



# WaterSense-AWE Outdoor Water Efficiency Webinar Series

March 12, 2020





# WaterSense-AWE Webinar Series

- Outdoor topics for water utility and irrigation professional audiences
- Recent topics covered include:
  - Efficient Irrigation Practices for Medians and Park Strips
  - Demonstrating the Nexus Between Water Efficiency and Stormwater
  - Accelerating the Landscape Transformation



Recordings of past webinars and registration for future webinars  
at [www.epa.gov/watersense/webinars](http://www.epa.gov/watersense/webinars)



# Housekeeping

- All attendees will be muted upon entering the webinar to minimize background noise.
- Please type questions into the chat box on the lower right-hand side of your screen. We will have a dedicated time for Q&A and open discussion at the end of the presentation.
- A recording of this presentation will be available on the WaterSense website ([www.epa.gov/watersense](http://www.epa.gov/watersense)) and the Alliance for Water Efficiency's YouTube channel ([www.youtube.com/user/A4WE/feed](http://www.youtube.com/user/A4WE/feed)).



# WaterSense-AWE Webinars

## Landscape Transformation Case Studies

**Christopher Charles**  
Austin Water, Texas

**Toby Bickmore**  
Southern Nevada Water Authority

**Katie Collins**  
Fort Collins Utilities, Colorado

**Kathy Nguyen**  
Cobb County, Georgia





LANDSCAPE  
TRANSFORMATION  
STUDY



Alliance  
*for* Water  
Efficiency

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# LANDSCAPE TRANSFORMATION STUDY

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## 1. Impact Analysis: Landscape Program Water Savings

- What range of water savings can be expected from reducing landscape water requirements?

## 2. Process Evaluation: Customer Motivations and Market Readiness

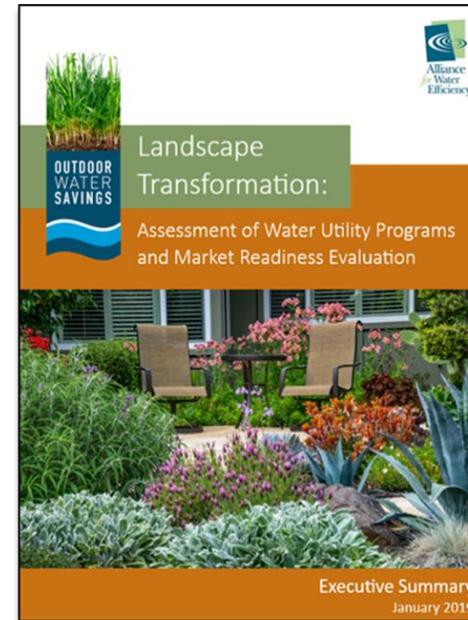
- What motivates people to change their landscape and irrigation practices to reduce the overall water requirement and usage?
- What are the reasons and rationale for their landscape choices?
- What barriers exist to landscape transformation and to utility-sponsored programs?



# HOW TO ACCESS THE INFORMATION

- Executive Summary available for free download
- Summary Analytics and Market Analysis Reports available for free download
- Infographic available for free download on “Sustainable Landscapes: Can Our Lawns Solve Our Water Challenges?”
- Full study materials with case studies available for AWE members
- Visit the AWE website at

[www.allianceforwaterefficiency.org/impact/our-work/landscape-transformation-assessment-water-utility-programs-and-market-readiness](http://www.allianceforwaterefficiency.org/impact/our-work/landscape-transformation-assessment-water-utility-programs-and-market-readiness)

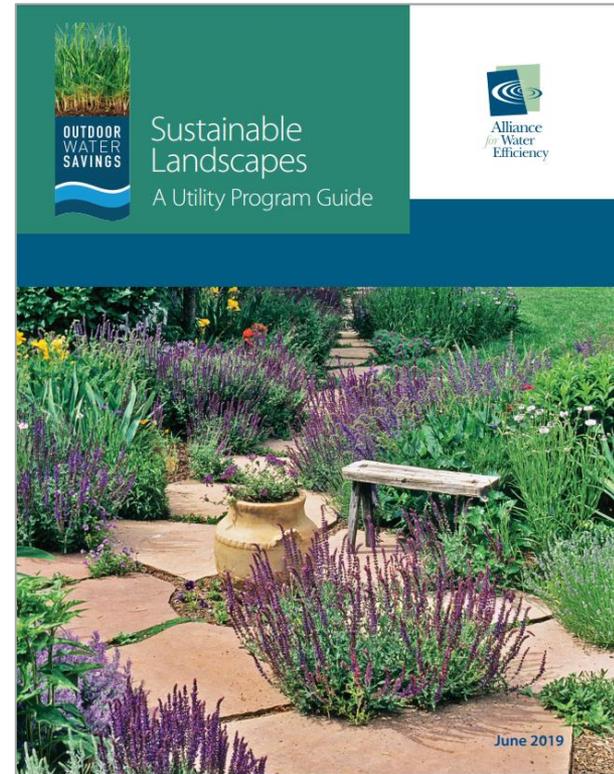


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# SUSTAINABLE LANDSCAPES: A UTILITY PROGRAM GUIDE

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- Landscape transformation study found that customers want help from their utilities, so this guide is targeted to utilities just getting started or those enhancing existing programs
- Organized into two sections:
  1. General considerations
  2. Considerations for specific types of outdoor landscape programs
- Features program examples with lessons learned





WaterSense Partners in Action

# Austin Water Conservation Division

## WaterWise Landscape Rebate Program: Listening to the Public

- What was not working
- What is working
- Steps forward

Christopher Charles  
Conservation Program Specialist  
Austin Water Conservation Department



WaterSense® Partner Austin Water

# The WaterWise Landscape Rebate Program

## Program requirements since 2018

- \$35 for every 100 square feet converted from turf grass to a WaterWise landscape
- Conversion area must:
  - Originally been at least 75 percent healthy turf grass
  - Cap-off automatic irrigation system or change spray heads to drip
  - Be comprised of 50 percent or more plant cover (at maturity)
  - Incorporate one inch of compost tilled into six inches of existing soil
- No more gravel unless it is a walking path (three feet max)
- Landscape fabric no longer required in plant beds, only hardscape areas (walkways, mulch rings, etc.)



WaterSense® Partner Austin Water

# The WaterWise Landscape Rebate Program

## Listening to the public—what was not working

- Landscape fabric
- Compost
  - Cost
  - Thin soil
- People adding automatic irrigation to their new landscape
- Gravel yards (up to 25 percent denials)
- Artificial turf requests



## Changes made:

- No more landscape fabric and compost requirements
- No more new automatic irrigation to their new landscape

WaterSense® Partner Austin Water

# The WaterWise Landscape Rebate Program

## Listening to the public—what is working

- Ability to do sections at a time (DIY people)
- Capping irrigation heads
- Decreased water use
  - Understanding water needs
  - Water conservation messaging
  - Rates and watering restrictions?



WaterSense® Partner Austin Water

# The WaterWise Landscape Rebate Program

## Steps forward:

- Participation down
  - “Free riders” back to acceptable level
  - Market stability
  - Lake levels high
  - Permanent watering restrictions
- City requests for not incentivizing
  - Gravel yards still continue
  - Artificial turf on the rise
- In-depth analysis for this program (Fall 2020)
  - Try to better quantify water savings
  - Automatic irrigation versus “hose draggers”





# More Information

## Contact:

Christopher Charles  
Conservation Program Specialist  
Austin Water  
Water Conservation Division  
[christopher.charles@austintexas.gov](mailto:christopher.charles@austintexas.gov)  
512-972-0366



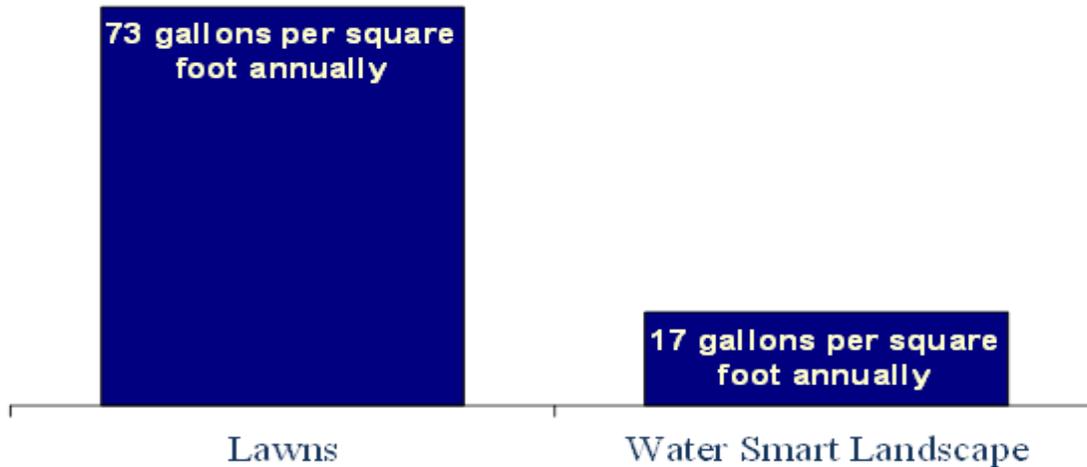
# Water Smart Landscapes Program



SOUTHERN NEVADA WATER AUTHORITY

# Southern Nevada Water Authority Xeriscape Conversion Study

Annual Water Application  
Lawn vs. Water Smart Landscape

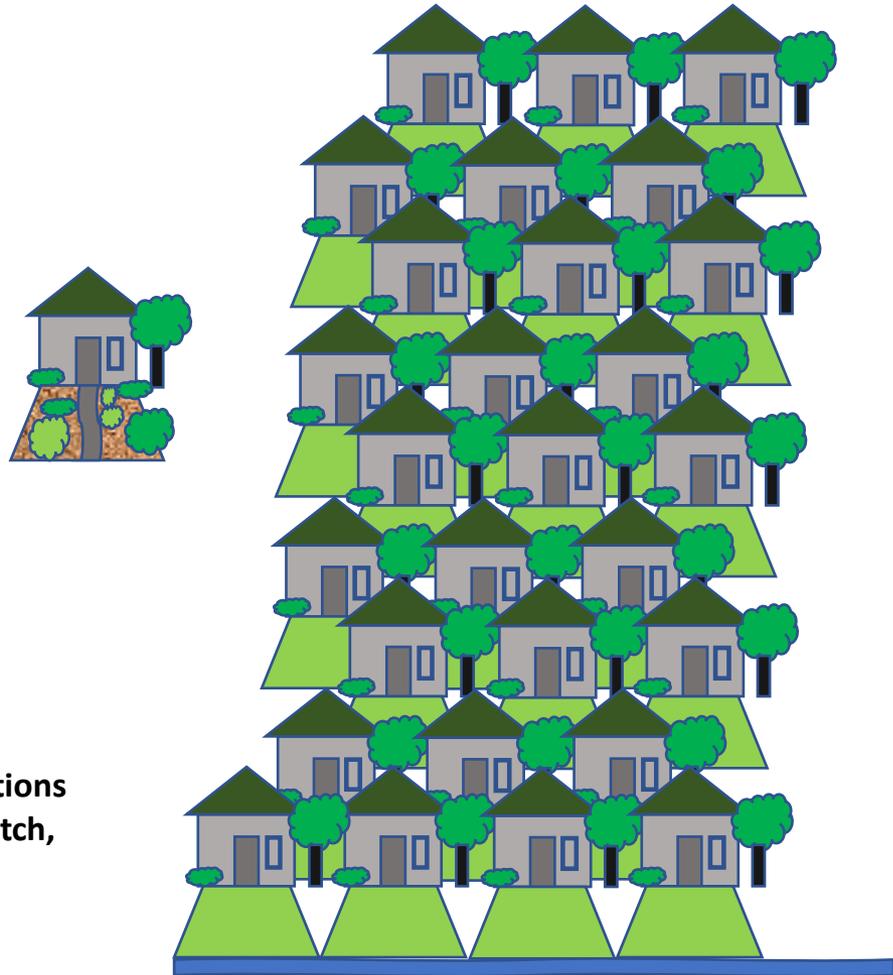


**For Every Home  
Converted between  
1999 and 2003...**

**Twenty-eight New  
Homes were built.**

**Most of those with  
front lawns.**

- No turf in front yards of single family residential since 2004
- No commercial property turf since 2004
- Ordinances originally had drought restrictions listed based on drought stage, such as watch, alert etc.
- Updated in 2007/2008 to make drought restrictions permanent



# Water Smart Landscapes Program

1. Customer application
2. Pre-conversion site inspection
3. One year maximum to complete the conversion
4. Post-conversion site inspection to verify requirements are met
5. Conservation easement required



# Eligibility and Rebate Amounts

- All customers eligible including government, golf courses, HOAs
- \$3.00 per square foot for the first 10,000
- Then, \$1.50 per square foot up to \$500,000



# Conversion Requirements

- **Plant Coverage**
  - 50 percent living plant cover
- **Irrigation System**
  - Low-flow drip system
  - Pressure regulator and filter
- **Mulch**
  - Rock, bark, synthetic turf, un-grouted pavers, etc.
  - Plastic weed barriers not allowed
  - Concrete not rebated
- **Minimum Conversion Size**
  - 400 square feet minimum for partial conversions



# Transforming the Urban Landscape



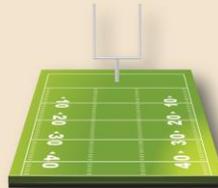
## WATER SMART LANDSCAPES PROGRAM FACTS

**193 MILLION**

Square feet of grass has been removed since the WSL program began in 1999

### THAT'S EQUIVALENT TO:

Enough grass to cover more than



**3,350**  
FOOTBALL FIELDS

Rolling an 18" wide strip of sod



**98%**  
AROUND THE EARTH

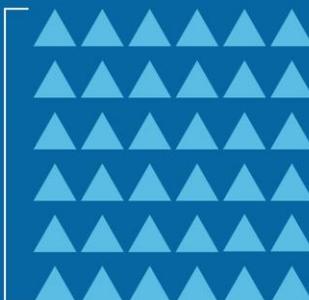
OR

**130 BILLION**

Gallons of water saved to date.

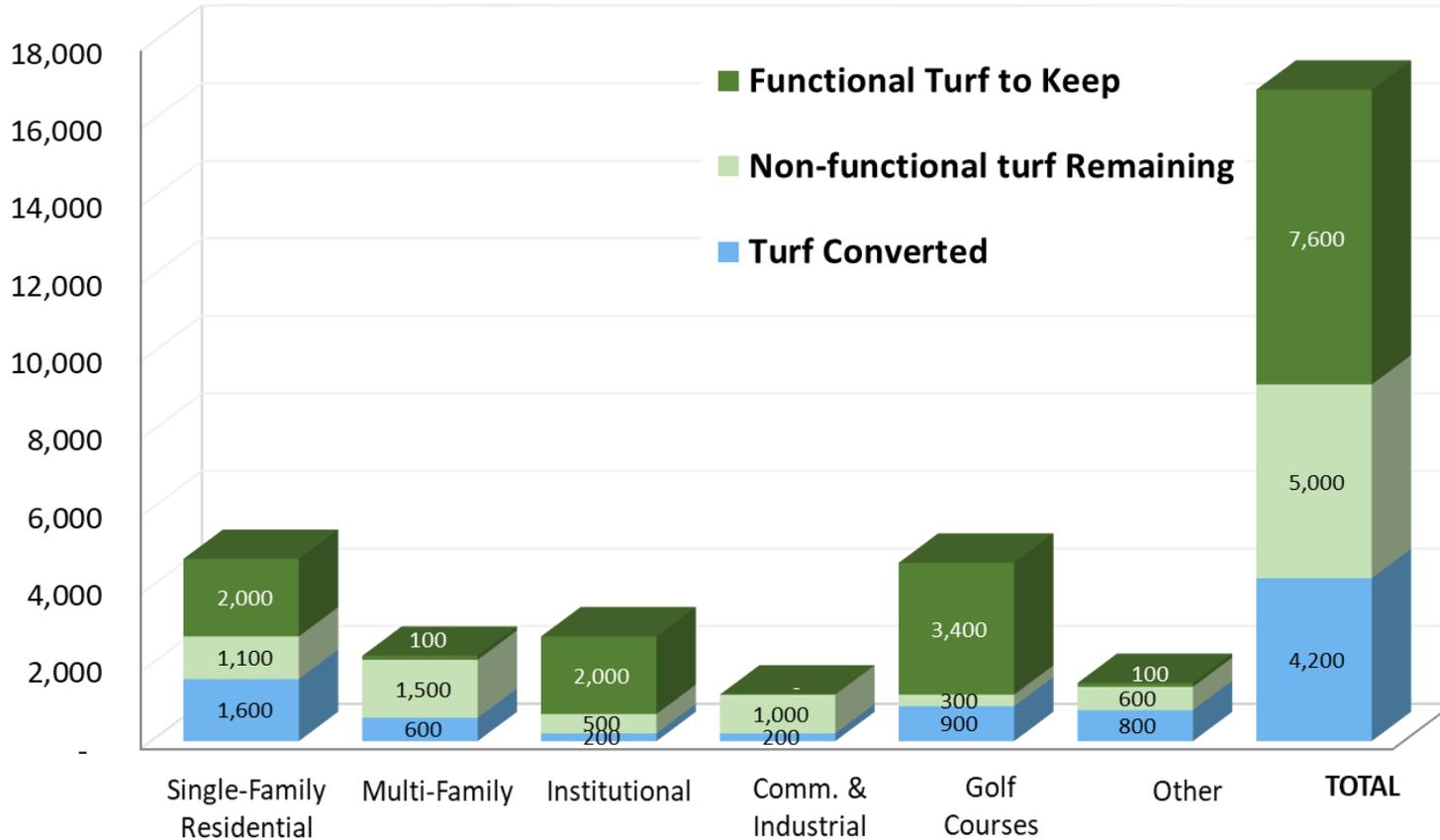
That's enough water to fill the Luxor Hotel Pyramid

**360**  
TIMES



Despite these accomplishments, more than 200 million square feet of non-functional turf are estimated eligible for replacement.

# NON-FUNCTIONAL TURF



**Potential annual water savings:  
12.2 billion gallons  
(37,400 acre-feet)**

# NEW AND STRENGTHENED INITIATIVES

**Reinforce efforts to eliminate useless turfgrass**



- **Medians**
- **Roundabouts**
- **Neighborhood entries**
- **So-called “pocket parks”**
- **Residential front yards**

**Non-functional turf is aesthetic only;  
only walked on by landscapers**

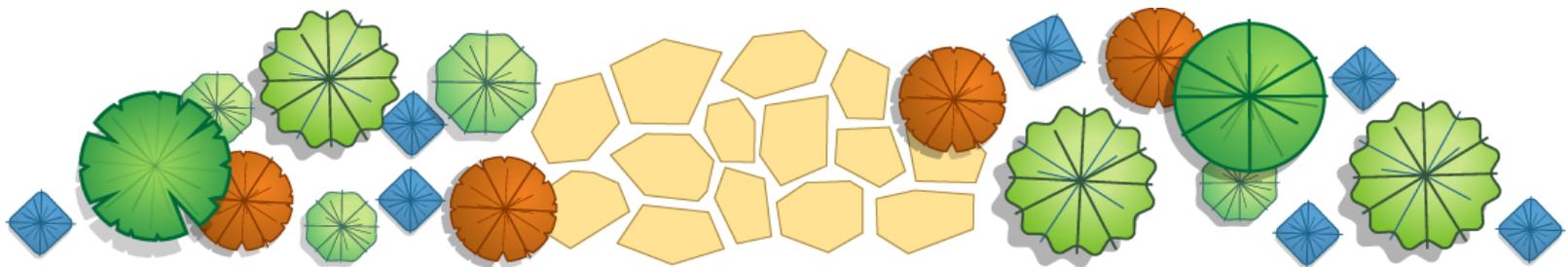


**Thank you**

**Toby Bickmore**  
**Conservation Services Admin**  
**[toby.bickmore@snwa.com](mailto:toby.bickmore@snwa.com)**



SOUTHERN NEVADA WATER AUTHORITY



# XERISCAPE INCENTIVE PROGRAM



XIP = “ZIP”  
(or not)



● **Design  
Clinics**  
2010-2014

● **XDAP**  
2014-2015

● **XIP**  
2016-present





- Educational rebate program
- \$0.75/square foot up to 1,000 square feet
- Managed in-house

- Pairs well with:
  - Sprinkler audits
  - Plant by number
  - Other City grant programs

## Estimated Water Savings (The Why)



before

8,000 gallons per month



after

1,500 gallons per month

- ✓ Check eligibility
- ✓ Attend two-hour class
- ✓ Enroll in XIP
- ✓ Attend 1:1's
- ✓ Submit design for approval
- ✓ Install landscape
- ✓ Submit final application
- ✓ Receive rebate



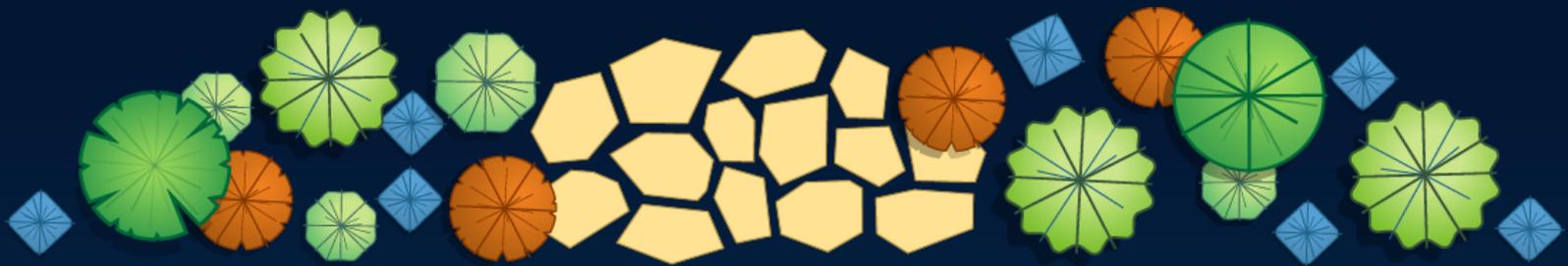
|   | TOTAL     | 2019      | 2018     | 2017     | 2016     |
|---|-----------|-----------|----------|----------|----------|
| Projects completed                        | 167       | 65        | 47       | 39       | 16       |
| Estimated annual water savings in gallons | 2,814,182 | 1,136,366 | 747,684  | 705,558  | 224,574  |
| Area converted (square feet)              | 201,013   | 81,169    | 53,406   | 50,397   | 16,041   |
| Average project size (square feet)        | -         | 1,249     | 1,136    | 1,292    | 1,046    |
| # Class Attendees                         | 530       | 212       | 148      | 71       | 99       |
| Rebate dollars paid                       | \$111,697 | \$43,506  | \$31,533 | \$25,054 | \$11,604 |
| Rebate Budget                             | \$112,000 | \$35,000  | \$35,000 | \$27,000 | \$15,000 |
| % Budget                                  | -         | 124%      | 90%      | 93%      | 77%      |



- AMI data analysis
- Average 14 gallons per square foot savings

- Online platform
- Design workshops
- Commercial XIP





# XERISCAPE INCENTIVE PROGRAM

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*Questions?*

Keep in touch:

Katie Collins

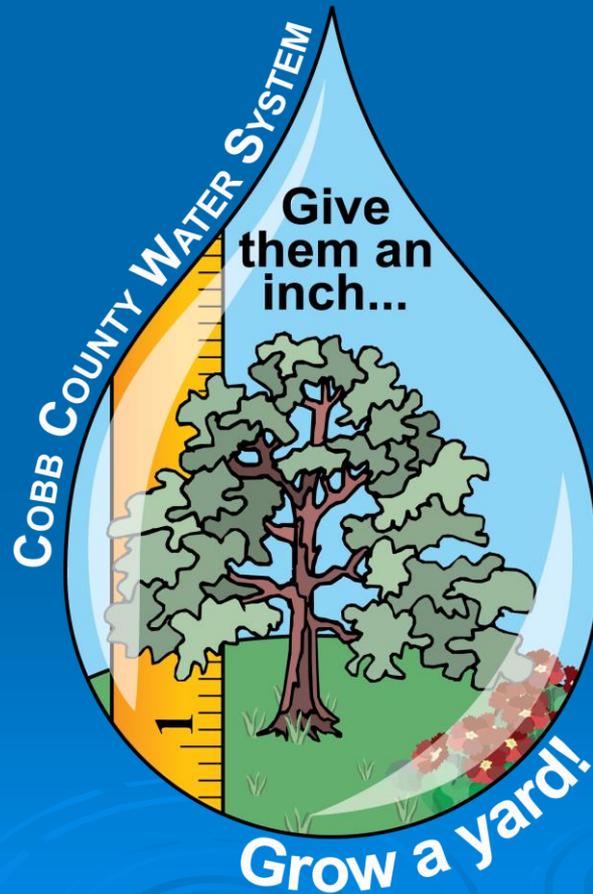
Fort Collins Utilities

*xeriscape@fcgov.com*

970-416-4378

# Cobb County Outdoor Water Use Program

Give Them an  
Inch...Grow a Yard



*Cobb County...Expect the Best!*



# Needed Program

- 💧 2006 per capita water use was up 20 percent over 2005 during irrigation season
- 💧 New rate structure sent a conservation signal to high outdoor water users—angry customers—heavy irrigators saw bills jump over 300 percent
- 💧 In our area, overwatering is the number one cause of plant mortality
- 💧 There was so much information and sources—our audience was confused
- 💧 Focus the audience—automatic irrigation

# Considerations

- 💧 Target audience: top 20 percent of water users—  
heavy outdoor irrigators
  - 💧 Message: *Your yard needs one inch of water per week*
  - 💧 Provide tools and information to assist customers in  
maintaining a beautiful, *cost effective* yard
  - 💧 Recognizable logo and slogan—new spin on old  
saying
  - 💧 Buy-in from civic leaders and irrigation/nursery  
industry
- 

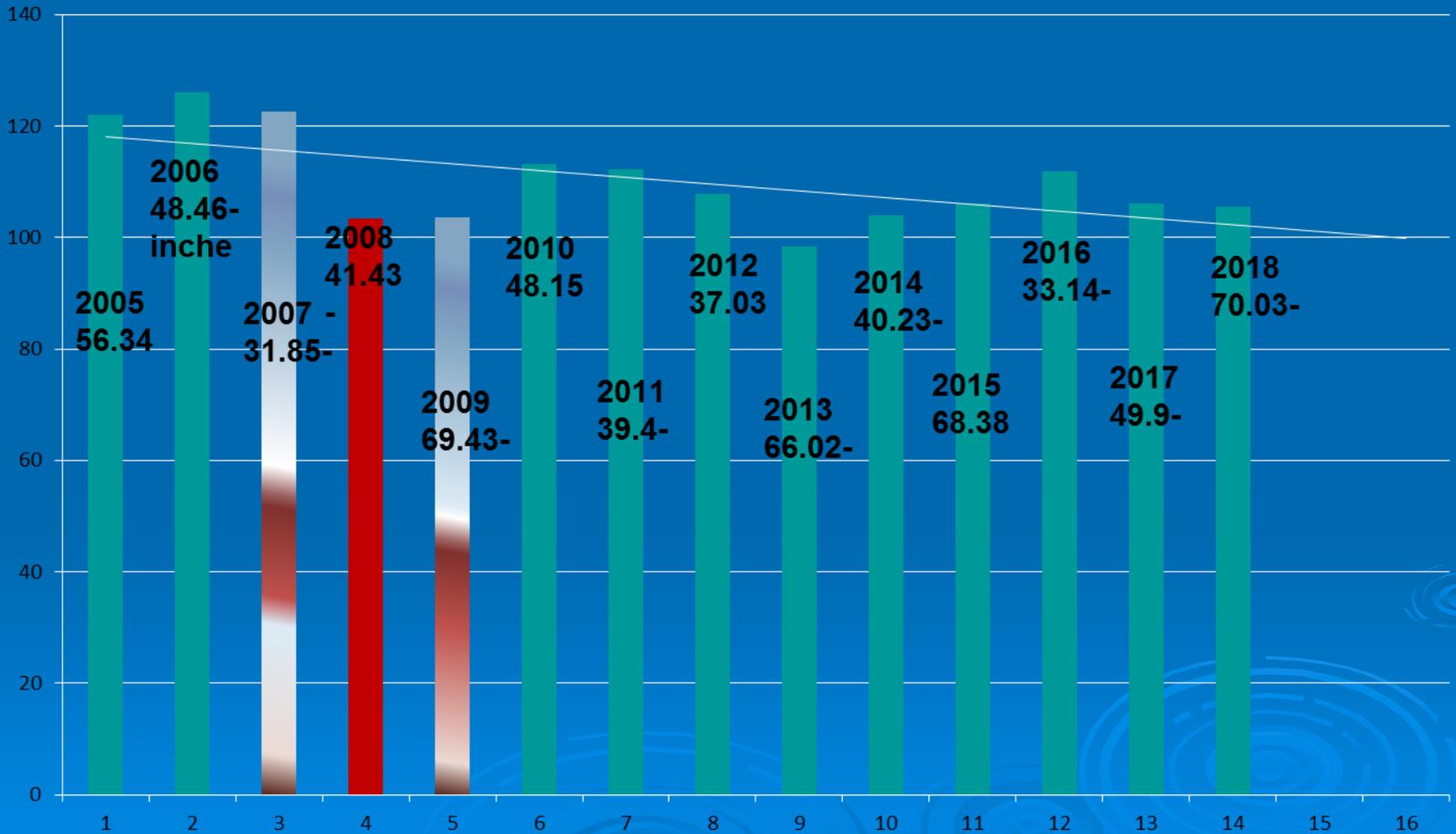
# Program Components

- ◆ At-home irrigation audit—drafted in partnership with the Georgia Irrigation Association
- ◆ Traveling displays with outdoor materials (partner with Cobb libraries, senior centers, and government centers)
- ◆ Link to irrigation calculator on website
- ◆ Prepare instructional video for TV23 and stream live on website
- ◆ Focus on new high efficiency outdoor water use technology
- ◆ Distribution of outdoor water saving kits

# Can't Go It Alone

- 💧 Give Them an Inch...Grow a Yard! *Partners:*
  - Local businesses, particularly landscape and irrigation companies, can become partners by carrying our educational materials and distributing to customers
  - Designated with window clings at their business or on vehicles
  
- 💧 Give Them an Inch...Grow a Yard! *Communities:*
  - Local HOAs can qualify by having Water System staff give a presentation to homeowners on efficient outdoor water use or by distributing our educational materials
  - Designated with yard signs at subdivision entrances

# Annual Per Capita Water Use and Rainfall

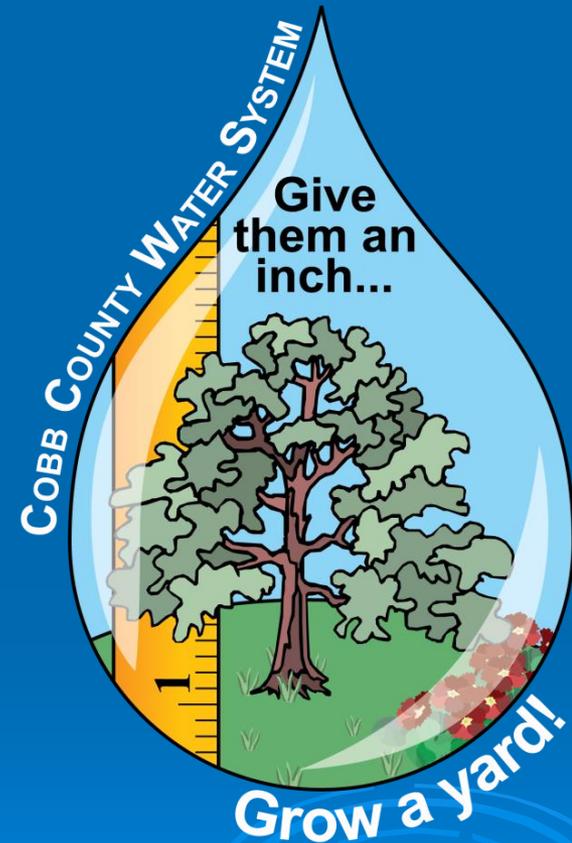


# Goals and Results

- Wanted a two percent reduction in peak water use per year driving toward an overall reduction in peaking factor from 1.5 to 1.3
  - GPCD May – Oct average 143 pre-program to 127 first year post
  - Annual average from 2005-2019 121 GPCD
  - Current peaking factor after first year 1.28
  - Average peaking factor 2005-2019 1.23
- Prevent our wholesaler from violating their withdrawal permit—wholesaler has not exceeded withdrawal permit since 2008

# Message Landing

- 22 irrigation and landscape partners—they carried our materials and gave them away to clients
- 18 communities labeled at Give Them an Inch...Grow a Yard—we utilized existing community beautification days
- Helped to have consistent and simple, actionable message: Water deeply once a week one inch of water including rainfall



# Most Interesting Lessons

- ◆ Even after the sunset of the official program—our message worked—our wholesaler was updating our shared water model and it showed a consistent spike of water in the 4 a.m. -5:30 a.m. window after extended dry periods
- ◆ Customers realized their yards were not going to die if they did not water everyday
- ◆ More resilient—similar drought hit in 2011/12 and we were better able to meet demands while maintaining permitted withdrawals and minimal increases to the peak
- ◆ It is challenging to keep the focus of industry professionals when it starts raining
- ◆ The program may have ended, but we keep and update many of the program components and have used them to expand landscape program offering

# Cobb County Water System

Kathy Nguyen

Customer Service Division Manager

[Kathy.Nguyen@cobbcounty.org](mailto:Kathy.Nguyen@cobbcounty.org)

770-419-6244



*Cobb County...Expect the Best!*



# Questions and Discussion

Please type your questions into the chat box.

EPA's WaterSense Program

[www.epa.gov/watersense/outdoors/](http://www.epa.gov/watersense/outdoors/)

The Alliance for Water Efficiency

[www.allianceforwaterefficiency.org/](http://www.allianceforwaterefficiency.org/)



# Partnering With WaterSense

WaterSense would not be successful without its nearly 2,000 partners.

- **Manufacturers** design and create products to meet WaterSense specifications
- **Retailers/distributors** get WaterSense labeled products onto shelves
- **Builders** construct water-efficient homes using WaterSense labeled products and to meet the WaterSense specification
- **Certification providers** inspect and label homes
- **Professional certifying organizations** train irrigation professionals to help homeowners water more efficiently
- **Promotional partners** spread the word
  - Water utilities, state and local governments, nonprofit organizations, and homebuilder associations

# New Resources

## Sprinkler Spruce-Up Social Media Graphics



## Oklahoma City Makes Median Irrigation OK



## Spray Sprinkler Body Mini-Report



## Spanish Sprinkler Spruce-Up Graphic



## Mulch Madness bill stuffers



# Before We Go

Help us identify topics for future webinars!

Visit us online

- [www.epa.gov/watersense](http://www.epa.gov/watersense)
- [www.allianceforwaterefficiency.org](http://www.allianceforwaterefficiency.org)

Be social



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