

Scottsdale Water PO Box 25089 8787 E Hualapai Drive Scottsdale, AZ 85255

#### ScottsdaleAZ.gov/Water

480-312-5650 Water Quality: 480-312-8732



# About This Report

At Scottsdale Water, we are committed to bringing our vision of Water Sustainability through Stewardship, Innovation, and People to life every day. Our goal is simple: to provide you with safe, reliable drinking water at an affordable price, paired with exceptional service. This annual report highlights our dedication to that mission.

Water is a vital resource, particularly as our community faces an unprecedented drought. Beyond ensuring that your water is safe, we are equally focused on maintaining a sustainable and secure water supply, both for today and for the future.

Scottsdale Water operates one of the most innovative and technologically advanced water recycling facilities in the nation. Thanks to forward-thinking aquifer recharge programs, strategic planning, and smart investments, Scottsdale became the first city in Arizona to achieve safe yield—putting more water into the aquifer than we extract—and has consistently done so since 2006, nearly 20 years ahead of the state-mandated deadline.

I encourage you to read through this report and learn more about the work and dedication behind providing safe, reliable, and affordable drinking water every day.

Kevin Rose · Scottsdale Water acting Senior Director

#### **DEFINITIONS AND ABBREVIATIONS**

**Contaminant** – Any physical, chemical, biological or radiological substance or matter in the water.

**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 Contaminant Level (MCL)** – The highest level of a contaminant allowed by the EPA in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.

**Maximum Residual Disinfectant Level (MRDL)** – The highest level of a disinfectant (chlorine) allowed in drinking water. There is convincing scientific evidence that addition of a disinfectant is necessary for the control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) – The level of 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 contamination.

**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 that a water provider must follow.

Part Per Million (ppm) / Part Per Billion (ppb) – Equivalent to mg/L and  $\mu$ g/L respectively, describe the levels of detected substances.

**Picocuries Per Liter (pCi/L)** – A measure of the radioactivity in a liter of water.

**Non-detectable (ND)** – The substance was analyzed but not detected.

Not Applicable (NA) - A regulatory limit does not exist.



# A NOTE FROM THE EPA

To ensure the water from your tap is safe to drink, the Environmental Protection Agency issues regulations limiting the amount of certain impurities allowed in drinking water and the water treatment process. You can expect all drinking water, including bottled water (which is regulated by the Food and Drug Administration), to contain at least small amounts of some contaminants. It's important to know the presence or detection of impurities does not necessarily indicate a health risk.

Scottsdale's drinking water sources include rivers, lakes, reservoirs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring materials and can pick up substances from human or animal activity. Possible contaminants may include:

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

# Water Supply and Treatment

Prior to the 1980s, Scottsdale was 100 percent reliant on groundwater for its water supply. Today, 90 percent of our total water supply comes from renewable surface water sources and recycled water, helping us ensure a long-term water supply for future generations.

Depending on the time of year, the weather and customer demand, you may receive water from a single source or from a combination of sources.



Water from Lake Mead is treated at the Scottsdale CAP Plant.

#### **SURFACE WATER**

Scottsdale's main surface water supply comes from the Colorado River. It is transported through the Central Arizona Project canal to the CAP Water Treatment Plant at the Scottsdale Water Campus in northern Scottsdale.

The CAP Plant, which can treat up to 70 million gallons of water per day, is actually three distinct facilities in one. CAP I and II use a conventional water treatment process, which includes pretreatment, coagulation/ flocculation, sedimentation, filtration and disinfection. Water at CAP III is treated with ultrafiltration membrane technology and disinfection. The CAP Plant uses granular activated carbon to improve taste and odor and treat for disinfection byproducts.

We also receive surface water from the Verde and Salt rivers watersheds, which is transported by the Salt River Project to the Chaparral Water Treatment Plant located near the intersection of Hayden Road and East McDonald Drive. The Chaparral WTP uses ultrafiltration membranes and granular activated carbon and has a treatment capacity of 27 million gallons a day. ●

### GROUNDWATER

A small portion of Scottsdale's water supply also comes from aquifers deep below ground. The city has 21 active wells and operates several groundwater treatment facilities, including the Central Groundwater Treatment Facility and the North Indian Bend Wash Granular Activated Carbon Treatment Facility, which treat groundwater from the North Indian Bend Wash Superfund site.

Both facilities were built by private companies that were deemed potentially responsible for contaminating the groundwater with Trichloroethylene. These companies pay operating and maintenance costs of the facilities. The groundwater is treated to levels that exceed federal and state drinking water standards, with regulatory oversight by the EPA, ADEQ and Maricopa County.

### **RECYCLED WATER**

The Advanced Water Treatment Plant at the Scottsdale Water Campus is one of the largest and most advanced water recycling facilities in the world. The plant treats water from Scottsdale businesses and homes to ultrapure standards that exceed federal drinking water regulations. That water is then used for turf irrigation and to replenish our local aquifers.

Since 1998, the state-of-the-art facility has enabled Scottsdale to inject over 70 billion gallons of water into our area aquifers in an effort to safeguard the city's long-term water supply, while ensuring the exceptional water quality of our local aquifers. To put this number in perspective, that's enough water to fill the Arizona Cardinals' State Farm Stadium 120 times.



### SOURCE WATER ASSESSMENT PROGRAM

In 2004, Scottsdale worked with the Arizona Department of Environmental Quality to finalize an assessment on the wells and surface water sources we use to provide you with drinking water. This assessment looked at potential risks to our water sources, which include gas stations, landfills, dry cleaners, agricultural fields and wastewater treatment plants.

The assessment concluded that most of Scottsdale's groundwater wells have low to medium risk, with the exception of the wells linked to the North Indian Bend Wash Superfund

Site. The water produced by these wells has a high risk of contamination, but is treated to meet or surpass drinking water standards and monitored closely by the city, ADEQ and the EPA.

All surface water sources are considered high risk due to their exposure to open air. These risks are addressed by the EPA through its increased monitoring requirements for surface water sources. The complete assessment is available at **azdeq.gov/environ/water/dw/swap.html** or by calling Scottsdale Water at 480-312-8732.

# Ensuring long-term water supplies

Since 2022, the Colorado River system has been in official shortage – meaning less water for the state of Arizona through the Central Arizona Project (CAP).

There has been a significant amount of news coverage about the drought and water cuts. The city is still able to meet demand for residents and businesses, while preparing for further cuts in coming years. The governance structure of how and when we are in shortage is currently controlled through the 2007 Interim Guidelines. This set of guidelines is set to expire at the end of 2026.

The U.S. Bureau of Reclamation intent is "to develop a robust set of operating guidelines for Lake Powell and Lake Mead that provide for the sustainable management of the Colorado River system and its resources under a wide range of potential future system conditions due to a changing climate". This is a critical time in our state for future planning efforts.

In the face of this uncertainty, coupled with a potential for higher levels of shortage triggers and reduction amounts, this becomes a time for serious planning and action.

Scottsdale was the first city in Arizona to declare stage one of its Drought Management Plan and has since grown many conservation initiatives (some by as much as 400%) and continue efforts on infrastructure planning. Scottsdale is responding in the following ways:



Water retention basins at the CAP plant at the Water Campus.

- Expanding our recycled water systems and entering into conversations for regional programs.
- Increasing aquifer storage and recovery abilities.
- Expanding the Automatic Meter Infrastructure network and WaterSmart customer portal to assist customers to better understand and more efficiently manage their water.
- Identifying steps and technology that could be used to improve the city's water conservation and efficiency efforts.
- Diversifying the city's water portfolio so the city is not as susceptible to water variances with one source

Ensuring a resilient water supply requires several levels of investment that can build a more robust supply in the face of the uncertainty on the Colorado system.

#### **HIGHLY PURIFED, RECYCLED WATER**

Long-term water sustainability takes planning, innovation, and resources. Since 2019, when Scottsdale was granted the first direct potable reuse permit in Arizona, Scottsdale Water has been preparing for full-scale execution of the highly purified, recycled water by using this water for taste testing and beer making. Now, given the current water shortages on the Colorado River, Scottsdale Water is planning to integrate this purified water into the Scottsdale water blend as early as 2029. By using state-of-the-art purification processes such as ozonation, membrane ultrafiltration, reverse osmosis, and ultraviolet photolysis, water will be treated to meet all state and federal drinking water standards to create a final product that results in a safe, clean water that has been proven more pure than bottled water.

#### WATER HARDNESS

As water makes its way to treatment plants or through aquifers, it picks up naturally occurring minerals that make the water "hard" and can also affect taste and other characteristics. Hardness is not a primary water quality standard and is not considered to be a health concern. Scottsdale is committed to providing you with the cleanest and safest drinking water possible, at an affordable price. We could implement additional treatment processes to address hardness, but this would not be cost effective, especially since the majority of residential water consumption is for outdoor use. There are varying levels of water hardness throughout

#### Approximate Hardness Levels

Boundary	Hardness (Grains per Gallon)	Hardness (mg/L or ppm)
South of Indian School Road	13 - 15	230-260
Indian School Road to Chaparral Road	13 - 17	215-285
North of Chaparral Road	13 - 17	230-290

Scottsdale as shown in the table to the right.

# 2024 Compliance Monitoring Results

Scottsdale performs tests for an assortment of contaminants at locations throughout the city. We test samples from eight entry points to the distribution system that represent the treated source water and at 150 locations throughout the distribution system to ensure the water entering your home or business remains safe and reliable.

We test for over 100 substances, but only the substances detected in the water are listed in this report. The results shown are from testing performed in 2024 unless otherwise noted.

A few substances are discussed in detail below. For more information about other substances or a complete list of all testing, please contact us at 480-312-8732 or visit the EPA's website, epa.gov/dwstandardsregulations.



The water quality lab, constructed in late 1990s, will undergo a large expansion and renovation in 2026, which will further enhance scientists' abilities to confirm treatment and compliance with all regulatory standards.

**Arsenic** is a naturally occurring mineral commonly found in water due to leaching from rocks and soil. The maximum contaminant level for arsenic allowed in drinking water is 10 ppb (parts per billion), based on a running annual average.

While your drinking water meets or surpasses EPA's standard for arsenic, it does contain low levels of arsenic. EPA is continually researching the health effects of low levels of arsenic, which has been known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. In 2024, the highest level of arsenic measured in Scottsdale's drinking water was 8.4 ppb.

**Nitrate** is an inorganic substance that is monitored due to run off from fertilizer use. Nitrate in drinking water at levels greater than 10 ppm (parts per million) is considered a health risk for infants younger than six months of age. (Nitrate levels above 10 ppm in drinking water can cause blue baby syndrome.) Nitrate levels in surface water supplies may rise quickly for short periods of time due to rainfall or agricultural activity. If you are caring for an infant you should seek advice from your health care provider. In 2024, the highest nitrate level detected in Scottsdale's drinking water was 4.9 ppm.

**Turbidity** is a measure of clarity in the water and is reported as Nephelometric Turbidity Units. Turbidity is caused by a variety of substances including sand, dirt and algae. Water is measured for turbidity to determine the effectiveness of the water treatment process. Scottsdale measures turbidity continuously at its surface water treatment plants.

*Microbiological Testing* is performed monthly at over 150 sites within the distribution system for Total Coliform and E. coli bacteria in order to verify the integrity of the distribution system as well as our water sources.

**Chlorine** is used as a disinfectant to ensure the treated water remains safe at all times. We continually monitor chlorine levels throughout the system to ensure that safe and adequate levels are maintained. Scottsdale's goal is to have a chlorine residual between 0.5 and 1.5 ppm in our drinking water system.

Byproducts of using chlorine as a disinfectant are trihalomethanes and haloacetic acids. These are formed as a result of a chemical reaction between chlorine and naturally occurring organic matter in the water. To minimize the formation of these disinfection byproducts, granular activated carbon is used during the water treatment process to reduce levels of organic matter and subsequently reduce DBP levels.

#### Additional Monitoring

*Cryptosporidium* is a pathogen found in surface water throughout the United States and can be spread through other methods besides drinking water. Ingestion may cause a gastrointestinal illness. During periodic monitoring conducted in 2017, Cryptosporidium was not detected in our source waters. If present, this organism is removed during treatment through the use of multimedia filtration. ●

*Lead and copper* are typically found in drinking water because of materials and components found in service lines and home plumbing. If present, elevated levels of lead can cause health problems, especially for pregnant women and young children. Scottsdale is committed to providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When water has been sitting for several hours, you can minimize the potential for lead exposure by flushing the tap for 30 seconds to 2 minutes before using water for drinking or cooking. If concerned about lead in your water, you can have your water tested. Information on lead in drinking water, testing methods, and steps to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at epa.gov/safewater/lead.

The most recent testing for lead and copper was performed in 2023. Lead and copper levels reported in the table are from water faucets inside 50 Scottsdale homes built before the lead ban.

Residents participating in the lead and copper program are notified of their results. If the lead concentration exceeds 15 ppb, the home is retested and the homeowner is contacted for follow-up guidance on ways to lessen the risk of exposure to lead from drinking water.

To address lead in drinking water, public water systems were required to develop and maintain an inventory of service line materials by Oct 16, 2024. Developing an inventory and identifying the location of lead service lines (LSL) is the first step for beginning LSL replacement and protecting public health.

To date, we've discovered no lead service lines. The lead service inventory may be viewed at: https://www.scottsdaleaz.gov/water/ water-quality/drinking-water. Contact us for more information about the inventory or lead sampling that's been done.

To further protect our customer's from lead in drinking water, Scottsdale uses caution when changing to a new water source or changing an existing treatment process. Additional monitoring is performed to ensure the water is not corrosive to home plumbing.

# Results for Regulated Contaminants

Substance	Unit	MCL	MCLG	Lowest Amount Detected	Highest Amount Detected	System Average	Highest Running Annual Average <sup>1</sup>	Likely Source in Drinking Water
Arsenic	ppb	10	0	1.1	8.4	4.1	8.4	Leaching of natural deposits
Barium	ppb	2,000	2,000	23	152	79	N/A	Leaching of natural deposits
Chromium	ppb	100	100	ND	26.9	9.2	N/A	Leaching of natural deposits
Fluoride	ppm	4	4	0.3	0.4	0.4	N/A	Leaching of natural deposits
Nickel	ppb	N/A	100	ND	1	1	N/A	Leaching of natural deposits
Nitrate	ppm	10	10	0.2	4.9	1.3	3.4	Leaching of natural deposits and septic systems; Runoff from fertilizer use
Selenium	ppb	50	50	1.7	2.8	2.3	N/A	Leaching of natural deposits; Discharge from petroleum refineries and mining
Alpha Emitters <sup>2</sup>	pCi/L	15	0	ND	2.3	0.5	N/A	Leaching of natural deposits
Uranium <sup>2</sup>	ppb	30	0	ND	14	4.2	N/A	Leaching of natural deposits
Total Organic Carbon	ppm	TT	N/A	1.3	2.2	1.7	N/A	Naturally present in the environment

Substance	Unit	MCL	TT Requirement	Highest Measurement	Treatment Technique Comparison	Likely Source in Drinking Water
Turbidity	NTU	1	95% less than 0.3 NTU	0.27	100% less than 0.3 NTU	Soil runoff

Substance	Unit	MCL	MCLG	Lowest Amount Detected	Highest Amount Detected '	Average	Likely Source in Drinking Water
Total Coliform	%	5 (monthly)	0	0	0.6	0.2	Naturally present in the environment
Chlorine	ppm	4 (MRDL)	4 (MRDLG)	0	1.5	0.65	Water additive used to control microbial growth
Total Trihalomethanes (TTHMs)	ppb	80	N/A	20.1	54.6	52.8 <sup>3</sup>	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	N/A	3.8	13.0	10.2 <sup>3</sup>	Byproduct of drinking water disinfection

Substance	Unit	AL	MCLG	90 <sup>th</sup> Percentile Value	# of Homes Greater than AL	Levels in Treated Water	System Average Levels in Treated Water	Likely Source in Drinking Water
Lead <sup>4</sup>	ppb	15	0	2.0	1 out of 50	ND	ND	Corrosion of household plumbing
Copper <sup>4</sup>	ppb	1,300	N/A	170	0 out of 50	ND - 2.8	1.6	Corrosion of household plumbing

1. Highest average at a single sample location

2. Includes 2020, 2023 & 2024 Sampling Data

3. Reported value is the highest locational running annual average (LRAA) calculated on a quarterly basis.

4. Lead and Copper Standard: 90% of homes tested must have lead and copper levels below the alert level (AL). LCR data collected in 2023.

#### **Attention Immuno-Compromised Citizens:**

If you are a person with a compromised immune system (i.e. undergoing chemotherapy, have had an organ transplant or have HIV/AIDS or other immune system disorders) you may be particularly at risk of infections and more vulnerable to contaminants in drinking water. Some elderly persons and infants may also have increased risk. You are encouraged

to seek advice about drinking water from your health care provider. More information including ways to lessen the risk of infection from microbial contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

# Results for Unregulated Contaminants

Substance	Unit	MCL	MCLG	Lowest Amount Detected	Highest Amount Detected
Alkalinity	ppm	NA	NA	111	250
Aluminum	ppm	NA	NA	ND	0.10
Calcium	ppm	NA	NA	45	88
Chloride	ppm	NA	NA	35	170
Iron	ppm	NA	NA	ND	0.04
Magnesium	ppm	NA	NA	23	37
Manganese	ppm	NA	NA	ND	0.0024
рН	Std. Unit	NA	NA	7.0	8.2
Sodium	ppm	NA	NA	46	112
Sulfate	ppm	NA	NA	20	253
Townsonations	oC	NA	NA	14	33
remperature	٥F	NA	NA	59	91
Total Dissolved Solids	ppm	NA	NA	325	710
Zinc	ppm	NA	NA	ND	0.056



Scientists at the water quality lab test water from more than 150 locations monthly to ensure the safety of the water supply.

### **RESULTS FOR UNREGULATED CONTAMINANT MONITORING RULE**

In an ongoing effort to improve the safety of drinking water, the Unregulated Contaminant Monitoring Rule (UCMR), part of the Safe Drinking Water Act, requires the EPA and water systems to assess the occurrence of unregulated contaminants in drinking water across the country. A new list of contaminants is issued about every five years and can contain up to 30 contaminants. The EPA uses this occurrence data along with health effects studies to determine if additional regulations are needed to protect public health.

Monitoring is performed at every location where source water enters the distribution system and some contaminants are also measured at points within the distribution system, where the water is consumed. The table below shows results of the most recent testing conducted in 2020.

Substance	Unit	MCL	MCLG	Lowest Amount Detected	Highest Amount Detected	Average	Likely Source in Drinking Water
Manganese	ppb	N/A	N/A	0.0	3.3	0.61	Leaching of natural deposits
Germanium	ppb	N/A	N/A	0	0.44	0.024	Leaching of natural deposits
Total Organic Carbon <sup>1</sup>	ppm	N/A	N/A	3.2	5.1	4.1	Decaying natural organic matter
Bromide <sup>1</sup>	ppm	N/A	N/A	0.057	0.12	0.08	Natural and industrial sources
HAA5 <sup>2</sup>	ppb	N/A	N/A	5.3	13	9.5	Byproduct of drinking water disinfection
HAA6Br <sup>2</sup>	ppb	N/A	N/A	8.8	17.0	13.7	Byproduct of drinking water disinfection
HAA9 <sup>2</sup>	ppb	N/A	N/A	11	26	20.0	Byproduct of drinking water disinfection

1. Halo Acetic Acid Indicator measured in source water

2. Halo Acetic Acid (HAA) Group

## **ADDITIONAL WATER INFORMATION RESOURCES**

U.S. EPA's Safe Drinking Water Hotline 800-426-4791, **epa.gov/safewater** 

Arizona Department of Environmental Quality 602-771-2300, azdeq.gov/environ/water/dw

Maricopa County Environmental Services Department 602-506-6666, maricopa.gov/EnvSvc/WaterWaste

Water-related topics may be discussed at City Council meetings or other public forums and we welcome your attendance. Meeting notices and City Council agendas are posted on the city's website at **ScottsdaleAZ.gov, search "Council Agendas."** 

Este informe contiene informacion muy importante sobre su agua potable. Si desea una copia de este informe en español o tiene alguna pregunta sobre el, por favor llame a 480-312-8711.

# **TIER 3 PUBLIC NOTICE**

When water systems violate a drinking water standard that does not have a direct impact on human health (for example, failing to take a required sample on time) the water supplier has up to a year to provide a notice of this situation to its customers.

We are required to monitor the wells for a fecal indicator like E. coli bacteria within 24 hours when there is a total coliform bacteria positive sample result in the distribution system. We had a total coliform positive sample result on October 17, 2024, we did not take a fecal indicator source sample as required under the Ground Water Rule and, therefore, cannot be sure of the guality of our drinking water during that time. A groundwater source associated with this sample station was running at the time but was not collected. Training was provided to staff to prevent similar violations in the future. Repeat samples in the distribution system were collected within 24 hours and all absent for total coliform and E. coli bacteria. This event was not an emergency and not a health threat. Consumers do not need to take any action.

For more information, please contact Scottsdale Water at (480) 312-8732 or 8787 E. Hualapai Dr. Scottsdale, AZ 85255.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

# **CITIZENS WATER ACADEMY**

Are you curious about how Scottsdale gets its water? Do you want to know more in depth about water as a whole? Scottsdale offers a Water Citizen Academy to residents. This free program offers an inside look at Scottsdale's water utility - one of the most advanced municipal water systems in the country! The multi-week course explains all facets of Scottsdale Water's planning and policies and takes you inside its state-of-the-art facilities and daily operations. Registration for Fall 2025's academy will open in August.



For more information, visit ScottsdaleAZ.gov and search "Water Academy."

## WATER TRAILER AT LOCAL EVENTS

Scottsdale Water is proud to offer free water at city events to educate the community on the safety and reliability of its water. This program also informs citizens and visitors on best water conservation practices and how to be better stewards of this precious resource. ●



ScottsdaleAZ.gov/Water 480-312-5650 Water Quality: 480-312-8732

