

URBAN WATER CONSERVATION

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Water Conservation Specialist

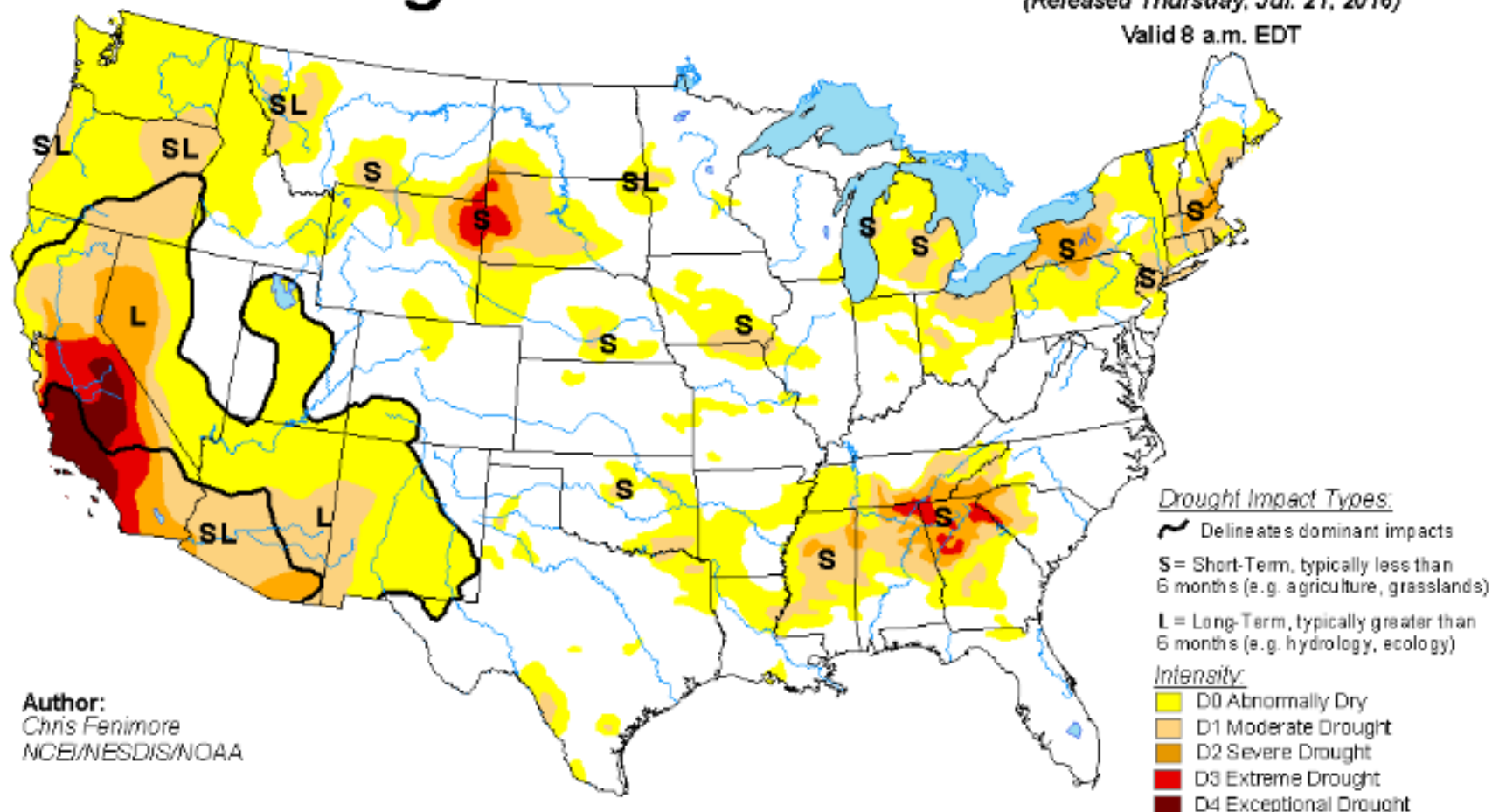


U.S. Drought Monitor

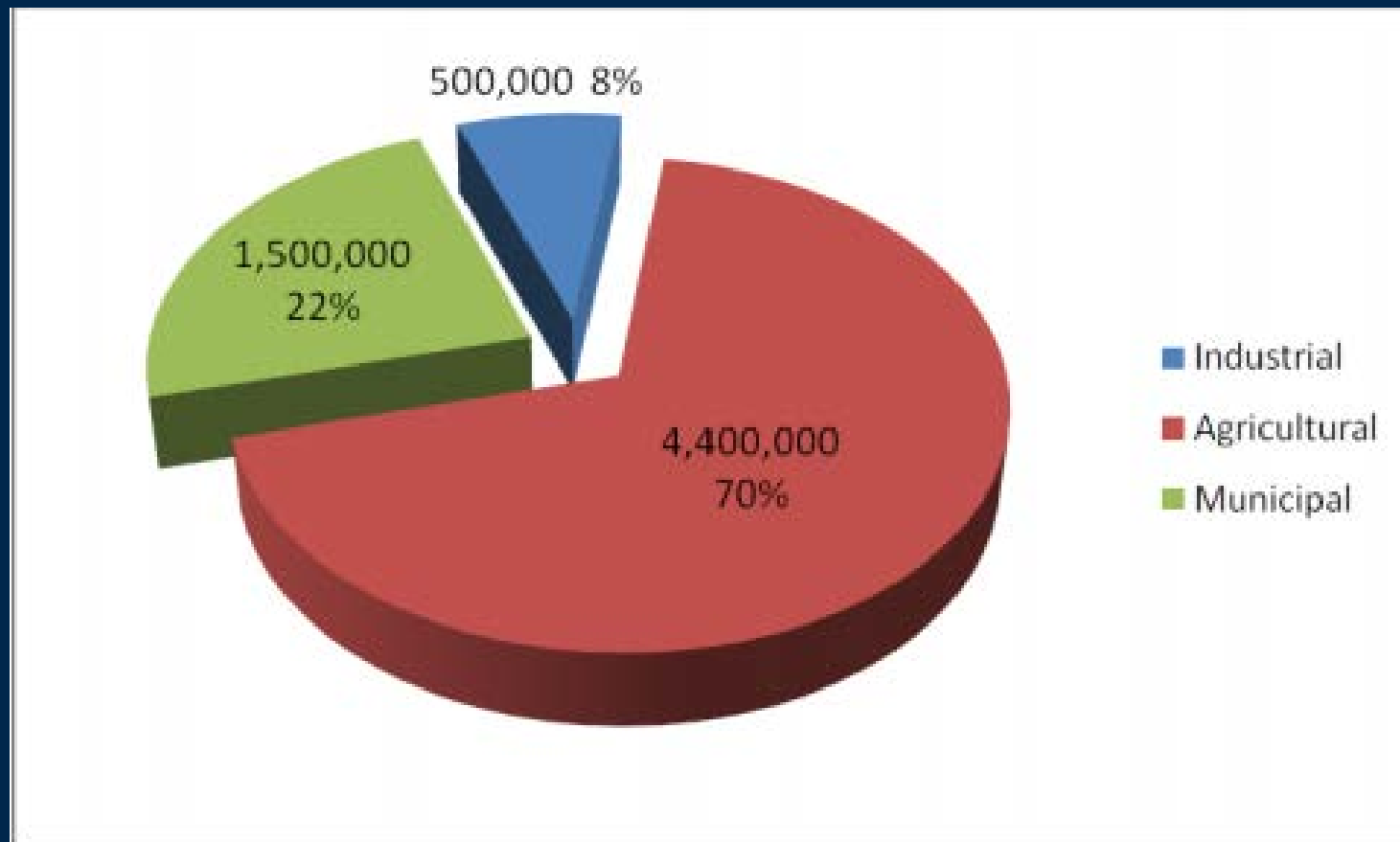
July 19, 2016

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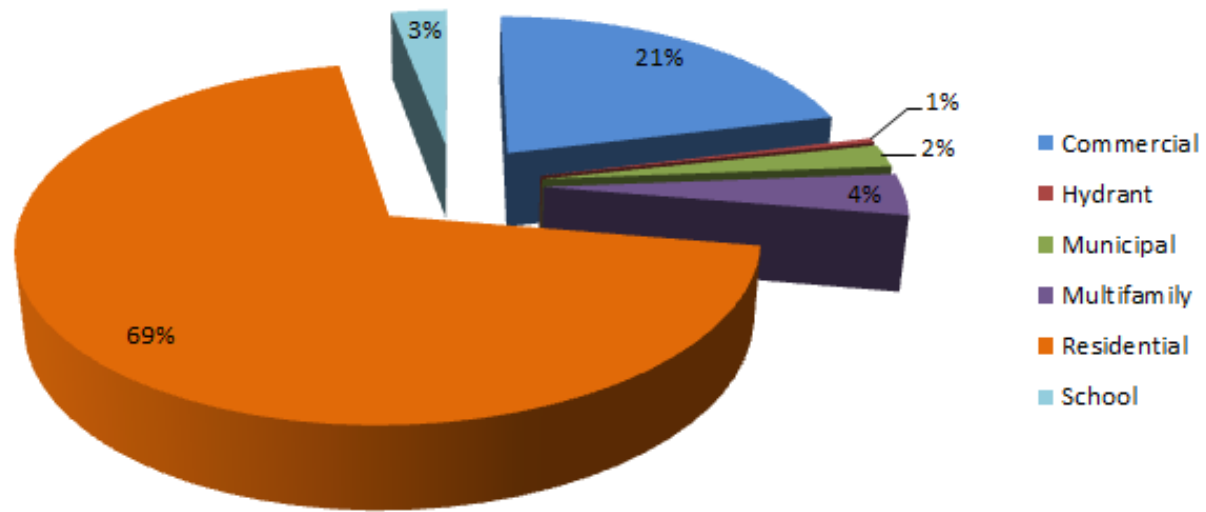
Author:
Chris Fenimore
NCEI/NESDIS/NOAA



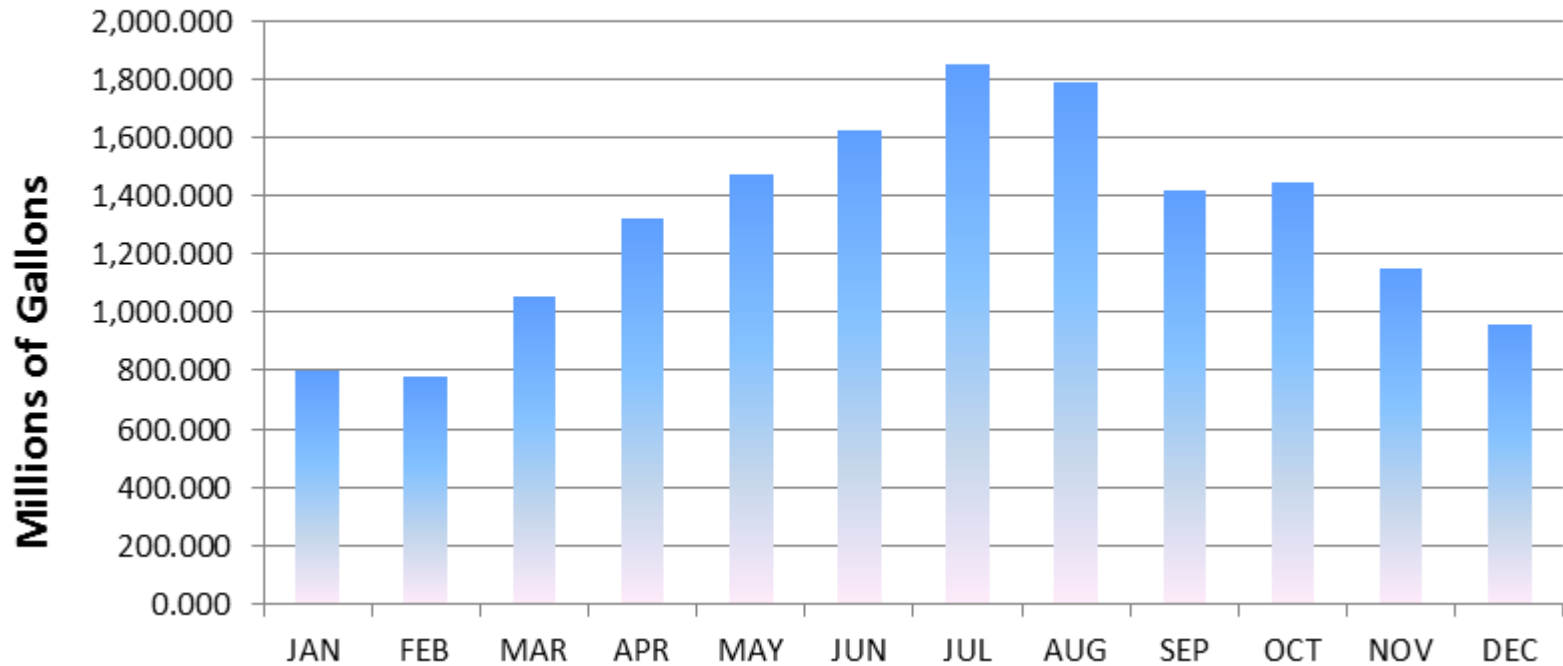
<http://www.azwater.gov/AzDWR/PublicInformationOfficer/documents/supplydemand.pdf>

Water use in Gilbert

2015 Consumption by Customer Class



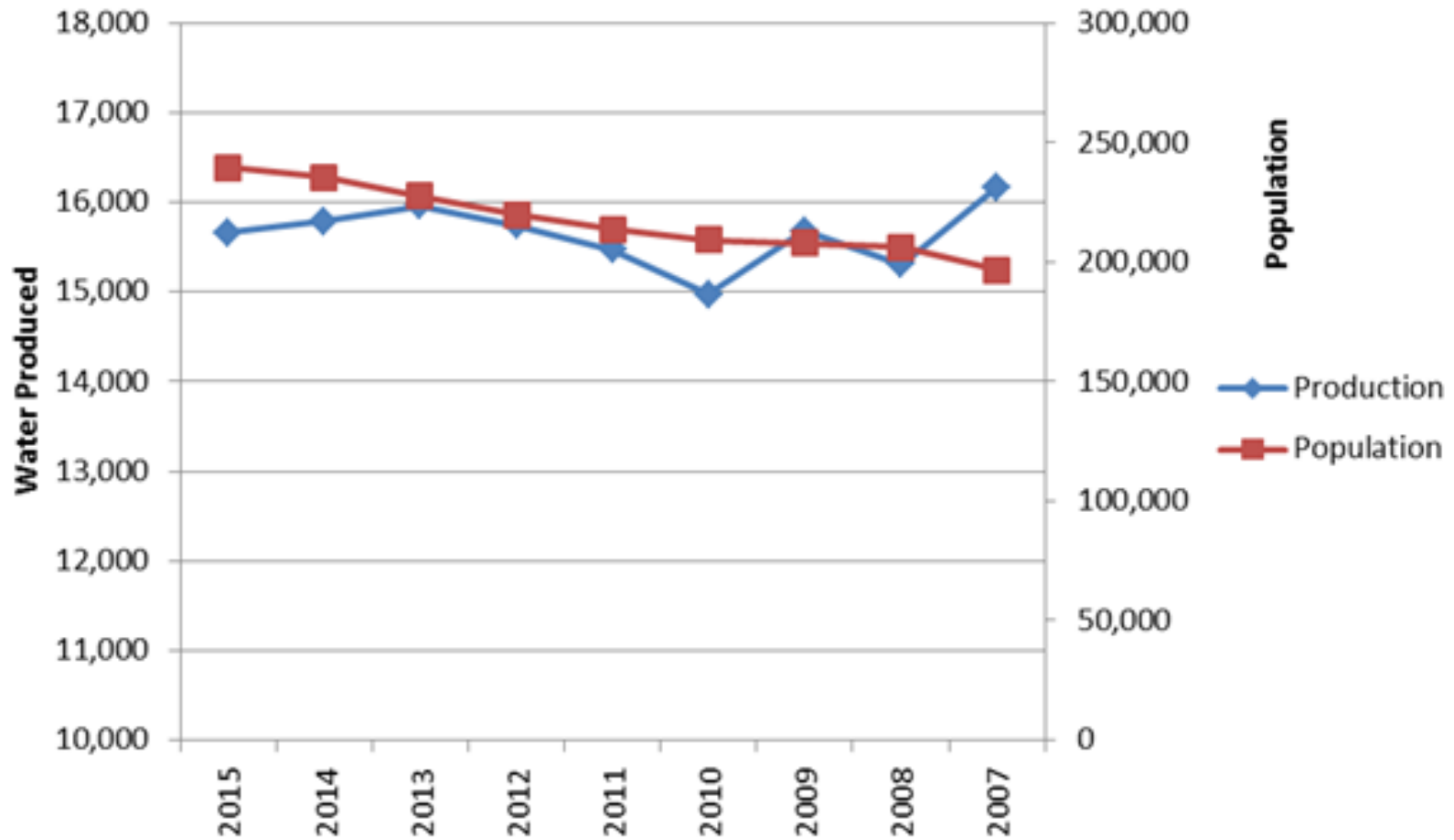
Gilbert Water Production 2015



Gilbert Water Division produced **15,658,888,000** gallons of water in 2015.

That's 48,055 acre feet of water.
(325,851 gallons in one acre-foot)

Gilbert Water Production and Population

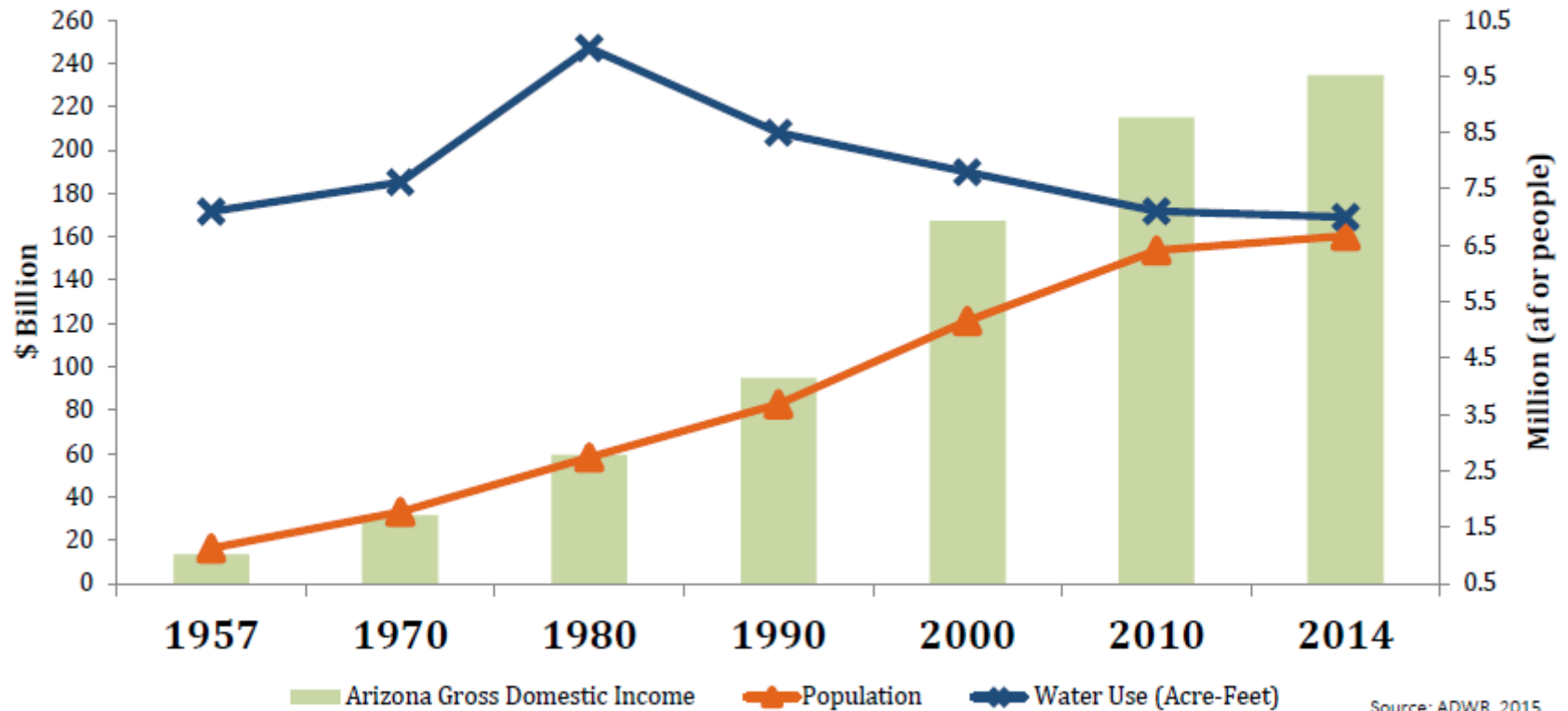


Gilbert's Water Conservation office works diligently to aid customers in reducing water use. Per person consumption in Gilbert has dropped 16% since 2004 in part because of these efforts.

Water use has declined by 36 gallons per person per day since 2004.



Arizona Water Use, Population, and Economic Growth (1957 - 2014)



[http://www.azwater.gov/AzDWR/ADWR_New
s/documents/FORWEBFinalSlides.pdf](http://www.azwater.gov/AzDWR/ADWR_New%20s/documents/FORWEBFinalSlides.pdf)



<http://green.blogs.nytimes.com/2012/03/16/a-rebate-for-low-flush-toilets/>

<http://www.allianceforwaterefficiency.org/EPAActInfo.as>
px

THE POWER OF PLUMBING + POLICY

CELEBRATING 20 YEARS OF WATER EFFICIENT TOILETS













22%
DECREASE
1999-2016

**Average annual indoor household
water use**

Figure 1. Indoor household use by fixture

							
Toilet 24% 33.1 gphd	Shower 20% 28.1 gphd	Faucet 19% 26.3 gphd	Clothes washer 17% 22.7 gphd	Leak 12% 17.0 gphd	Other* 4% 5.3 gphd	Bath 3% 3.6 gphd	Dishwasher 1% 1.6 gphd

* The "Other" category includes evaporative cooling, humidification, water softening, and other uncategorized indoor uses.

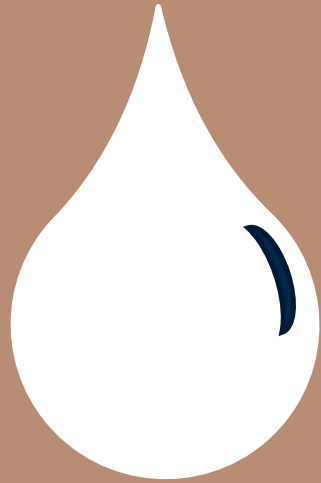
Where is the remaining
water used?



1 . Water Efficiency Checkup

High water bill? Think you have a leak?

gilbertaz.gov/watercheckup



Overwatering

Many times the cause of sudden high water usage is due to the *programming* of the irrigation controller.



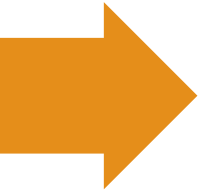
Leaks

Other times a sudden jump higher than normal water usage can be attributed to a leak.



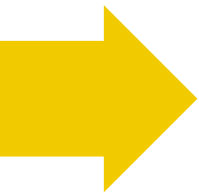
Most common leaks

- ▷ Stuck on irrigation valve
- ▷ Pool autofill
- ▷ Toilets



50,000 gallons

Average annual savings



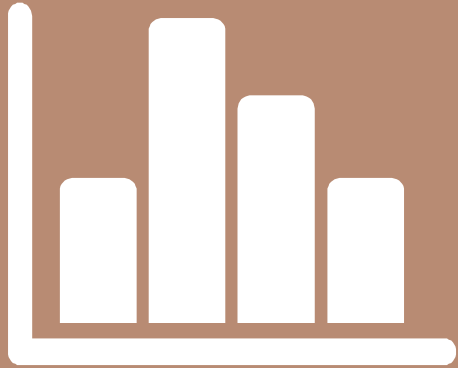
**\$2.17 per 1,000
gallons saved**

Water Efficiency Checkup program is less expensive than the cost of acquiring new water supplies

2. HOA Landscape Irrigation Assistance

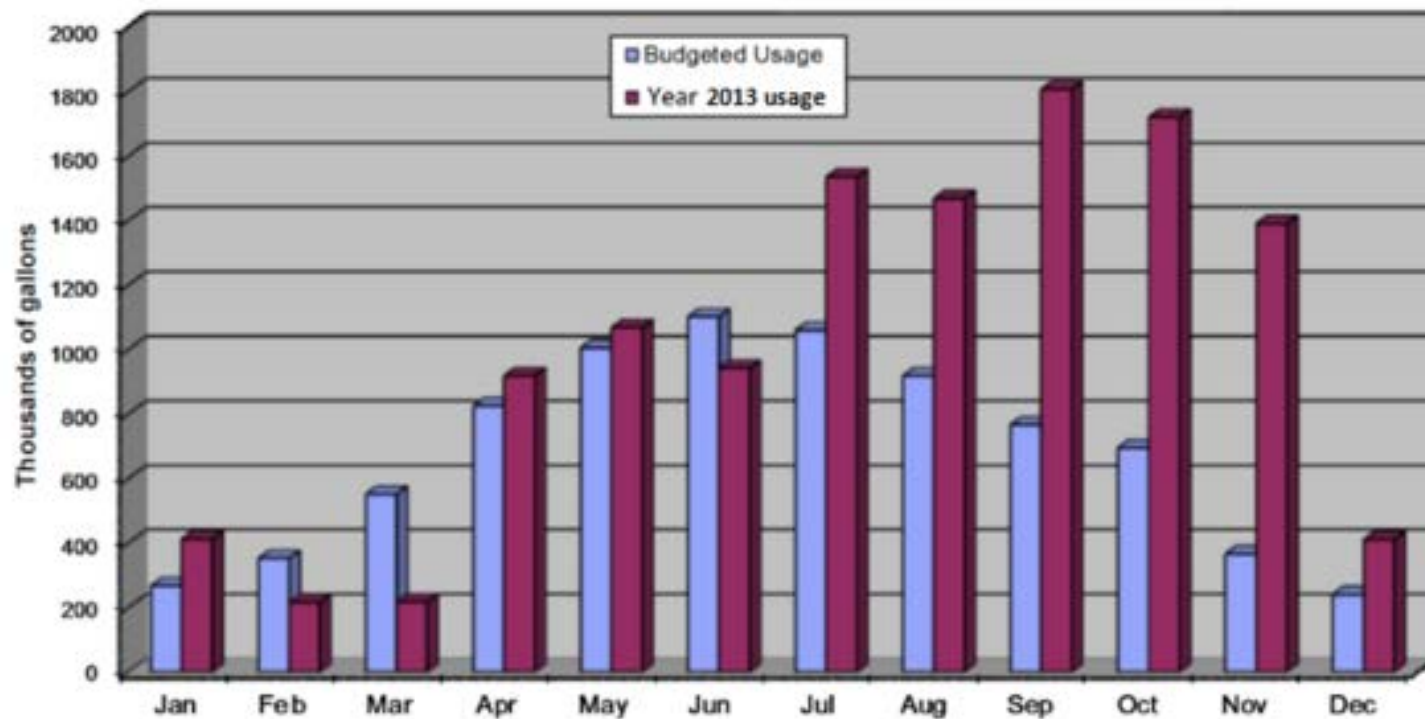
HOA common areas are large landscapes that need water!
We help you water right.

gilbertaz.gov/HOA-irrigation

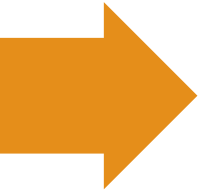


Water budgets

We'll provide your landscape contractor, HOA board, and property manager with customized monthly water use targets to ensure your landscape looks great *AND* is irrigated appropriately.

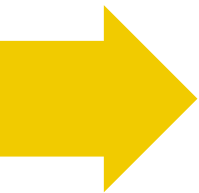


A sample water budget graph shows when water usage exceeds the recommended amount for that particular landscape.



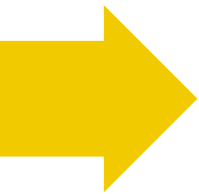
16,000,000

Gallons saved



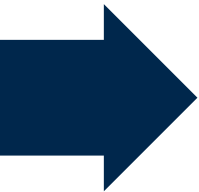
\$30,000

One HOA in Gilbert saved 16 million gallons of water and \$30,000 annually by working with a Water Conservation Specialist



52 million gallons

Saved in one year



253 million gallons

Culmulative water savings since program began in
2009

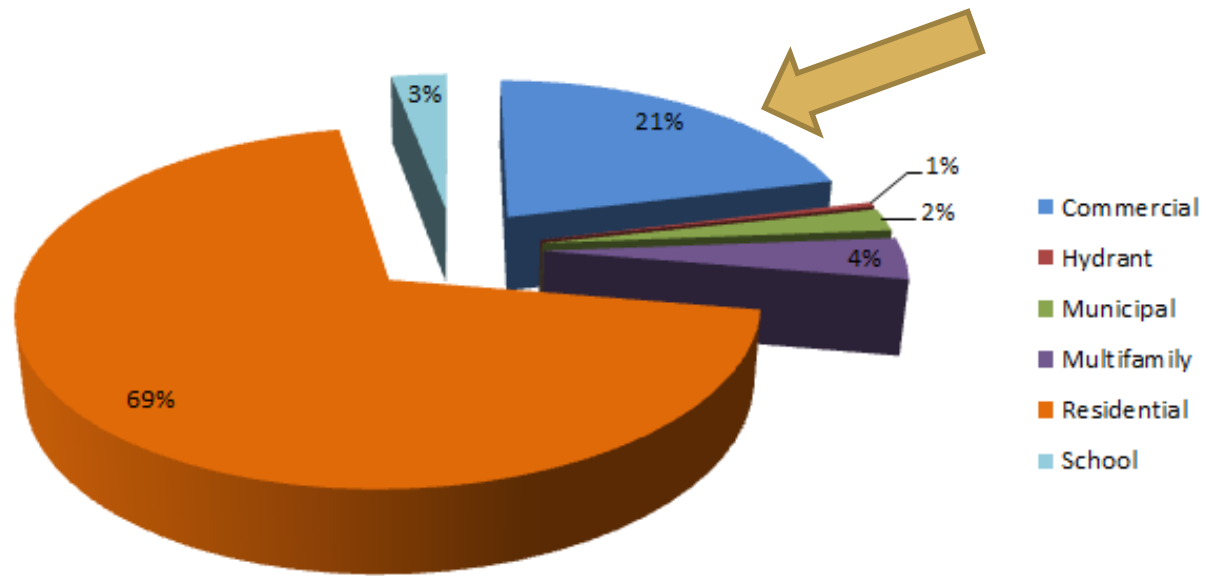
3. Water Wise Gilbert

A water conservation recognition program for commercial customers

gilbertaz.gov/waterwise

Water use in Gilbert

2015 Consumption by Customer Class



How to become a Water Wise Gilbert organization



Schedule

Schedule a Water Efficiency Checkup with a Gilbert Water Conservation Specialist.



Save

Save water by implementing the suggestions from the Water Conservation Specialist's follow up report.



Promote

Utilize free promotional materials provided by Gilbert Water Conservation to share your accomplishments with your customers.



Maintain

Maintain your water savings.

Children's Learning Adventure

**2/2/2016
Water
Efficiency
Checkup**

**Implemented
financially-feasible
water-saving
recommendations.**

**Over 500,000
gallons
saved since
checkup.**

BIG WATER SAVINGS, LITTLE CUSTOMERS



CHILDREN'S
LEARNING
ADVENTURE
SAVES BIG



MONITORS
INDOOR
WATER USE

SMART
CONTROLLER
IRRIGATES
LANDSCAPE

380,000
GALLONS SAVED
BY CHECKING
FOR LEAKING
TOILETS



149,000
GALLONS SAVED
BY ADJUSTING
IRRIGATION TO
LOCAL CLIMATE
CONDITIONS

GILBERTAZ.GOV/WATERWISE



Arizona Wilderness Brewing Company

**2/25/16
Water
Efficiency
Checkup**

**Working with
landscape
contractor to
irrigate
according to
landscape water
budget.**

**163,000
gallons
saved on
landscape
since
checkup.**

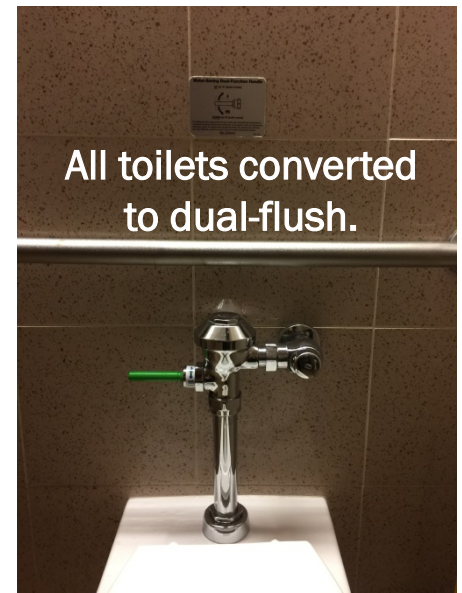


FREESTONE RECREATION CENTER

IS WATER WISE GILBERT
WATERLESS URINALS | DUAL-FLUSH TOILETS
HIGH EFFICIENCY SHOWER HEADS & FAUCETS



Urinals taken from 1.0 gpf to 0.5 gpf.



All toilets converted to dual-flush.

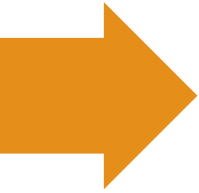
Waterless urinals in front restroom.



All faucet aerators converted from 2.2 gpm to 0.5 gpm

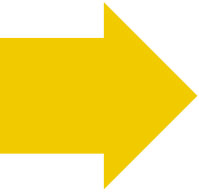


Showerheads replaced with 1.5 gpm



630,000 gallons

Projected annual savings



\$2,300

Saved annually in water and sewer fees

Look for a Water Wise Gilbert
business near you!



**WATER
WISE
GILBERT**

4. Technology

Water efficient technology for municipal sector.

Technologies for saving water (and energy and sewer fees)

▷ Pre-rinse spray valves for restaurants



- 1.28 gal per min (federal standard 1.6 gpm)



Technologies for saving water

- ▷ Waterless urinals and High Efficiency urinals



OLD

- ▷ 1.0 gal per flush

NEW

- ▷ 0.125 gal per flush
- ▷ 0.25 gal per flush
- ▷ 0.5 gal per flush

Dual-flush toilets



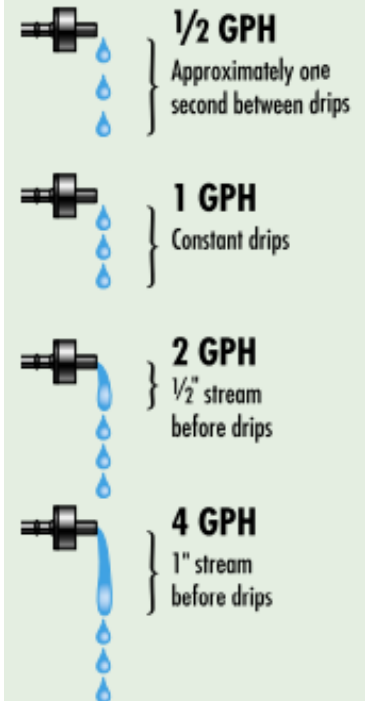
Pressure-compensating emitters

▷ Water output is what they say they're going to deliver



Estimating Emitter Flow

Use this visual guide to estimate emitter flow rates in gallons per hour (GPH).



▷ Drip irrigation should drip, not stream!



Fine for potted plants, but try
to avoid for in-ground plants



Stream rotor nozzles

- ▷ Apply water at a slower rate, allowing soil to absorb water that is applied to it (*can* prevent runoff)

Prevent this



Use this



Pressure regulating heads

- ▷ Prevent misting due to high irrigation system pressure

Prevent this



Use this





1800 Spray with PRS at 79 psi inlet pressure.
PRS regulates flow to 0.86 gallons per minute.



Non-PRS competitive spray at 79 psi inlet pressure.
Without PRS, flow rises to 1.64 gallons per minute.

Smart controllers

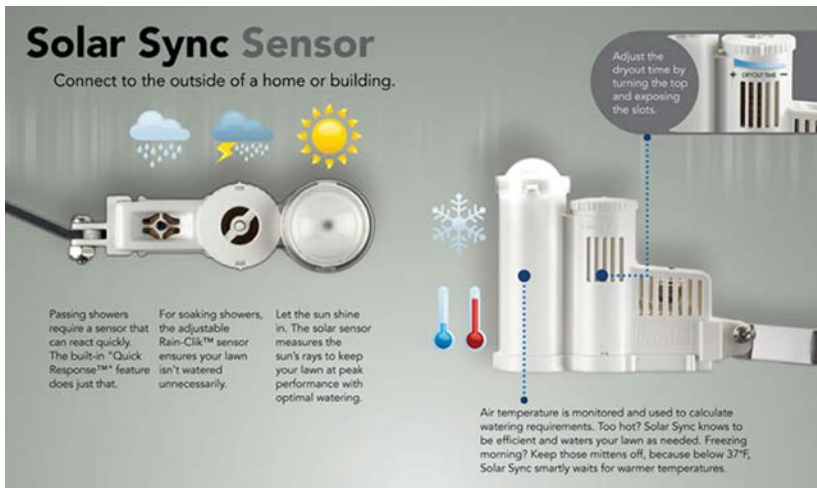
- ▷ People often ***do not adjust controller*** with the seasons.
- ▷ People often ***do not respond to rainfall events, cloudy days, drops in temperature, and shorter day length.***



Add on sensors

Solar Sync Sensor

Connect to the outside of a home or building.



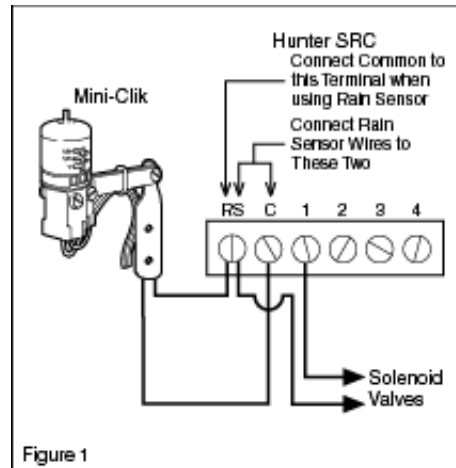
Adjust the dryout time by turning the top and exposing the slots.

Passing showers require a sensor that can react quickly. The built-in "Quick Response"™ feature does just that.

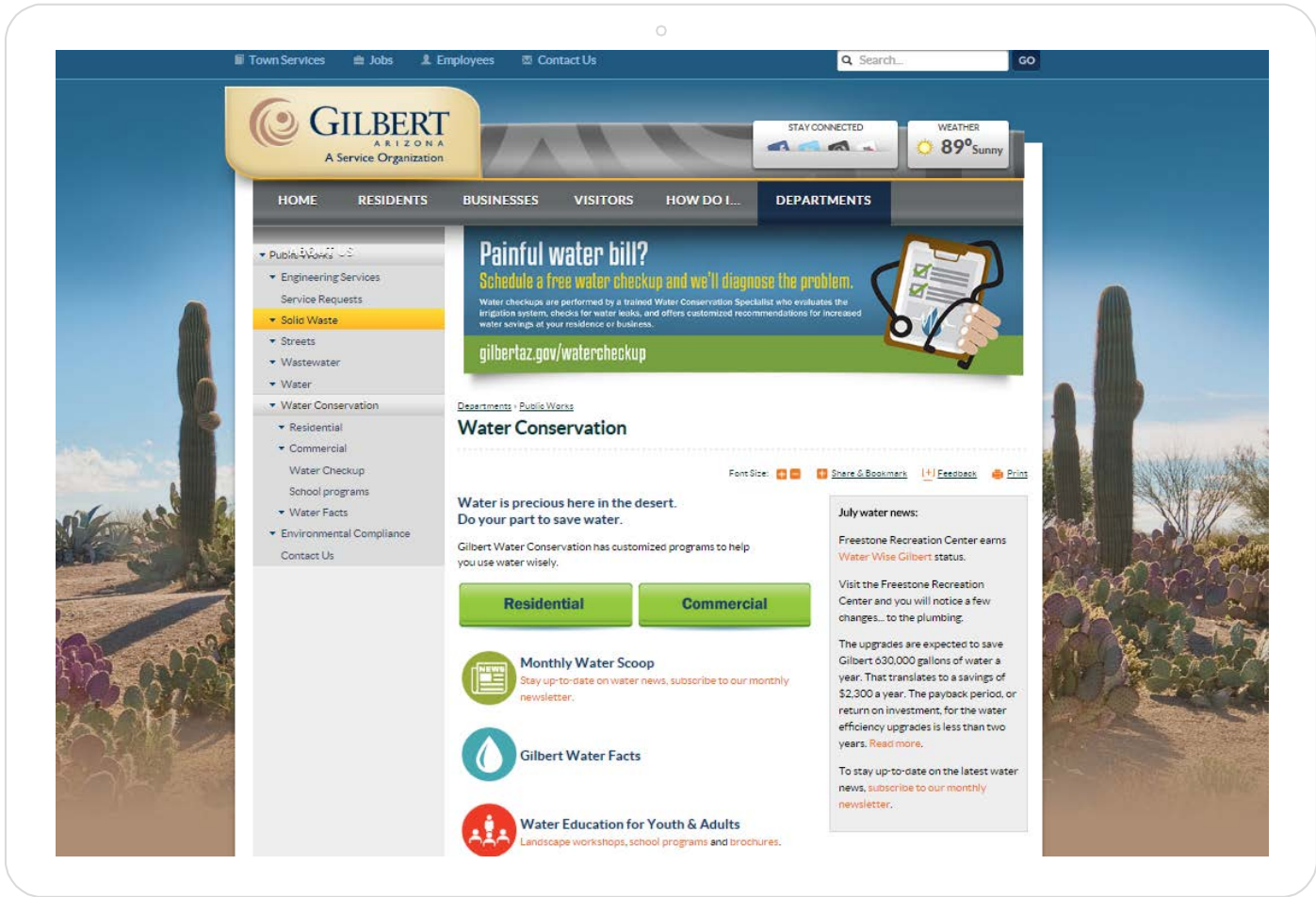
For soaking showers, the adjustable Rain-Clik™ sensor ensures your lawn isn't watered unnecessarily.

Let the sun shine in. The solar sensor measures the sun's rays to keep your lawn at peak performance with optimal watering.

Air temperature is monitored and used to calculate watering requirements. Too hot? Solar Sync knows to be efficient and waters your lawn as needed. Freezing morning? Keep those mittens off, because below 37°F, Solar Sync smartly waits for warmer temperatures.



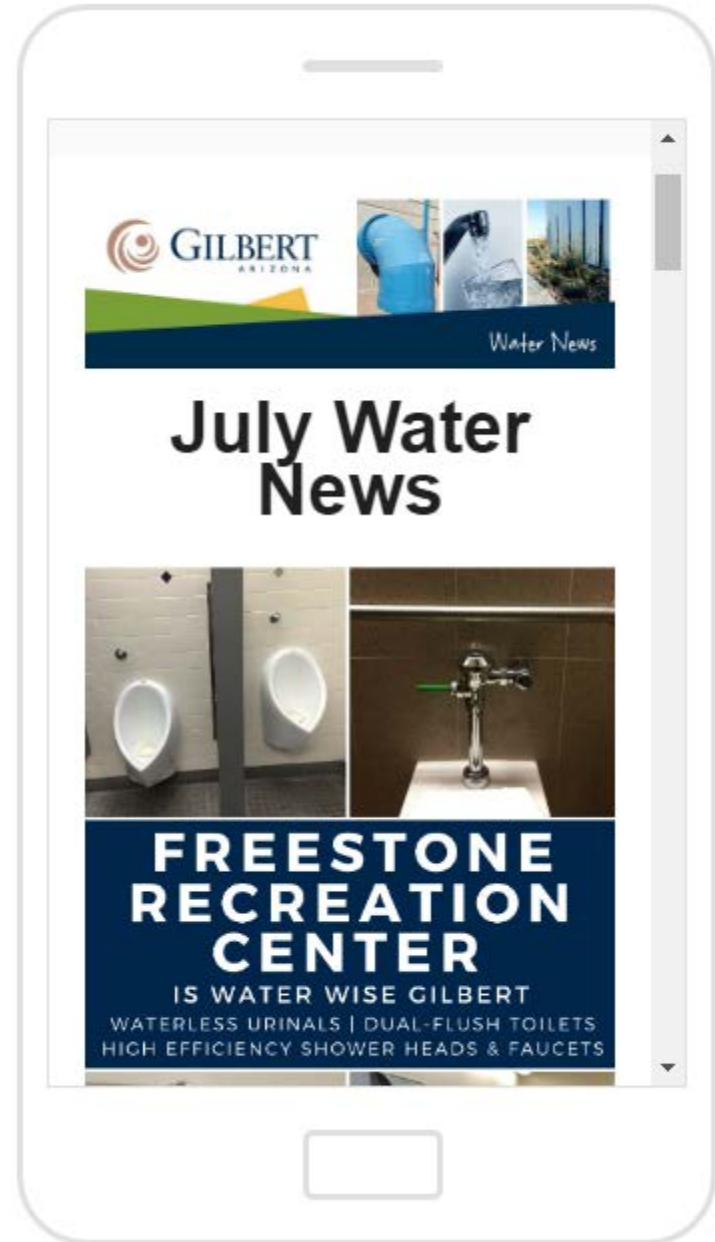




▷ gilbertaz.gov/water

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monthly e-newsletter

And stay up-to-date with the
latest news, tips, and events
from Gilbert Water
Conservation.



Important resources

- ▷ **Smart Home Water Guide**
smarthomewaterguide.org
- ▷ **Landscape Watering by the Numbers**
landscapewateringguide.com
- ▷ **How to Xeriscape with Style**
landscapewithstyle.com

Important resources

- ▶ **Make Your Landscape Thrive**
amwua.org/landscape

How much water should
my household use?

gilbertaz.gov/watercalculator

Thanks!

Any questions?

For more information visit:

gilbertaz.gov/water

E-mail

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