment (SWA)

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land 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. The Arizona Department of Environmental Quality (ADEQ) evaluates each water source used by public water systems (PWS) in Arizona. These evaluations assess the hydrogeology of drinking water sources to determine the quality of groundwater being drawn into wells, the watersheds supplying surface water and the surveyed land being used for activities occurring near drinking water sources. This PWS did not receive a SWA from ADEQ because the PWS was either inactive at the time or the PWS did not exist.

Drinking Water Contaminants

The sources of drinking water (both tap 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**, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- ✦ **Inorganic contaminants**, such as salts and metals 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**, such as agriculture, urban storm water runoff, and residential uses that may come from a variety of sources.
- ✦ **Organic chemical contaminants**, such as synthetic and volatile organic chemicals are by-products of industrial processes and petroleum production, and may also come from gas stations, urban storm water runoff, and septic systems.
- ✦ **Radioactive contaminants**, that can be naturally occurring or be the result of oil and gas production and mining activities.

Potential Contaminants of Concern

- ✦ **Arsenic:** If arsenic is less than or equal to the MCL, your drinking water meets EPA's standards. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.
- ✦ **Nitrate:** Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.
- ✦ **Lead:** Lead, in drinking water, is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Red Rock Water Company is responsible for providing high quality drinking water but cannot control the variety of materials used in residential plumbing components. When your water has been sitting for several hours, you can reduce the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. 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 www.epa.gov/safewater/lead.

Additional Health Information

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. Some people may be more vulnerable to contaminants in drinking water than the general population.

Some people 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 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. 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.

Key Definitions

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

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

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected health risk.

Maximum Residual Disinfectant Level (MRDL): The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of disinfectant added for treatment at which no known or anticipated adverse effect on health of persons would occur.

Not Detected (ND or <): Not detectable at reporting limit.

Not Applicable (NA): Sampling was not completed by regulation or was not required.

ppm: Parts per million or Milligrams per liter (mg/L)

ppb: Parts per billion or Micrograms per liter (µg/L)

ppt: Parts per trillion or Nanograms per liter (ng/L)

pCi/L: Measure of the radioactivity in water

WATER QUALITY TABLES

2023 Water Quality Data Tables – GW – Santa Cruz Water Company - Red Rock

Primary Contaminants

Analyte	Unit	MCL, TT, or MRDL	MCLG or MRDLG	Range (Avg)	Likely Source of Contamination	
Inorganic Contaminants						
Arsenic	2021	ppb	10	0	3.2	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Fluoride	2021	ppm	4	4	0.44	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	2023	ppm	10	10	3.5	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Chromium	2021	ppb	100	100	1.2	Discharge from steel and pulp mills; erosion of natural deposits
Barium	2021	ppm	2	2	0.1	Discharge from drilling waste; discharge from metal refineries; erosion of natural deposits
Radionuclide Contaminants						
Combined Radium	2018	pCi/L	5	5	<0.6	Erosion of natural deposits
Alpha Emitters	2018	pCi/L	15	15	3.9	Erosion of natural deposits

Secondary Contaminants

Analyte	Unit	MCL, TT, or MRDL	MCLG or MRDLG	Range (Avg)	Likely Source of Contamination	
Hardness as CaCo3	2019,2021	ppm	NA	NA	78-110 (94)	Naturally present in the environment
Magnesium	2019,2021	ppm	NA	NA	<2-4.3 (2.15)	Naturally present in the environment
Sodium	2019,2021	ppm	NA	NA	42-47 (44.3)	Naturally present in the environment
Sulfate	2019,2021	ppm	NA	NA	37-51 (44)	Naturally present in the environment
Calcium	2019,2021	ppm	NA	NA	31-39 (35)	Naturally present in the environment
Alkalinity	2019,2021	ppm	NA	NA	140	Naturally present in the environment
Total Dissolved Solids (TDS)	2019,2021	ppm	NA	NA	260-290 (275)	Naturally present in the environment

Disinfection and Disinfection By-Products (DBPs)

Analyte	Unit	MCL, TT, or MRDL	MCLG or MRDLG	Range (Avg)	Likely Source of Contamination	
Chlorine	2023	ppm	4	4	0.3-1.7 (0.9)	Water additive used to control microbes
Total Trihalomethanes (TTHM)	2023	ppb	80	NA	8.1-23 (15.55)	By-product of drinking water disinfection
Haloacetic Acids (HAA5)	2023	ppb	60	NA	<2	By-product of drinking water disinfection

Lead and Copper

Analyte	Unit	AL	Sampling	90th Percentile	Likely Source of Contamination	
Copper	2023	ppm	1.3	13 Samples from consumer's tap	0.0275	Corrosion of household plumbing systems; erosion of natural deposits
Lead	2023	ppb	15	13 Samples from consumer's tap	<0.5	Corrosion of household plumbing systems; erosion of natural deposits

Revised Total Coliform Rule (RTCR) - Microbiological

Microbiological	MCL/ MCLG	Number of Positive Samples	Number of Negative Samples	Violation Y or N	Likely Source of Contamination	
E. Coli	2023	0	0	42	N	Human and animal fecal waste
Fecal Indicator (From GWR source)	2023	0	0	42	N	Human and animal fecal waste
Total Coliform Bacteria	2023	0	0	42	N	Naturally present in the environment

Per- and Polyfluoroalkyl Substances (sampled in 2023)

Analyte	Unit	(Proposed) MCL, TT, or MRDL	(Proposed) MCLG or MRDLG	Range (Avg)	Likely Source of Contamination
PFOA	ppt	4	4	<3.60	Discharge from manufacturing various consumer products
PFOS	ppt	4	4	<3.60	Discharge from manufacturing various consumer products
PFNA	ppt	NA*	NA*	<1.79	Discharge from manufacturing various consumer products
PFHxS	ppt	NA*	NA*	1.86-2.10 (1.98)	Discharge from manufacturing various consumer products
PFBS	ppt	NA*	NA*	<1.79	Discharge from manufacturing various consumer products
GenX	ppt	NA*	NA*	<4.50	Discharge from manufacturing various consumer products
Calculated Hazard Index (HI)	ppt	1 (no units)	1 (no units)	0.21-0.23 (0.22)	Discharge from manufacturing various consumer products

* EPA is proposing a Hazard Index MCL to limit any mixture containing one or more of PFNA, PFHxS, PFBS, and/or GenX Chemicals. The Hazard Index considers the different toxicities of PFNA, GenX Chemicals, PFHxS, and PFBS. For these PFAS, water systems would use a hazard index calculation to determine if the combined levels of these PFAS in the drinking water at that system pose a potential risk and require action (Source: EPA Fact Sheet: Understanding the PFAS National Primary Drinking Water Proposal Hazard Index).

Additional Information on Per- and Polyfluoroalkyl Substances

Your drinking water was sampled for the presence and concentration of 29 different per- and polyfluoroalkyl substances. On April 10th, 2024, EPA announced the final National Primary Drinking Water Regulation (NPDWR) for six PFAS compounds.

Compound	Final MCL (enforceable levels) parts per trillion (ppt) (also expressed as ng/L)
PFOA	4.0
PFOS	4.0
PFHxS	10.0
PFNA	10.0
HFPO-DA (commonly known as GenX Chemicals)	10.0
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index

PFAS are man-made chemicals that are resistant to heat, water, and oil. They have been used since the 1940s to manufacture various consumer products, including fire-fighting foam and stain resistant, water-resistant, and nonstick items.

Many PFAS do not break down easily and can build up in people, animals, and the environment over time. Scientific studies have shown that exposure to certain PFAS can be harmful to people and animals, depending on the level and duration of exposure.

To learn more about this group of chemicals, we encourage you to read the ADEQ-provided "PFAS 101 Fact Sheet" and to visit the ADEQ website at

<https://www.azdeq.gov/pfas-resources>

PFAS 101

What are PFAS?

PFAS stands for per- and polyfluoroalkyl substances. PFAS are man-made chemicals that are resistant to heat, water, and oil. They have been used since the 1940s to manufacture various consumer products, including fire-fighting foam and stain-resistant, water-resistant, and nonstick items.

Many PFAS do not break down easily and can build up in people, animals, and the environment over time. This is why they are often referred to as “forever chemicals”.

Scientific studies have shown that exposure to certain PFAS can be harmful to people and animals, depending on the level and duration of exposure.

Pending PFAS Regulation

PFAS are not currently regulated nationally or in Arizona. The U.S. Environmental Protection Agency (EPA) has proposed a national regulation for PFAS in drinking water. The proposed regulation includes “Maximum Contaminant Levels” for six common PFAS, which are based on long-term, chronic exposure to low levels. EPA expects to finalize the drinking water regulation by 2024, and then water systems will be given three years to address PFAS contamination.

In addition to PFAS drinking water regulations, EPA has proposed other actions like designating some PFAS as hazardous substances, which would allow the state and federal government to hold polluters accountable. EPA also proposed aquatic life standards to help protect wildlife in our streams and rivers.

What We Are Doing to Protect Public Health:



ADEQ has conducted targeted testing since 2018 to understand the impact of PFAS in Arizona. This testing has included drinking water, groundwater, wastewater, and biosolids.



To prevent PFAS from entering the environment, we launched a pilot program to help fire departments stop using PFAS-containing aqueous film-forming foams. We have worked with 52 fire departments across Arizona to replace and safely discard almost 10,000 gallons of foam to date.

Testing Arizona’s Drinking Water

EPA is requiring that public water systems serving 3,300 people or more test their drinking water for PFAS. However, most systems in Arizona serve fewer than 3,300 people. Therefore,



we are testing the smaller water systems even though the EPA does not require it. Our goal is to make sure that all regulated water systems are tested for PFAS as soon as possible.

What Happens if PFAS are Detected?

If PFAS are detected, we ask systems to follow EPA recommendations to inform customers, examine steps to limit exposure, and take more samples to assess the level, scope, and source of contamination. When a system’s PFAS concentrations exceed EPA’s proposed limits, we help the systems perform additional testing, begin exploring potential solutions and even apply for federal funding, if needed. We also provide systems with a PFAS Toolkit to help them meet the challenges. The toolkit includes information about funding, customer communication and next steps.

Benefits of ADEQ’s Drinking Water Testing Program

ADEQ’s PFAS drinking water testing program offers several benefits to small drinking water systems and their customers. It provides free PFAS testing to these systems, potentially saving them significant costs. It also offers assistance with next steps if PFAS are detected. With many systems across the country facing similar challenges, it is important that Arizona’s drinking water systems begin planning to meet the new rules as soon as possible.



Want to learn more?

Visit azdeq.gov/PFAS-Resources to:

- Contact us
- Watch our *Intro to PFAS in Arizona* video
- Explore other resources

You can also find our PFAS Interactive Data Map at bit.ly/myPFASmap to see results from our testing since 2018.

Conservation and Drought

How do we ensure that a vital resource will be here 100 years from now?

At Global Water, we plan for the future by investing in conservation and water recycling and by applying the right water for the right use. That is why Global Water is more than a utility, we are resource managers. Our Total Water Management philosophy has resulted in over 16 billion gallons of saved water within the state of Arizona!



Water Conservation Rates

Global Water offers water conservation rates and a conservation rebate to incentivize using less water. If a customer uses a water volume below the rebate threshold, they can receive a rebate equal to 60% of the commodity rate.



Advanced Metering Infrastructure (AMI)

AMI meters utilized in our service areas send hourly water use information and alerts related to leaks and high usage through an online WaterSmart portal.



Water Conservation Program

Our conservation program at Global Water offers a variety of services and information including education programming for K12 students, adults, and landscape professionals as well as community outreach and water conservation resources for all customers.

For water conservation resources and to learn more about our conservation program, please visit <https://www.gwresources.com/conservation-education>.