

Customers of Small Community Water Systems

June 2026



Background

Water is one of Arizona's most precious and limited resources. Every gallon saved benefits your family, your neighbors, and future generations. This factsheet is intended for homeowners, renters, and household members in Arizona's rural communities, particularly those outside Active Management Areas (AMAs). It suggests strategies for reducing water waste and increasing water use efficiency while maintaining a desired quality of life. It highlights low-cost, practical water-saving strategies with documented savings that any household can implement regardless of budget or location.¹ These strategies may also be useful for rural well owners; a separate factsheet designed for them can be accessed here wrrc.arizona.edu/conserve.

Approximately 237,000 Arizonans are served by small community water systems,² defined as systems serving 1850 customers or fewer (15 to 1,850 service connections or regularly serves 25 to 1,850 year-round residents).¹ Many rely on groundwater pumped from basins experiencing some level of decline.³ Outside AMAs, there are no mandatory conservation requirements, meaning groundwater protection depends on voluntary action. The water savings of individual households can make a difference.⁴

Why Conservation Matters

Arizona has been in a prolonged drought for over two decades, with below-average precipitation recorded since the mid-1990s.⁵ Average temperatures in Arizona have also risen 2.5°F since the beginning of the 20th century, and historically unprecedented increases in annual average temperature are projected during this century.⁶ Together, reduced precipitation and rising heat are accelerating groundwater depletion across the state, making household conservation more important than ever.

How Is Water Used?

Understanding where water is used points directly to where savings are possible. As shown in Figure 1, a recent study of Arizona residential water use found that average daily household water consumption is approximately 139 gallons per capita per day (GPCD).⁷ Outdoor use, including landscape irrigation, pools, and cleaning, accounts for approximately 64% of that total, while 36% is used indoors.⁷ Indoors, toilets are typically the single largest water user, followed by showers, kitchen and bathroom faucets, and clothes washers.

Where to Look for Water Savings

Water savings can be achieved through structural changes and behavioral changes. Structural changes, such as replacing toilets, usually require an investment in long-term water savings without affecting lifestyle. Behavioral changes, such as taking shorter showers, are costless but require lifestyle adjustments.

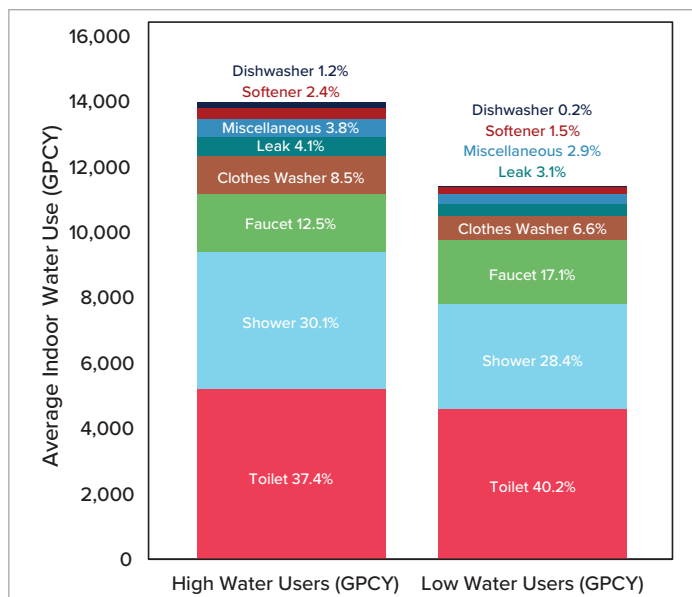


Figure 1. Average annual indoor water use in gallons per capita per year (GPCY) for high and low water users nationally. High water users typically did not practice water-saving strategies, while low water users did. Note: outdoor use, which accounts for a large percentage of total household water use, is not shown. Source: Naseri et al. (2025).⁷

Where Are Arizona's Small Community Water Systems?

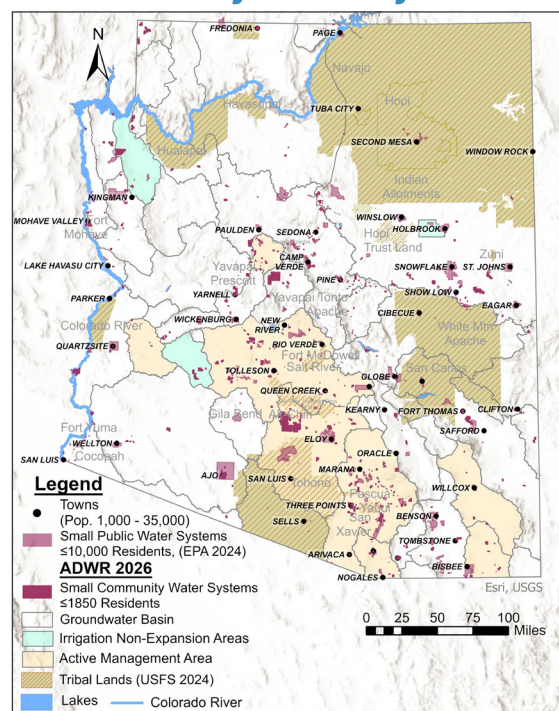


Figure 2. ADWR Small Community Water Systems. Source: Arizona Water Conservation Factsheet, Small Community Water Systems.

When thinking about how you can save water, consider:

- Leaks cost the average household more than 10,000 gallons per year, and most are easy and inexpensive to fix.⁸
- Toilets are the most notorious leak culprits. Be aware that leaks in the service line between the water meter and your home are the homeowner's responsibility. A broken water meter can make it difficult to detect leaks. Report any broken meters to your water provider.
- Indoor fixtures and appliances like toilets, showerheads, faucets, and washing machines account for the majority of indoor use. Older models use significantly more water than newer low-water-use models.
- In Arizona, outdoor use can account for up to 60–70% of total household water demand during summer months.⁴ Landscape irrigation is the primary use of outdoor water for most households.
- Water treatment devices like reverse osmosis and water softeners create significant water waste that can be reduced or redirected.⁹
- Behaviors such as taking long showers and washing dishes under running water use more water than you may imagine. Relatively small behavior changes can make a big difference.

Every 10,000 gallons saved is equal to washing about 280 loads of laundry, 600 showers, or meeting your family's water needs for a full month.⁴

Indoor Water Efficiency Strategies

STRATEGY 1: Install WaterSense Fixtures and ENERGY STAR® Appliances

Fixing leaks and upgrading fixtures are the most cost-effective investments available and can pay for themselves within a few years through reduced water and energy costs. The EPA's WaterSense program certifies products that use at least 20% less water than standard models without sacrificing performance.¹⁰ WaterSense labeled fixtures are widely available at hardware stores and require no special installation. ENERGY STAR® certified washers and dishwashers use less water and less energy than standard appliances.

Fixture / Appliance	Standard Use gallons (g)	Replacement Use gallons (g)	Estimated Annual Savings gallons/yr
Toilet	3.5–6 g/flush	1.28 g/flush	13,000
Showerhead	2.5 g/min	2.0 g/min	2,700
Faucet Aerator	2.2 g/min	1.5 g/min	700
Washing Machine	40 g/load	15–25 g/load	5,000
Dishwasher	10 g/cycle	3–5 g/cycle	1,300

Finding Rebates in Your Area

Water utilities may offer rebates or other programs. Check your utility provider website to see what conservation programs are available to you. For example, Arizona Water Company, who serves several communities around the state, provides toilet rebates for purchasing and installing high-efficiency toilets.¹¹ Find out who your utility provider is through your utility bill, and check with them to see about conservation programs available to you. Other rebate opportunities may be available regionally. For example, Cochise County¹² offers a rebate to residents in the county, regardless of water provider. Visit the EPA WaterSense rebate finder at epa.gov/watersense for programs in your area.¹⁰ Finally, the Water-Use-It-Wisely AZ-Water-Wise-Kit program provides free water-saving devices to anyone in the state.

STRATEGY 2: Leak Detection and Repair

Residential leaks occur most commonly in toilet flappers, faucets, and outdoor spigots.⁸ Note: leaks in the service line between the water meter and the home are the homeowner's responsibility.

Toilet Leak Test: A leaky toilet flapper can waste up to 200 gallons per day. Replacement costs about \$5 and can save up to 73,000 gallons per year.⁸

- Put a few drops of food coloring in your toilet tank and wait 15 minutes without flushing.
- If color appears in the bowl, your flapper is leaking. Replace flapper as soon as possible.

How to Check Your Water Meter for Leaks:

- If you have a meter, it can help you detect household leaks.
- Turn off all water in your home and go to your water meter and write down your meter reading.
- Don't use any water for 1–2 hours.
- Check your meter again. If the meter reading has changed, you have a leak somewhere in your system.

- Call your water provider or a plumber if you cannot locate the leak.
- A broken water meter can make it difficult to detect leaks. Report a broken meter to your water provider.
- See the Resources link on page 4 for additional guidance from the Smart Home Water Guide.

STRATEGY 3: Home Water Treatment Devices

Many rural households use home treatment systems for water quality concerns. Note: All community water systems must meet EPA National Primary Drinking Water Standards.

- For aesthetic concerns such as taste and odor, granulated activated carbon (GAC) filters, such as Brita filters, and other adsorptive media reduce chlorine taste and odor effectively and use no additional water.⁹
- Older model water softeners "soften" incoming hard water using 20-70 gallons per regeneration cycle. Look for a "demand-initiated regeneration (DIR)" or "metered" water softener that only regenerates when necessary.⁹ DIR systems can save 25-40% water than clock initiated models.
- Reverse osmosis systems can address both aesthetic (e.g., taste, odor, or color) and hardness issues but produce 7–10 gallons of wastewater for every filtered gallon of water. Inline systems that treat all of a household's water are expensive to install and can multiply a household's water use. Consider redirecting reject water for outdoor use. A small, under-sink device can provide water for drinking and cooking with less waste.

Outdoor Water Efficiency Strategies

STRATEGY 1: Install Smart Irrigation Controllers

In rural communities, outdoor water use often serves essential needs including livestock watering, gardens, and food production. If you have a landscape or a garden irrigation system, replacing a standard clock-based irrigation timer with an EPA WaterSense labeled smart controller is an impactful and cost-effective outdoor water-saving investment. Smart controllers adjust watering schedules automatically based on real-time weather data, soil moisture, and local evapotranspiration (ET) rates, so plants can get water when they need it.¹⁰

Controllers can be installed by yourself, or a certified professional. Once installed, check your controller's watering schedule monthly during the growing season to verify that run times and zone coverage match your plants' current needs. Adjust timers for monsoon rainfall periods when supplemental irrigation may not be needed.

- Estimated savings: up to 15,000 gallons per year per household.¹³
- Cost: \$80–\$300 for a quality Wi-Fi enabled smart controller. Professional installation costs will vary. If you are replacing an existing controller, it is likely no new wiring will be required.¹⁰
- Check with your water provider for available rebates before purchasing.

STRATEGY 2: Install Drip Irrigation Systems and Switch to Low Water Landscaping

Drip systems deliver water directly to plant roots and significantly reduce evaporation losses.¹⁴ Replacing grass or high-water-use plants with native arid-adapted species dramatically reduces irrigation demand.

What to Plant and Watering Tips:

The best drought-tolerant plants for your property depend on where you live in Arizona. Elevation, rainfall, and soil type vary significantly across the state. Free regionally specific native plant guides for your area (organized by elevation and climate zone) are available from the U of A Cooperative Extension Water Wise program at waterwise.arizona.edu.¹⁴ Look for plants that are:

- Select native plants for your specific region of Arizona, adapted to local rainfall and soil conditions
- Labeled native or drought-tolerant at your local nursery
- Set drip irrigation schedules to water during early morning or evening to reduce evaporation losses.¹⁴
- Add 2–3 inches of mulch around plants to retain soil moisture and reduce watering frequency by 25–50%.¹⁴
- Group plants with similar water needs together (hydrozoning) to avoid overwatering drought-tolerant species.¹⁴

STRATEGY 3: Rainwater Harvesting (Passive and Active)

Arizona law explicitly encourages rainwater harvesting (A.R.S. Section 45-788). Capturing rain that falls on your roof, other impervious surfaces, and soils, and using it outdoors gives you free water.

Passive rainwater harvesting: uses earthworks like berms, basins, and contour swales to slow, spread, and sink rainfall into the soil where your plants can use it. This approach can dramatically reduce the need for irrigation.¹⁴

- Level berms on contour slow runoff and allow it to percolate into the root zone.
- Basins around trees and shrubs retain water. Adding mulch reduces evaporation.
- Grading your landscape to direct runoff toward planted areas puts water to use and can reduce erosion and/or flooding.

Active rainwater harvesting: involves storing rainwater in rain barrels or cisterns for later use. System costs depend primarily on the size and type of storage used.

- Connecting a simple rain barrel to a downspout to catch roof runoff typically costs \$50–\$150.¹⁴
- Cisterns hold more water and are good for households with larger irrigation needs.¹⁴
- Large-scale systems provide long-term storage for extended dry periods but require significant investment and maintenance by a qualified service.
- Filtration and treatment devices are required for any indoor uses.

Both active and passive basin systems rely on gutters and downspouts to direct water from your roof to the collection point. If your home does not have rain gutters, installing them is a recommended first step. Many hardware stores carry basic gutter kits, and your local U of A Cooperative Extension office can provide guidance on simple installations.¹⁴

STRATEGY 4: Gray Water Reuse

Gray water is household wastewater from showers, bathtubs, bathroom sinks, and laundry. (Water from toilets, kitchen sinks, or dishwashers is blackwater, which requires treatment.) Arizona allows single-family gray water reuse for landscape irrigation without a permit for systems handling less than 400 gallons per day.¹⁵

- Gray water is generated daily, rain or shine, making it a reliable source for outdoor irrigation.
- Simple household systems can be installed in an afternoon.¹⁵
- Gray water may be used for trees and landscape plants, not vegetables, herbs, or edible root crops.¹⁵ Use of soaps low in salts are recommended, high sodium is harmful to plants.

Laundry-to-Landscape (L2L) System is gray water diverted from your washing machine discharge hose directly to plantings. No pumps are required; the machine does all the work.¹⁵ You may need to re-route the washer's discharge hose to connect to an outdoor distribution line. In some homes, this will require additional piping. A licensed plumber or gray water installer can assess your setup. This requires using low salt soaps to prevent killing plants with the gray water.

Shower-to-Landscape System is gray water diverted from a branched-drain that collects shower and bath water and distributes it to irrigation. No pumps or electricity is required. A free design guide is available from the Arizona Department of Environmental Quality (ADEQ) at azdeq.gov/recycled-water-rulemaking.¹⁵ A licensed plumber or gray water installer should be consulted.

- Materials cost: \$300–\$1,500 installed.¹⁵
- Estimated savings: 20–50 gallons per household per day or 7,300–18,250 gallons per year.¹⁵

TRIBAL COMMUNITIES: Water Efficiency with Culture in Mind

Water customers of Tribal water utilities face many of the same water use decisions as other rural residents; other decisions are unique to their Tribal communities. Differences are rooted in cultural values and traditional practices. Tribal communities have long practiced responsible water stewardship; however, the water efficiency strategies in this factsheet may prove useful. Resource constraints have prevented many Tribes from extending water service to all members living on Tribal land. For example, approximately 30–40% of Navajo Nation residents lack running water at home, and among households that haul water, nearly three quarters are using less than the minimum amount of water recommended for health and well-being.^{16,17} For these households, the priority is gaining reliable access to water. Tribal households dependent on private wells or hauled water have water supply and quality concerns not faced by utility customers. The factsheet for domestic well users, available at wrrc.arizona.edu/conserve is likely to be more relevant to them.

Note: All community water systems, including those operated by Tribal nations, must meet EPA National Primary Drinking Water Standards.¹⁸

How Much Rain Can You Collect?

Roof Area (sq. ft.) × Rainfall in inches (in) × 0.623 = Gallons Collected¹².

Example: A 1,500 sq. ft. roof × 12 (in) rainfall = 11,000 gallons/year. This can supply landscape irrigation needs for a typical household.

Getting Started

Adopting water conservation strategies can be financially and personally rewarding. Many resources are available; you do not have to figure this out alone. **Please use the QR code below or visit wrrc.arizona.edu/conserve to find additional resources and references (linked by numbers in the text) used for the creation of this factsheet.**

Additional Definitions, Resources, and References

wrrc.arizona.edu/conserve



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WATER INFRASTRUCTURE
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