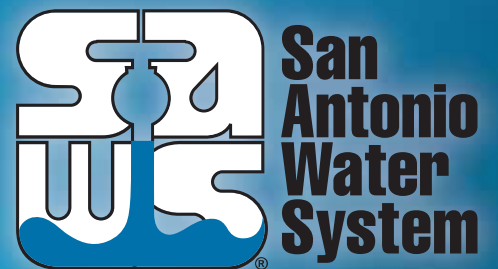


# Transforming Texas Landscapes (and irrigation systems)

Karen Guz  
Conservation Director  
San Antonio Water System



MAKING SAN ANTONIO  
**WATERFUL**



# More In Common Than You Might Think





Drought



Flood

Texas weather is best described as "drought punctuated by flood"



# San Antonio Water System

- 1.8 million served water & wastewater
- Produce and deliver water
- Over 500,000 accounts
- Diverse Customer Base
  - 71% volume residential (indoor & outdoor)
  - 23% volume commercial/industrial
  - 6% volume commercial landscape irrigation
- Conservation Drivers:
  - Fast growing region
  - Drought prone with strict aquifer regulations
  - Part of San Antonio culture



GARDEN STYLE  
SAN ANTONIO

# Some San Antonio History

## San Antonio Express-News

Serving South Texas since 1865

SATURDAY, August 24, 1996

Final Edition 50c

# Bunton orders pumping limits

## City leaders react angrily, plan to file appeal Monday

By **KEN DILANIAN**  
EXPRESS-NEWS STAFF WRITER

Flanked by local leaders at a dramatic City Hall news conference, Mayor Bill Thornton vowed Friday to appeal a federal judge's order that he be decreed as favoring animals over people.

"Today I think it's time we draw a line in the sand to fight for consideration of humans and human rights," Thornton said. "Quite frankly, the court is jacking us around."

Thornton's sentiments were echoed by a variety of city officials who protested an order by Senior U.S. District Judge Lucius D. Bun-

ton III that may require San Antonians to stop watering their lawns in an effort to save five federally protected species at Comal and San Marcos springs.

After years of warnings, threats and voluntary plans, Bunton finally imposed a legally binding court order in response to allegations from the non-profit Sierra Club that San Antonio's Edwards Aquifer water use is violating the Endangered Species Act.

Governments at all levels have failed to properly preserve the Edwards, Bunton wrote, and that failure is killing species in violation

■ See **THORNTON/8A**



"Today I think it's time we draw a line in the sand to fight for consideration of humans and human rights. Quite frankly, the court is jacking us around."

— Mayor Bill Thornton

"The Edwards Aquifer region has finally reached the point where the aquifer is unable to provide for the needs of all those who depend upon it during dry years."

— Senior U.S. District Judge Lucius D. Bunton III



## SAWS chief foresees ban on lawn watering by Oct. 1

By **JERRY NEEDHAM**  
EXPRESS-NEWS STAFF WRITER

A federal judge ordered restrictions on pumping from the Edwards Aquifer by the city of San Antonio and other defendants Friday, in an endangered species lawsuit filed by the Sierra Club.

Mayor Bill Thornton and City Council members vowed an appeal.

The order by Senior U.S. District Judge Lucius D. Bunton III does not take effect until Oct. 1. Depending on how much rain falls by then, the San Antonio Water System and other large users of aquifer water could be limited to no



The water debate is about a lot more than blind critters.

Carlos Guerra/TS

more than 1.2 times their winter average pumpage.

Joe Aceves, SAWS president, said that to meet that limit, the city probably would have to ban any outdoor water use by residen-

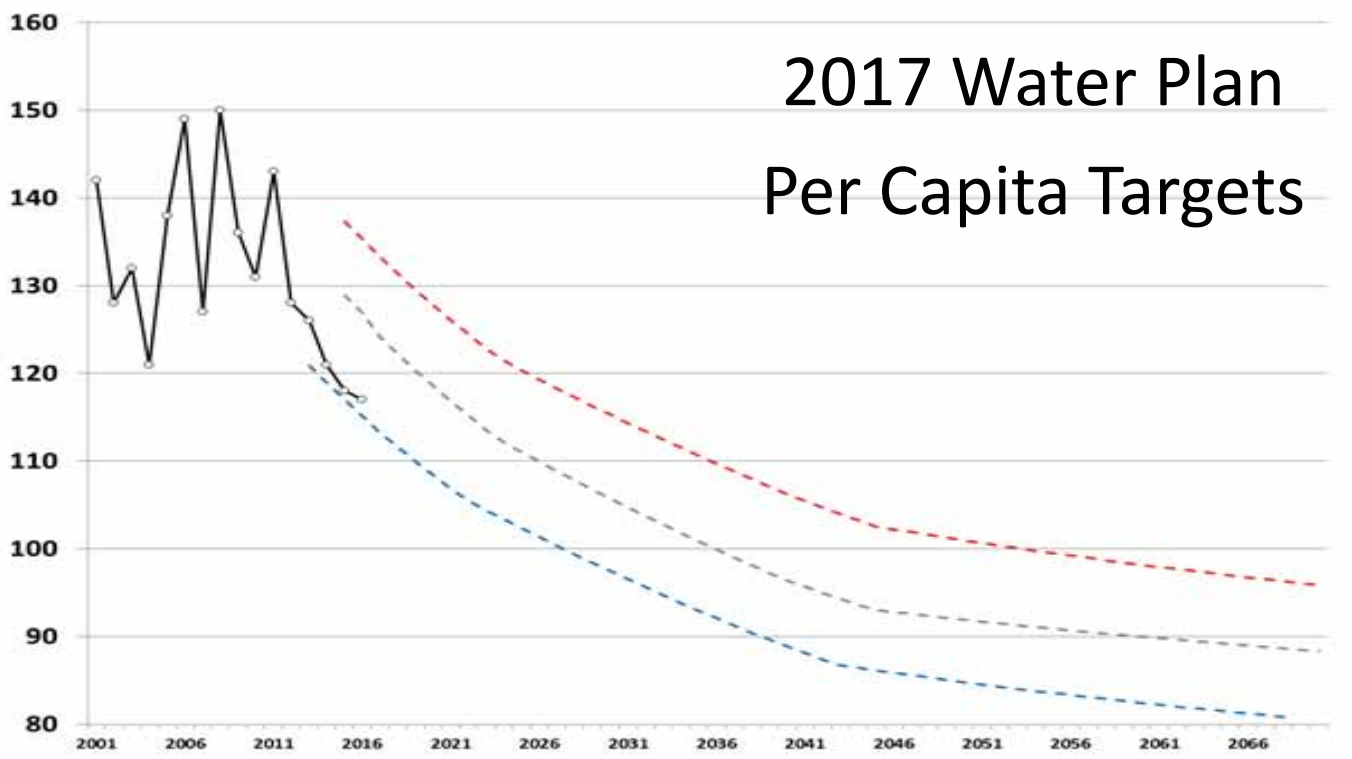
■ See **FEDERAL/8A**

Conservation  
viewed as a  
supply since  
1993



April 23, 2017  
“San Antonio’s water supply  
is more secure than it  
has been in decades...”  
San Antonio Express-News

# 2017 Water Plan Per Capita Targets



Peak Demand &  
Drought Preparation  
= **Outdoor Programs**





NOT only about plants  
Irrigation Scope & Flow  
Customer Behavior  
Customer Knowledge

Solutions:

1. Education
2. Incentives
3. Reasonable Regulation

Non-Profit Partners help us reach over 200,000/year with face to face conservation education





Dig in!

Your resource for inspiring designs, drought-hardy plants and regional expert advice to transform your yard into a water-saving showpiece!



12 NATIVE EVERGREEN SHRUBS FOR SAN ANTONIO LANDSCAPES

It can be tricky to choose native substitutes for the cookie-cutter evergreens that populate so many suburban property lines. So we've compiled a dozen delightful native screens and hedges for your perimeter planting pleasure.



Find a PLANT

Year Round Watering Hours

CURRENT WATERING ADVICE

Lawn:	0	0
Beds:	0	0

Science still in agreement; no need to water in 2018!

- Mark Peterson, Project Coordinator  
Nov. 5, 2018

full sun shade

REWARDS & EVENTS  
CALENDAR

prev	NOVEMBER 2018							next
S	M	T	W	T	F	S		
28	29	30	31	1	2	3		
4	5	6	7	8	9	10		
11	12	13	14	15	16	17		
18	19	20	21	22	23	24		
25	26	27	28	29	30	1		

OPEN FULL CALENDAR

150,000 people spent about 8,400 hours on GardenStyleSA.com in 2018

# Coupons: Reducing Grass Piece by Piece



Figure 5: Location of WaterSaver coupon participants in Bexar County (2014-2018)

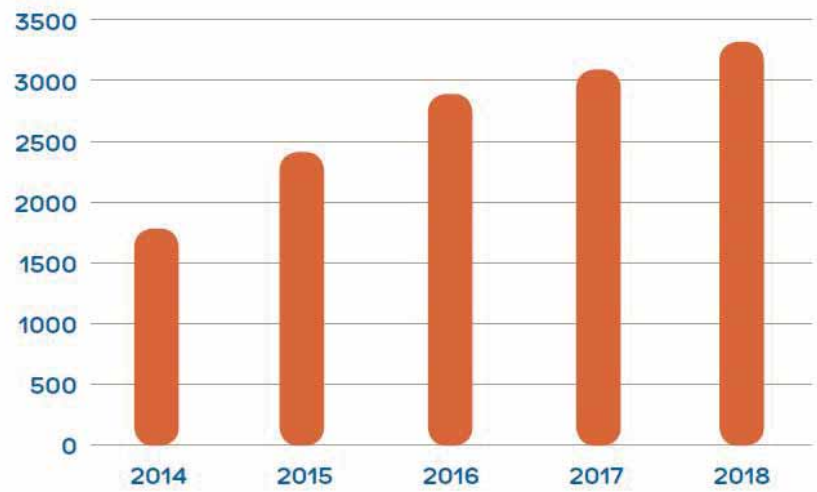
# Irrigation Consultations

Customers are continually amazed how much water their irrigation system uses and how much they can save.



23

## Number of Consults/Year



Savings= 1,200-4,000/month



## Irrigation Rebates;

**Goal: Reduce FLOW & SCOPE**

### Financial Offers:

\$\$\$\$ Retire Entire System

\$\$\$ Retire Entire Zone

\$\$ Convert to Point Source Drip

\$ Convert to PR Heads (Grass only)

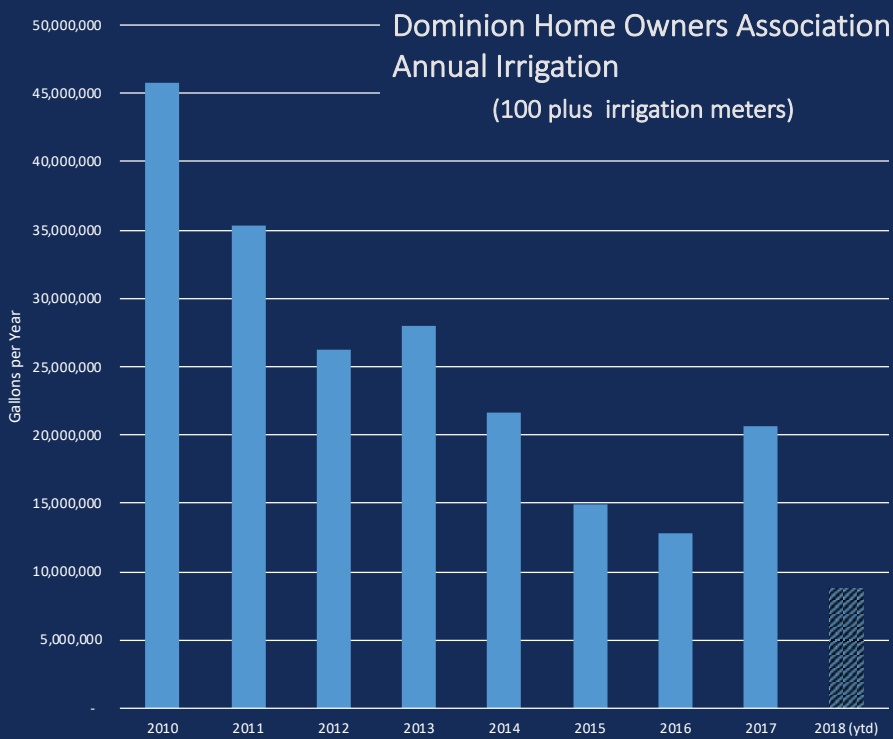
\$\$ Pilot: add Master Valve

### Offer Based On:

GPM of System and # Zones

Rebates require a consult; data used for custom offer





### Irrigation Check Up

- Required of 3,000 plus accounts
- based on property size or total annual water usage

Savings significant & often leads to Custom Rebate participation.



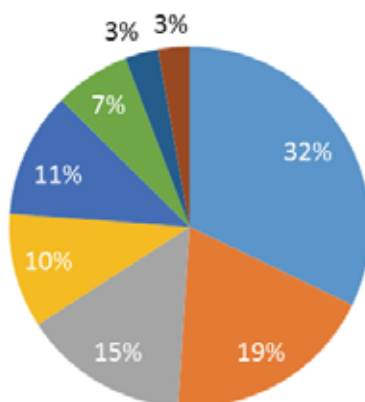
## 1.3 billion gallons saved in 2018

- 3,110 Irrigation Consultations
- 250,000 in Education Participants
- 38,000 Get WaterSmart Reports
- 3000 Landscape Coupons Used
- 800 Plumbers to People Assists
- 500 Irrigation Systems Upgraded
- 90% Commercial Irrigation Check Up Compliance (3300 accounts)

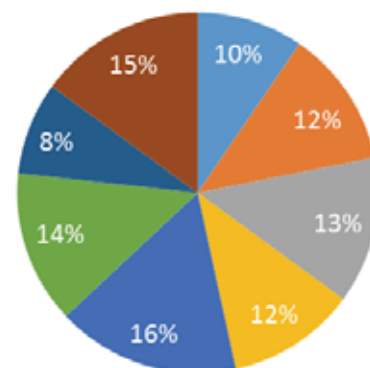
66% engaged..  
But NOT all high  
user targets

We know which households influence peak the most.

Number of Bills



Consumption



■ Tier 1 
 ■ Tier 2 
 ■ Tier 3 
 ■ Tier 4 
 ■ Tier 5 
 ■ Tier 6 
 ■ Tier 7 
 ■ Tier 8



## Newest Engagement Metrics:

### Newly engaged customers/year

- “New” = no participation for past five years
- 33% no “new participation

### HTRs = Super Users & Affordability

### 2018:

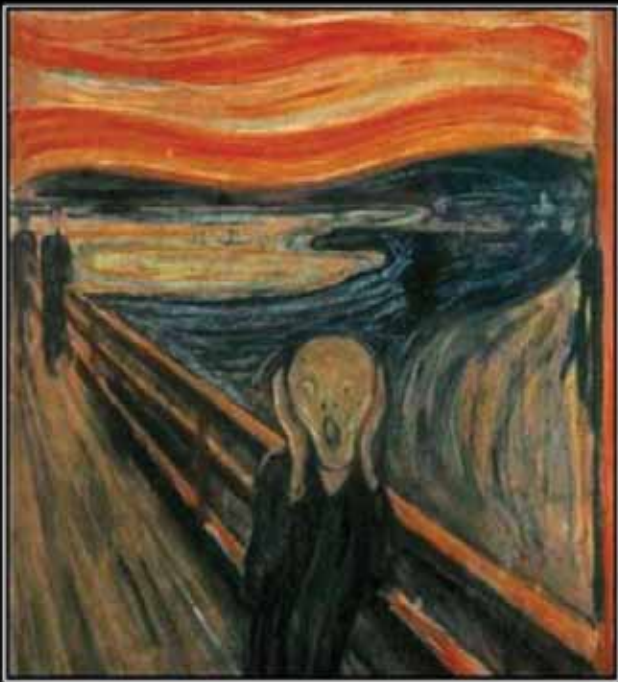
- 20,000 Conservation Newbies
- Doubled HTR Participation

Tech/Analysis  
Tools Provide  
Scale & Ability to  
Target



GARDEN STYLE  
SAN ANTONIO

Marketing to the  
Target Audience



Just Say it Ain't So

## Evaluation Tests Our Savings Assumptions

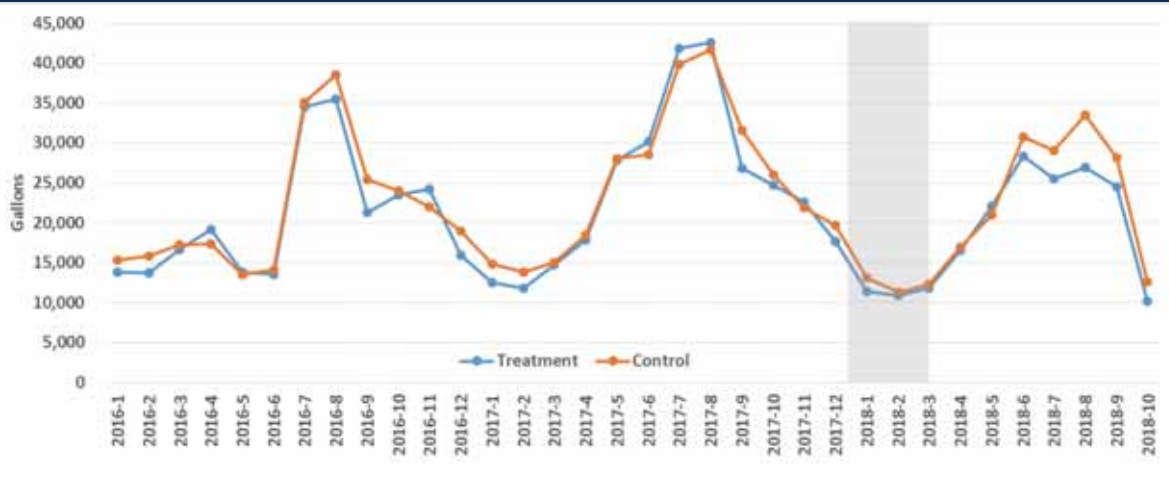
- Most households water less than “theoretical irrigation requirement”
- Absent intervention 30% of households may increase water use post plant change
- Personalized letters can reduce use (even if recipients do not remember them)
- Rain barrels recipients proud of savings actually increased usage by 2%
- 30% of drip irrigation retrofits in commercial sites increased usage

**Bottom Line:**

**Theoretical Savings May Not Equal Actual**

Pilots Test  
new options  
AND target  
newbies





Rachio Pilot; Top 1% Users vs. Control Group

Random Control Trial Pilots give more clear results

# Pilot Projects; Refine Programs & Metrics



Project	Target	Savings Outcome	Other Benefits
WaterSmart Reports Year One	12,000 unengaged high use customers	6-9% monthly reduction in usage documented by comparison against control group	<ul style="list-style-type: none"> <li>• Improved satisfaction</li> <li>• Understand consumption pattern</li> <li>• Less likely to call with complaint</li> <li>• Full digital profile</li> </ul>
Personalized High Winter Use Letters	High use with little seasonal variation	56% reduction if yes to free consult 26% reduction letter but no consult	<ul style="list-style-type: none"> <li>• Appreciative customers!</li> <li>• Full digital profile for consult users</li> </ul>
App-Based Controllers	Top 1% Residential Users	23% reduction against control group in summer 19% reduction against control group in winter	<ul style="list-style-type: none"> <li>• Irrigation controller data</li> <li>• Drought restriction compliance</li> </ul>



- Retrofit Savings Analysis
- Program Management Platform Updates
- Tech: Dashboards, max/week setting, engagement focus, better TX “winter “ settings
- Builder Partners

So Many  
Things to  
Still Figure  
Out!



Follow Up?

Visit SAWS:  
[GardenStyleSA.com](http://GardenStyleSA.com)  
[Saws.org](http://Saws.org)

Visit TX WCAC:  
[Savetexaswater.org](http://Savetexaswater.org)

[Karen.guz@saws.org](mailto:Karen.guz@saws.org)  
210 233-3671

# Transforming Texas Landscapes (and irrigation systems)

Karen Guz  
Conservation Director  
San Antonio Water System



MAKING SAN ANTONIO  
**WATERFUL**

