



Director's Office Message



Tucson Water's story is a 4,000-year tradition of responsible desert dwelling in the Sonoran Desert.

Providing fresh, responsibly sourced, quality water has been the vision and commitment of Tucson's Mayor and City Council and City staff over many decades.

For more than 100 years, Tucson's growth has required a more responsive

water system to deliver reliable, quality

water to customers.

Since then, Tucson has become one of the largest communities in North America entirely on a groundwater system. Tucson Water proudly serves over 240,000 households and businesses in the Tucson metropolitan area with water primarily sourced from the Colorado River. It is delivered via the Central Arizona Project. Tucson Water recharges this water into local aquifers, which act as a natural filter before the water is pumped out through wells and served to customers.

We monitor water quality at hundreds of locations across our system—from our wells to your homes and businesses—and conduct tens of thousands of water quality tests every year. We go far beyond what is required by federal and state regulations. This is our commitment to providing safe, clean water here in our desert home.

Today, we are preparing for the next century through our One Water 2100 master planning process, and we invite you to learn more and get involved at https://www.OneWaterTucson.com. Our water quality relies on robust capital improvement projects that invests in infrastructure reliability and other pressing challenges surrounding water resources and water quality sustainability.

Our employees take pride in serving the Tucson community and ensuring that high-quality drinking water is delivered directly to you daily. We will continue to be the responsible stewards of Tucson's water future and guide our community toward being responsible Sonoran Desert dwellers.

John P. Kmiec, MPA Director

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Contact Information

Water Quality / Pressure Concerns

520-791-5945

Mon. to Fri., 8 a.m. to 4:30 p.m. Email us about Water Quality

or Pressure Concerns:

CustomerSupportUnit@tucsonaz.gov

Public Information Office

520-791-2666

TWInfo@tucsonaz.gov

Other Contacts:

24 Hour Emergency Line

(i.e., broken water main) 520-791-4133

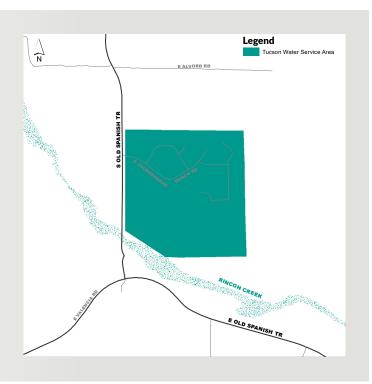
Customer Service & Billing

520-791-3242 or 800-598-9499

Where Does My Water Come From?

Thunderhead Ranch

Tucson Water Thunderhead Ranch is a small community water system that serves 59 households with a population of 165 residents. The water source is local groundwater delivered from two active wells. An aeration system to elevate pH, and thus control corrosion, was designed, installed, and has been in operation since 2005.



TUCSON ONE WATER

Careful management of our water resources is critical to Tucson's long-term sustainability. One Water 2100 Master Plan is a new approach for managing water resources for long-term resilience and sustainability, meeting both community and ecosystem needs. One Water will guide the utility in how to best manage its water resources under ever changing conditions. This approach treats all of Tucson's water resources as equally important: surface water, groundwater, recycled water, and rain and stormwater harvesting.

Get Involved!

Public participation is essential to ensuring communities and stakeholders have a say in how our water resources are managed. To provide feedback or subscribe to receive One Water news and updates, or for a list of One Water events and engagement opportunities, visit https://www.tucsononewater.com/get-involved.



Protection Starts at the Source

How We Treat Your Drinking Water

CHLORINE DISINFECTION

Chlorine disinfectants are added to drinking water to kill harmful pathogens. It's quite effective because a "residual" amount of chlorine remains after the initial application that continues to protect against bacteria and other microorganisms. Chlorine residual disinfection is maintained throughout the distribution system. Approximately 1 part per million (equivalent of about a cup of water in a swimming pool) of chlorine is added to the drinking water supply at well sites, reservoirs, and other facilities to keep drinking water free of microbiological contamination. Tucson's water meets microbiological drinking water standards from the time it is recovered from the ground and treated until it reaches the customer's tap.

CHLORINE
DISINFECTANTS
ARE ADDED TO
DRINKING WATER
TO KILL HARMFUL
PATHOGENS.

Tucson Water continually measures chlorine residual disinfectant levels to ensure they do not exceed the maximum residual disinfectant limit. We use sampling stations located throughout the distribution system to collect 268 routine chlorine samples a month, and we collect microbiological samples at the same time.



In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

WHAT'S IN YOUR WATER

Drinking water sources include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the land surface or through the ground, it dissolves naturally occurring

minerals, and in some cases, radioactive material, and can pick up substances resulting from animal presence or human activity. Different kinds of contaminants will appear in your drinking water, sometimes naturally, and in varying levels. Some contaminants are harmless, whereas others may be dangerous if consumed in large quantities. Our water quality specialists work continually to make sure the water we deliver to you is fresh, clean, and safe to use. We currently monitor for approximately 90 regulated and 103 unregulated contaminants.



\mathbb{Q}_{c} WHAT WE LOOK FOR

Contaminants that may be present in drinking water before we treat it:



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 that 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, from 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 also may come from gas stations, urban storm water runoff, and septic systems.



Radioactive contaminants that can occur naturally or result from oil and gas production and mining activities.

TESTING FOR PFAS

Per- and polyfluoroalkyl substances (PFAS) are synthetic chemicals used in a wide range of products, from fire fighting foam, to nonstick cookware, to waterproof clothing, to food packaging, to shampoo and more. PFAS are a contaminant of concern because they could potentially pose a risk to public health and because they do not degrade. In other words, if they reach the environment, they will be there forever and could affect groundwater and drinking water.

Annually, Tucson Water conducts hundreds of rigorous tests for PFAS across our system. Tucson Water has delivered and will continue to deliver water that exceeds the U.S. Environmental Protection Agency's (EPA's) health advisory level. In fact, we go above and beyond federal guidelines by also removing wells that have detectable amounts of PFOA or PFOS from service.

Testing to date shows that PFAS are found in specific areas but are not present in the majority of Tucson's water groundwater supply.



The Arizona Department of Environmental Quality (ADEQ) is working with Tucson Water to eliminate the threat to our drinking water supply from PFAS. This includes plans to install new groundwater monitoring wells and design and construct preventative measures to stop PFAS-contaminated groundwater from migrating. New technologies and innovations are being used to remove PFAS from groundwater and limit its movement to other groundwater sources.

Visit http://www.azdeq.gov/WQARF for more information.



BACKFLOW PREVENTION

A cross-connection is a point in a plumbing system where the potable (drinking) water supply is connected to a nonpotable source. Contamination may occur when water flows through a cross-connection from a non-potable source, such as a sprinkler system or heating and cooling unit, into the potable water system. This can happen through a process known as backflow.

Tucson Water's Backflow Prevention Program is designed to protect the public drinking water supply from pollutants and contaminants that could infiltrate the Tucson Water system from private properties through backflow.

All commercial and multifamily customers and some single-family customers are required to install backflow prevention assemblies on their Tucson Water service connections. These assemblies prevent nonpotable water from being drawn into the public drinking water system and must be tested annually.

For more information: https://www.tucsonaz.gov/water/backflow-prevention or phone 520-791-2650.

Going Above and Beyond

Tucson Water does a lot more than merely complying with the minimum EPA standards.

We perform extra monitoring to give staff and customers additional water quality information. Here's how we did it:

UNREGULATED CONTAMINANT MONITORING RULE

Unregulated contaminants are those for which the EPA has not established drinking water standards. A compound's presence in water does not necessarily mean there is a health risk; its concentration is a far more important factor in determining whether there are health implications. Tucson Water carefully tracks the concentrations of these compounds and EPA health studies and will keep you informed of any developments.

SENTRY PROGRAM

Tucson Water's Sentry Program is an additional, voluntary monitoring component of our routine water quality management strategy. The Sentry Program proactively identifies contaminants of emerging concern (such as PFAS, industrial chemicals, personal care products, pesticides, and pharmaceuticals) so they can be addressed early. Annual results are summarized here:





Tucson Water keeps your drinking water safe by regularly monitoring all drinking water sources. If any contamination approaches the maximum contamination level (including PFAS) at a drinking water source, we remove the source from service.





MONITORING

Every year, Tucson Water tests thousands of water samples collected from drinking water wells and permanent taps located throughout our water distribution system. Some tests are required by federal and state regulations (for example, the Safe Drinking Water Act or EPA standards), but we proactively perform hundreds of additional tests to confirm that only the cleanest and safest drinking water reaches your home. Test results and data are compiled and available at https://www.tucsonaz.gov/water/about-your-water-quality and include charts, tables, and maps of water quality information.

Help protect our water sources

- Maintain your septic system
- Limit pesticide and fertilizer use
- Properly dispose of household hazardous waste
- Properly dispose of medications
- Volunteer in your community

Visit https://www.tucsonaz.gov/es/household-hazardous-waste or call 520-791-3171.







59 NUMBER OF HOUSEHOLDS



2
POTABLE WELLS



1 BOOSTER



1.5
TOTAL MILES
OF PIPE



1 STORAGE FACILITIES



WATER QUALITY
SAMPLING POINTS





48
REQUIRED SAMPLES



116
REQUIRED TESTS



166 VOLUNTARY SAMPLES

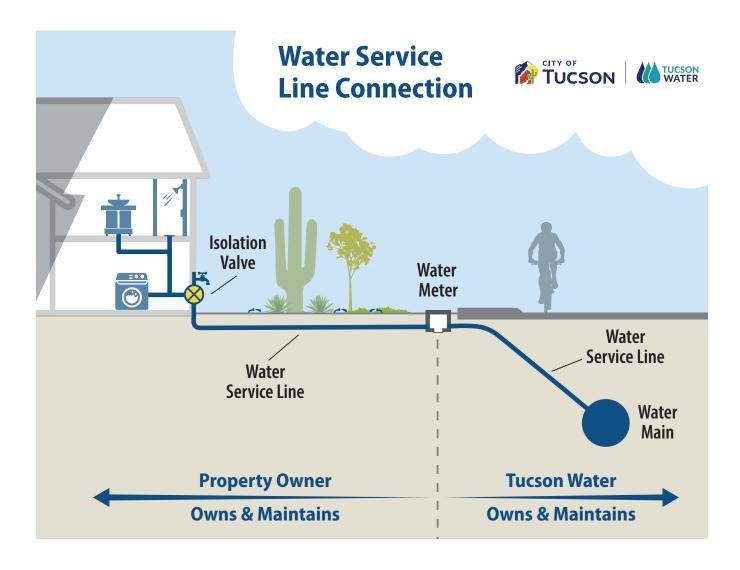


247
VOLUNTARY TESTS

Customer Zone

Tucson Water is responsible for maintaining and replacing watermains throughout its service area, including service lines up to the water meter.

Property owners are responsible for the service lines from the water meter to their service address or property. It is the homeowner's responsibility to maintain the water line and keep it in good repair.



GET THE LEAD OUT PROGRAM

Lead water service lines are a key source of lead in tap water. Since 1999, Tucson Water has identified, located, removed, and replaced lead water service lines from its water system. In 2016, due to the water crisis in Flint, Michigan, Tucson Water proactively launched the "Get the Lead Out" (GTLO) program that identified, located, and removed 142 lead water service lines in the project area. Since 1999, 866 lead water service lines have been removed from the main system. Visit https://www.tucsonaz.gov/water/lead-and-copper for details.

Tucson Water has continued to expand the GTLO program: we are well-positioned to meet the revised lead and copper rule requirements and our own water quality management and public health goals. The expanded program will include community participation where we will work with customers and stakeholders to identify water service line material at homes and businesses. More information about the expanded GTLO program and how you can help identify the water service line at your home or business will be provided as the program unfolds.

WHAT'S NEW WITH THE LEAD AND COPPER RULE?

In 2021, EPA revised the Lead and Copper Rule to improve public health protection by reducing exposure to lead and copper in drinking water. Tucson Water will be providing the following information to regulators to comply with the revised rule:

- Lead water service line inventory
- Lead and galvanized steel service line replacement plan
- List of childcare facilities and elementary schools within the water service area
- Updated compliance sampling plan
- Updated communications plan on the revised lead and copper rule



ABOUT LEAD

Tucson Water follows EPA's Lead and Copper Rule, a regulatory requirement for public drinking water systems to protect customers and the public. We sample for lead and copper at over 100 locations on a regular basis throughout our water service area. Lead and copper monitoring is an important function of our water quality management program and our public health goals.

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. Tucson Water is responsible for providing high-quality drinking water but 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 2 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. For a list of licensed labs in Arizona that can analyze your water for lead and copper, see the Arizona Department of Health Services Licensed Environmental Laboratories https://app.azdhs.gov/bfs/labs/elbis/drinkingwatertestinglabs/drinkingwatersearchcontentpage.aspx. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline by calling 1-800-426-4791 or by visiting https://www.epa.gov/safewater/lead.

Frequently Asked Questions

What is a water service line?

A water service line is the pipe that delivers water from the watermain to your meter and the pipe that delivers water from your meter to the first outside water tap at your residence or business.

Who owns and maintains a water service line?

The property owner owns and maintains the water service line from your water meter to the first outside tap at your home or business. Tucson Water owns and maintains the water service line from the watermain to your water meter.

What is a lead water service line?

A lead water service line is a portion of pipe made of lead that connects the watermain to the water meter and the water meter to the home's or building's outside tap.

Do I have lead plumbing in my home or business?

If your home or building was built after 1990, it is likely that the plumbing materials do not contain lead. Buildings built in 1945 or earlier pose the greatest risk of having lead-containing plumbing materials and lead water service lines.

Your Water Quality

Did you know?

The results are in! Our water quality specialists continuously monitor and test your drinking water to keep you and your family safe and healthy. Did you know you can check the test results for your own community with our easy-to-use Water Quality Map? Enter your address at https://www.tucsonaz.gov/water/mywaterquality/ and view the results for your sample area. You can even compare the results against the maximum limits set out by the Environmental Protection Agency.

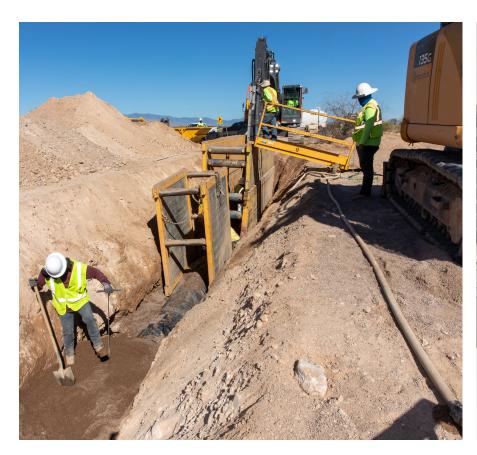
OUR WATER QUALITY
SPECIALISTS CONTINUOUSLY
MONITOR AND TEST YOUR
DRINKING WATER TO KEEP
YOU AND YOUR FAMILY SAFE
AND HEALTHY.

VULNERABLE POPULATIONS

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.

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 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 EPA and the U.S. Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants, call the EPA Safe Drinking Water Hotline at 1-800-426-4791.





Water quality statistics: It's all about quality

SOURCE WATER ASSESSMENT PROGRAM

The ADEQ completes annual source water assessments for Tucson Water drinking water wells. The assessments review the adjacent land uses that may pose a potential risk to the water sources. It classified the Tucson Water Thunderhead Ranch Public Water System wells as Low Risk.

A Low Risk designation indicates that most source water protection measures are either already implemented, or the hydrogeology is such that the source water protection measures will have little impact on protection.

ADEQ source water assessments are available for public review. Contact the Arizona Source Water Coordinators at 602-771-4597 or 602-771-4298 to request a copy.

Sources of Potential Risks:

- Gas stations
- Landfills
- Dry cleaners
- Agricultural fields
- Mining activities

DETECTED CONTAMINANTS

Tucson Water routinely monitors for contaminants in your drinking water as specified in the National Primary Drinking Water Standards. Monitoring results for the period of January 1 to December 31, 2022, or from the most recent period, are included in the table. Certain contaminants are monitored less than once a 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.

Contaminant	MCL	MCLG	Units	Highest Sample Result	Range	Year	MCL Violation (Y/N)	Major Source of Contaminant
Disinfection Byproducts								
Total Trihalomethanes (TTHM) ^a	80	N/A	ppb	3.3	3.3	2022	N	Byproduct of drinking water disinfection
Inorganics								
Barium	2	2	ppm	0.04	0.04	2022	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	ppm	0.13	0.13	2022	N	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	10	10	ppm	4.4	4.4	2022	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium	N/A	N/A	ppm	14	14	2022	N	Erosion of natural deposits
Contaminant	Action Level	MCLG	Units	No. of Samples above Action Level	90th Percentile Value	Year	MCL Violation (Y/N)	Major Source of Contaminant
Lead	15	0	ppb	0	7.8	2022	N	Corrosion of household plumbing systems; erosion of natural deposits
Copper	1.3	1.3	ppm	0	0.08	2022	N	Corrosion of household plumbing systems; erosion of natural deposits

Disinfectant	MRDL	MRDLG	Units	Annual Average	Monthly Average Range	Year	MCL Violation (Y/N)	Major Source of Contaminant
Chlorine	4	4	ppm	1	0.7 - 1.3	2022	N	Water additive used to control microbes

Notes:

a. TTHM MCLG: bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 ppm): chloroform (0.07 ppm).

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than 6 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 your health care provider for advice.

DEFINITIONS

Action Level:	The concentration of a contaminant that, 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 risk to health.
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 Applicable (N/A):	Sampling was not completed by regulation or was not required.
Not Detected (ND or <):	Not detectable at reporting limit.
ррь:	Parts per billion, or micrograms per liter (µg/L). Equal to adding ONE droplet of water to a backyard swimming pool.
ppm:	Parts per million, or milligrams per liter (mg/L). Equal to adding about a CUP of water to a backyard swimming pool.
ppt:	Parts per trillion, or nanograms per liter (ng/L). Equal to adding ONE droplet of water to 15 Olympic-sized swimming pools.

Frequently Asked Questions

HOW DO I KNOW MY WATER IS SAFE TO DRINK?

Tucson Water provides safe drinking water that complies with all federal, state, and local drinking water regulations. Our staff work together to monitor drinking water quality at 170 wells, 60 reservoirs, 271 sampling stations, and 125 selected homes across all our systems.

HOW IS TUCSON'S DRINKING WATER TREATED?

Tucson Water uses chlorination to disinfect against organisms, such as bacteria and viruses. We strive to maintain a chlorine residual between 0.80 mg/L to 1.2 mg/L throughout the distribution system.

WHY IS MY WATER MILKY/CLOUDY?



Water with a cloudy or milky white appearance may be caused by millions of tiny air bubbles present in the water. They're harmless and not a health concern, and they will not damage your plumbing or appliances. Fill a clean, clear glass with water and let it stand for a few

minutes. As air escapes, the water will clear from the bottom of the glass up to the top. Note, a faucet aerator that requires cleaning or replacing can also cause milky water. Remove the aerator and soak it in vinegar or replace it.

WHY DOES MY WATER PRESSURE SEEM LOW (OR HIGH)?

Water pressure can vary greatly from one area of the water system to another, even from house to house. Here are some factors that may affect your home's water pressure:

- Elevation of your home relative to the reservoir or booster station serving your area
- An area water outage
- A leak inside the Customer Zone
- A home water treatment system that needs maintenance

- A malfunctioning shut-off valve to the house
- A pressure regulating valve (PRV) that needs adjustment or replacement.

PRVs are required if your domestic water pressure exceeds 80 psi. PRVs are common in many homes and have been required by Pima County on all newly constructed homes since 2005.

WHY DOES MY WATER SMELL LIKE ROTTEN EGGS?

Rotten egg, musty, or sewer smell is most commonly caused by bacteria growing in a sink drain or water heater. These bacteria may flourish because water faucets haven't been turned on, hot water hasn't been used or has been turned off for a while, or the water heater thermostat is set too low. Go to the sink where you believe the odor originates. Check cold water versus hot water. Fill a clean glass with cold water, step away from the sink, and smell the water. If there is no odor, the origin may be the sink's drain or garbage disposal.

WHY IS MY WATER DISCOLORED?

Discolored or dirty water can be related to older, galvanized pipes, plumbing or a water softener in the Customer Zone or to recent activity in your neighborhood, such as construction, break repairs, or flushing fire hydrants. Visit https://tucsonaz.gov/water/outages for any notices about your location.

Get a white bucket and go to the outside faucet closest to your water meter or to the main faucet where water enters the house. Remove the garden hose if attached to the faucet. Run the water from the spigot into the bucket until the bucket is full. Repeat 2 or 3 times.

If bucket water is clear, the issue is most likely in the Customer Zone. Contact a plumber to inspect plumbing and pipes.

Contact Us

To report water quality and pressure issues, please contact Water Quality/Pressure Concerns at 520-791-5945 Mon. - Fri., 8 a.m. - 4:30 p.m. or email CustomerSupportUnit@tucsonaz.gov.

Conservation and Drought Planning

Did You Know?

Tucson Water delivers the same amount of water today that it supplied in 1985 despite a 20% increase in population.

TUCSON WATER CONSERVATION PROGRAM

For decades, Tucson Water has promoted water conservation, providing community education, resources, and rebates for our customers. Our efforts have paid off, with individual water use decreasing 30% as a result. Today, Tucson Water delivers the same amount of water we did in the late 1980s while serving over 200,000 more customers. The Conservation Program is currently funded by a conservation fee of 10 cents per one hundred cubic feet (ccf) (1 ccf = 748 gallons) assessed on all potable water sales and operates out of a separate fund within the Tucson Water Department. The fund was established in 2008 through the adoption of Ordinance 10555.

The Conservation Program offers a suite of conservation services and customer incentives, including low-income assistance, education programming for K12 students and landscape professionals, one-on-one water audits, community outreach, and conservation resources and tools.

Through these services, the Conservation Program has achieved the following:



4.88 billion gallons

(14.985 acre-feet) of water



INVESTED MORE THAN \$16 million

in rebates and incentives



71,000 high-efficiency toilets and urinals,

including over 8,400 free toilets for low-income customers



3,500 rainwater harvesting and gray water systems,

including 300 subsidized systems for low-income customers



ENGAGED WITH NEARLY 600,000 students

and community members



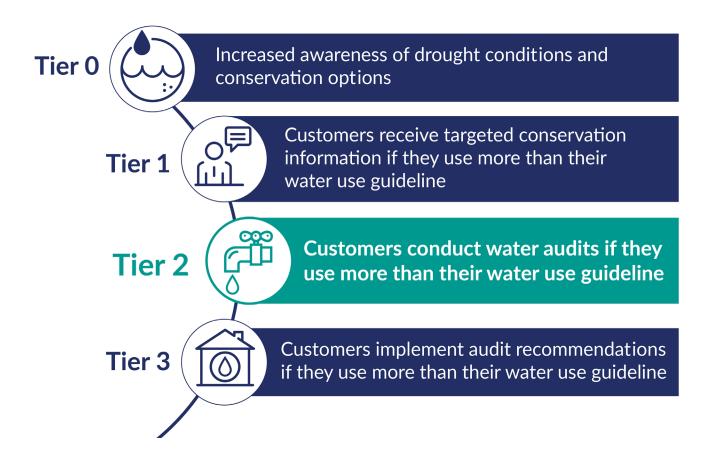
CONDUCTED NEARLY 10,000 water audits

over the last five years

CONSERVATION AND DROUGHT

To prepare for ongoing drought within the Colorado River Basin, the City of Tucson updated its Drought Preparedness and Response Plan in 2020 to align with current Colorado River indicators. The City's drought plan tiers correspond directly to the shortage tiers on the Colorado River and will change in accordance with the Bureau of Reclamation's declaration for the upcoming year. Conservation staff are preparing tools and measures to respond to the current drought status, as well as future drought tiers. The infographic illustrates the conservation measures being developed for each stage of drought. In 2022, the City of Tucson had a Tier 1 drought status and moved to a Tier 2 drought status as of January 1, 2023. Tucson Water is working to empower customers with water use guidelines to determine how much water they use relative to other similar customers. Then, in each progressive stage of drought, customers who exceed their water use guideline will be instructed to take additional measures to conserve water. Concurrently, the City is examining its own facilities to identify and implement efficiency opportunities.

Refer to https://www.tucsonaz.gov/water/drought-preparedness for more information.







Contact Us

https://www.tucsonaz.gov/water CustomerSupportUnit@tucsonaz.gov

Para nuestros clients que habla Español: Este informe contiene información muy importante sobre la calidad de su agua. Traduscalo o hable con alguien que lo entienda bien. Para obtener una copia de este informe en Español, llame al (520) 791-5945.









