

# One Water Approach to Gardening

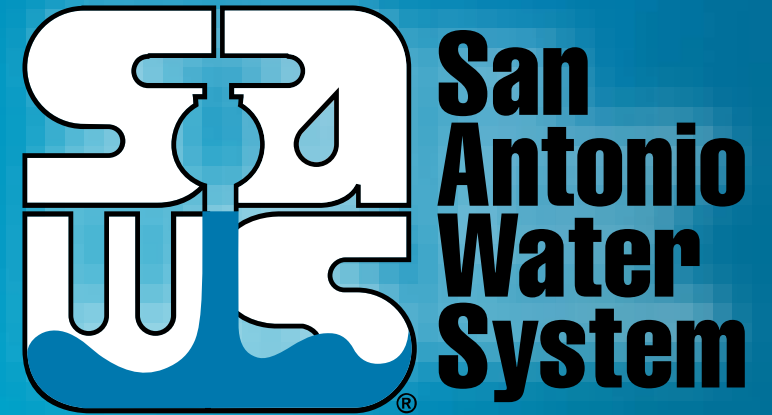
Dana Nichols

Manager - Conservation Department

Upper Guadalupe River Authority

Fall EduScape Seminar

September 12, 2019



MAKING SAN ANTONIO  
**WATERFUL**

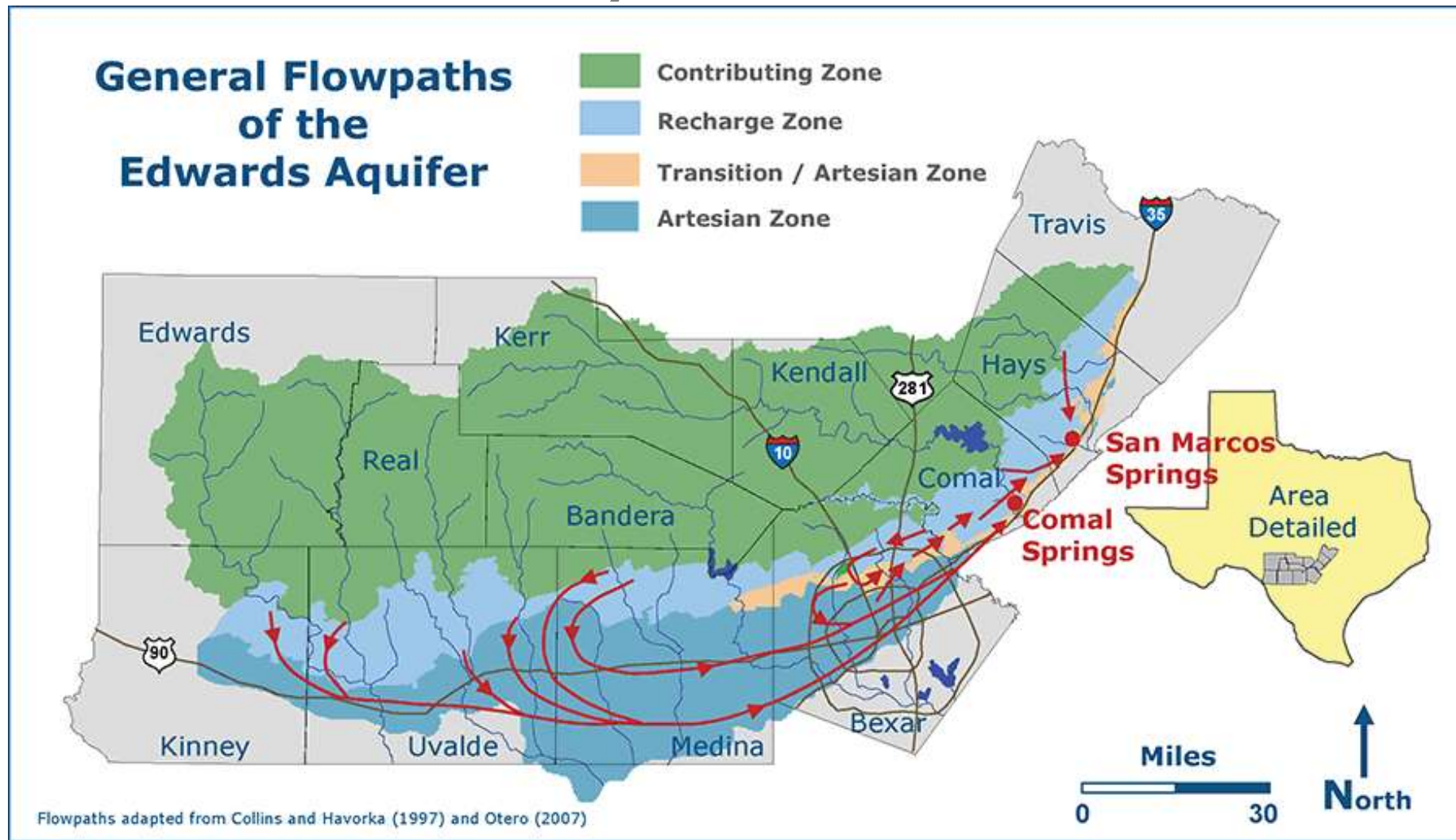


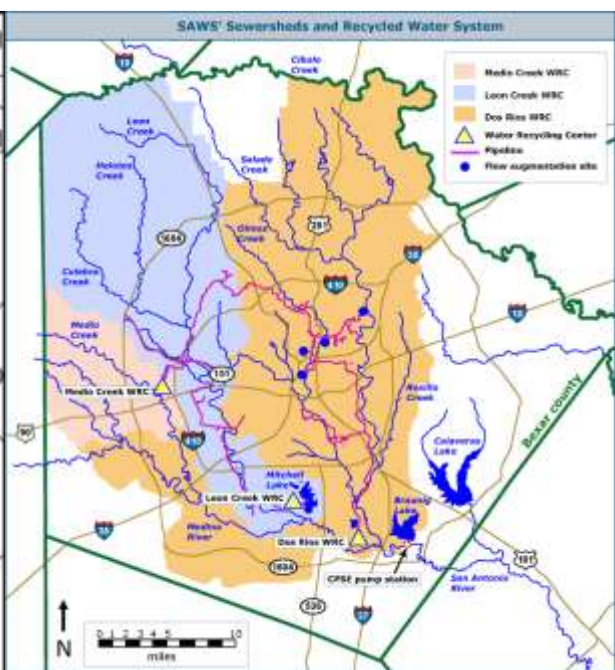
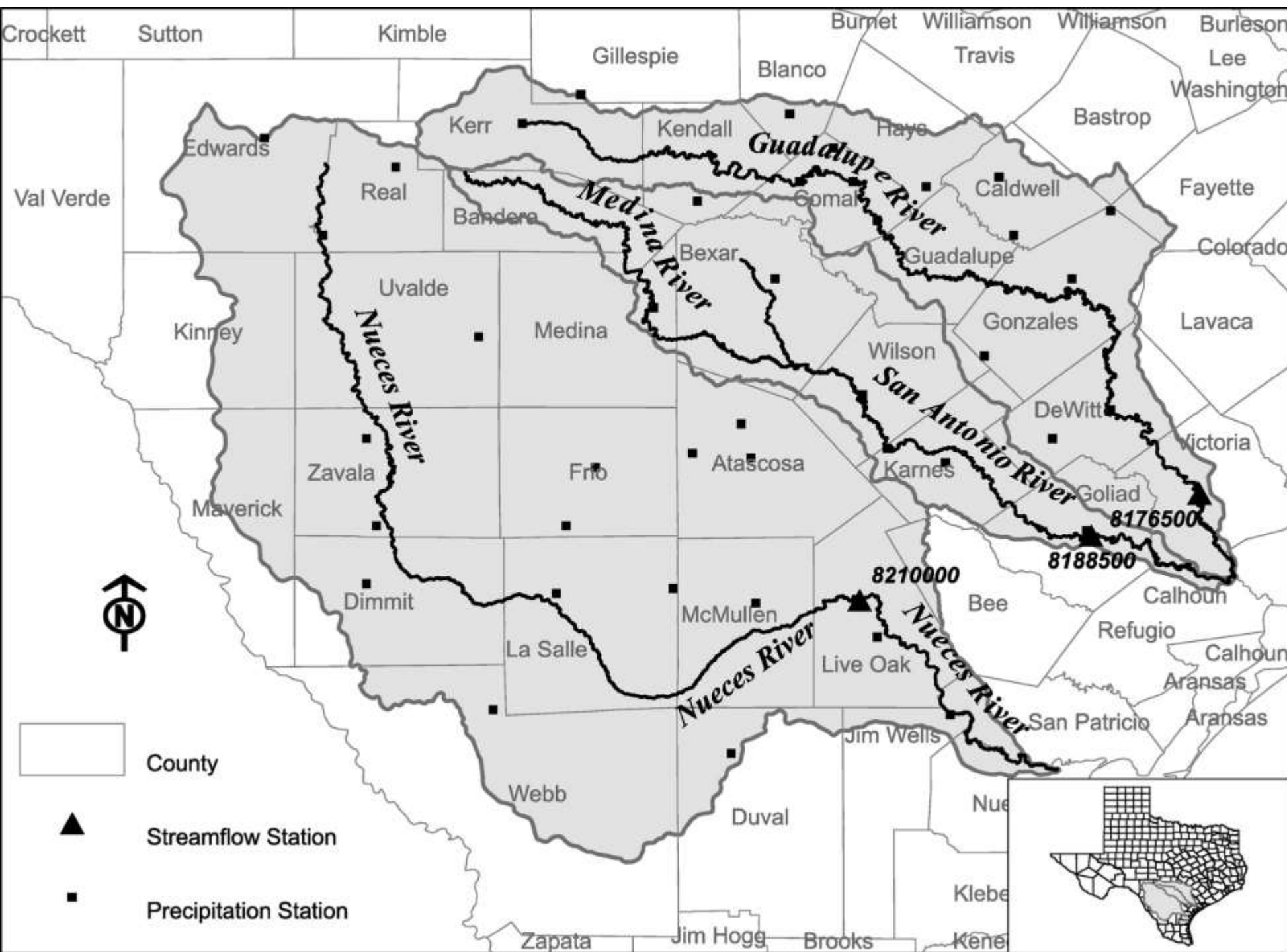
**I****F** **THERE** **IS** **MAGIC** **ON** **THIS** **PLANET**

**IT** **IS** **CON****TAIN****ED** **IN** **WATER** **ER.**

**GARY SWEENEY**  
Quote by **LOREN EISELEY**

# The Texas Hill Country Follows the Water Formations



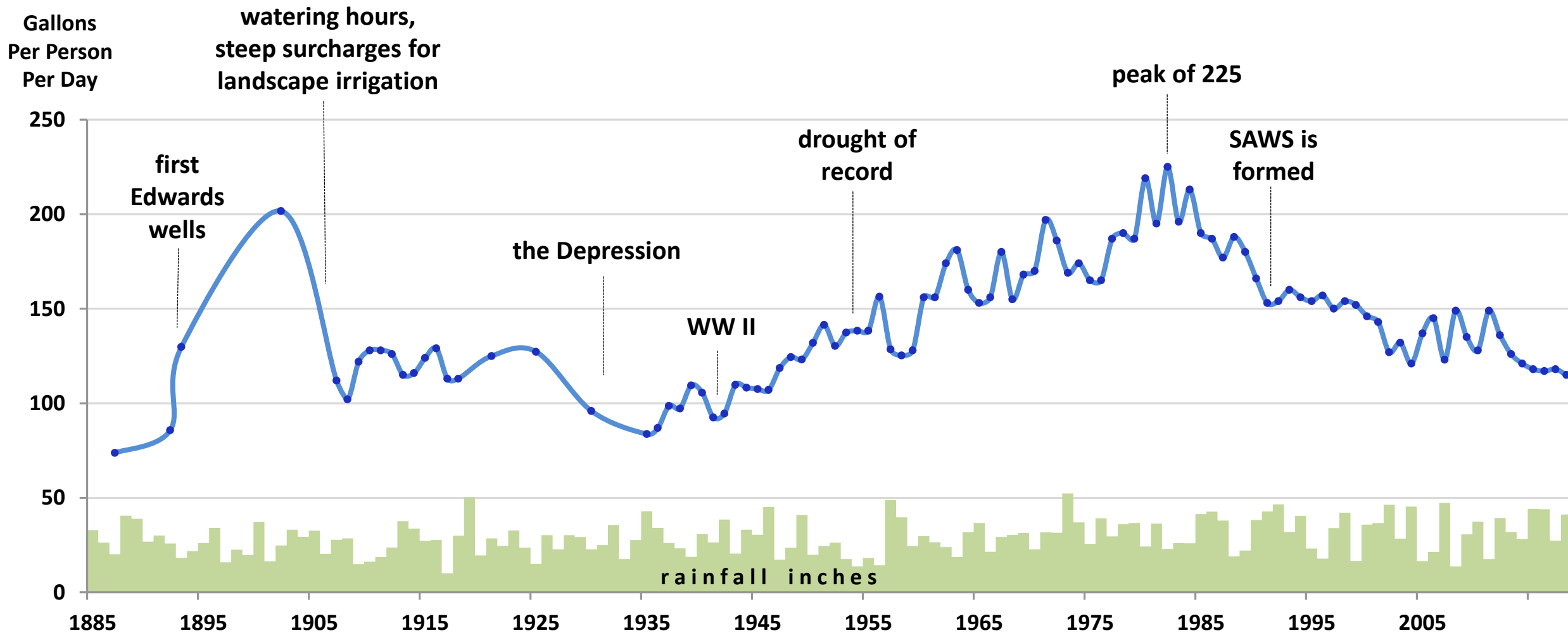


Water does not know political boundaries.



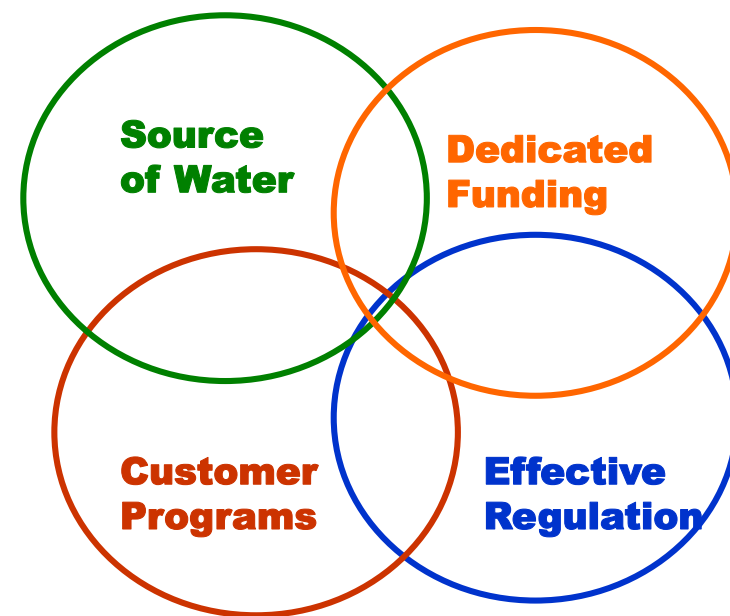
# Daily Per Capita Water Use

## 1887 to 2018



# Formula For Conservation Success in San Antonio

- Customer Programs
  - Equipment Change and Behavior Change
- Year Around and Drought Regulation
- Conservation Considered a Source of Water
- Dedicated Funding with Supporting Rate Structure



# Drought = Mandatory Temporary Rules

## Drought Management in San Antonio is:

- In response to special conditions to obtain immediate cut-back
- Focused **only** on discretionary usage
- **Never** on production water or for health and safety
- Mandatory and temporary
- Staged to reflect severity of situation
- Often inconvenient for customers



# Drought Restrictions

•Edwards Stage		•Edwards Supply	•City Restrictions
•660 ft msl •Stage I		•Loss of 20%	•Water 1X/Week
•650 ft msl •Stage II		•Loss of 30%	•Water 1X/Week •Reduced Hours
•640 ft msl •Stage III		•Loss of 35%	•Water 1X Every OTHER Wk •Reduced Hours
•630 ft msl •Stage IV		•Loss of 40%	•All Above Plus •Surcharge Excess Usage

•Other rules apply for car washing, power washing, pools, decorative fountains, and hotel linen programs



# Water use rules is not a new idea

**Irrigating and use of Hose without Nozzle prohibited.**

# 2977 San Antonio, Texas, *May 1<sup>st</sup>* 1891

*Mrs Mary Wenger* *City Cemetery*

◇ TO WATER WORKS COMPANY, ◇

---

For the Privilege of using Hose for Sprinkling (inside of lot,) for  
 the Year ending *May 1<sup>st</sup> 1892* \$ *4<sup>00</sup>*

Received Payment,  
*E. Sittman*  
 COLLECTOR.

Privilege of Sprinkling Street and use of Lawn Sprinkler not included in this License.

5474

E. Jewell

# Application and Contract for Sprinkling.

I hereby apply for the PRIVILEGE OF SPRINKLING, FOR ONE YEAR, on my premises, No. 133  
Crawford Ave Street, (inside of lot), and agree to pay for same \$2.00

Dollars per year, quarterly in advance, at the office of the Company, on the first of May, August, November and February of each year, in addition to amounts paid by me as regular water rates, and subject to the rules and regulations of the Water Works Company. Above rates may be altered in event of any change in dimensions of property sprinkled. Sprinkling street and use for irrigation, not allowed.

Ed Jewell.

San Antonio, MAY 1 1901 190

NIC TENGG, BOOKSELLER, STATIONER AND PRINTER.

# Conservation = Continuous Improvement

- Meet long-term water management goals
- Addresses all water end-use categories
- Year-round
- Voluntary (can become rules over time)
- Treated as a Water Supply and analyzed against other supplies
- Requires innovation, analysis, evaluation, and change



Water Conservation in San Antonio

# Conservation Programs for Customers

## Equipment Change

- One decision, one time, ongoing, month to month savings



## Behavior Change:

### Landscape Transformation

- Decision to use water or not needs to be made daily

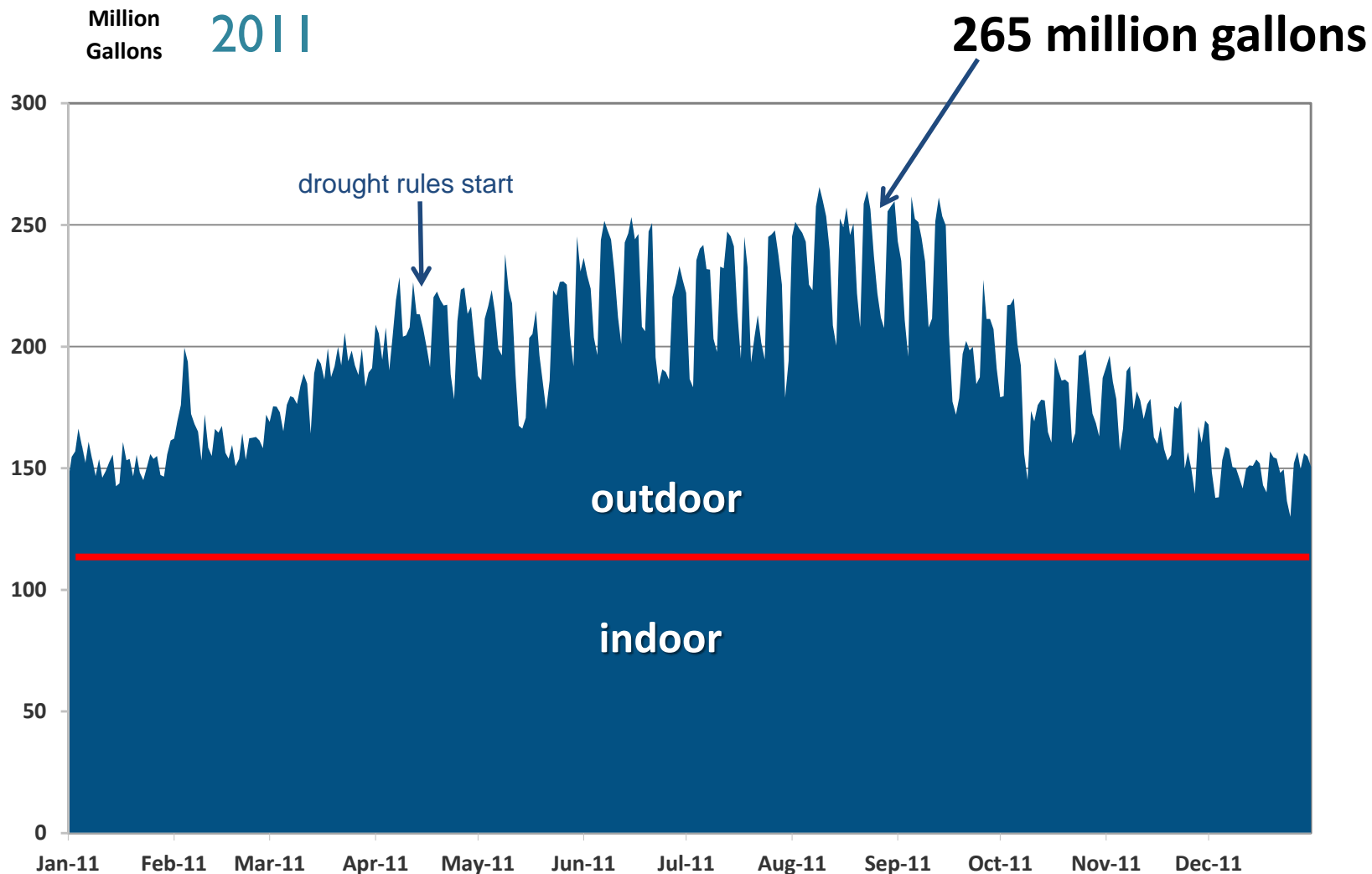


# Evaluation and Analysis:

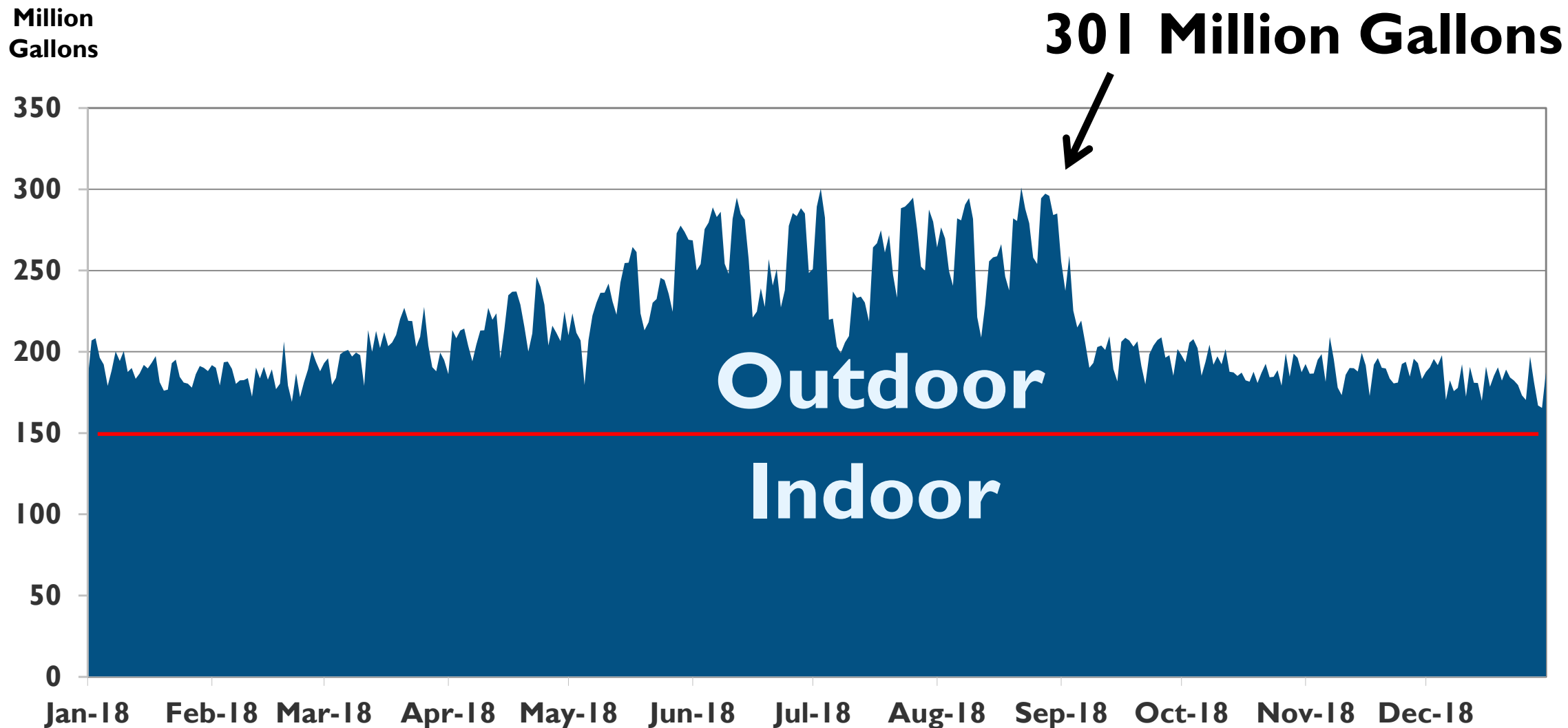
## Endings and Beginnings

- Kick the Can ended after a 20 year Run
  - 300,000 toilets distributed to customers
  - Youngest toilet changed 20 years old- Significant Free-ridership
  - Analysis showed Indoor water low and has minimum impact on permit or water supply needs
  - Sewer water is recycled in San Antonio to replace potable use and insure environmental flows in rivers
  - Addressing leaks still an opportunity area for programs
  - Plumbers to People still in place
- Declare victory on indoor use and intensify focus on peak water
- Peak Water “needs” drive the need for new water supplies and possible permit infractions

# Daily Volume to Distribution



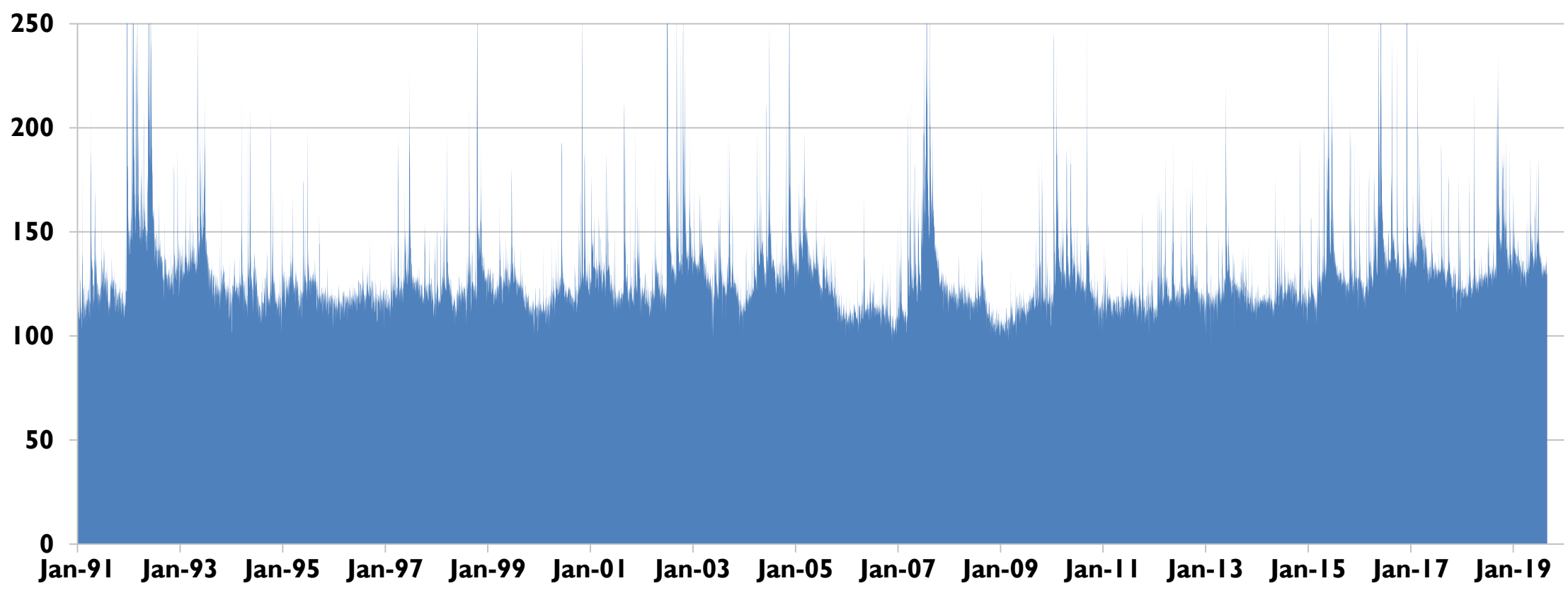
# SAWS Daily Volume to Customers, 2018



# Daily Effluent Volumes

## 1991 to August 2019

million gallons  
per day





# Conservation Strategies

Diverse program mix

## Education & Outreach

- Presentations & workshops
- Gardening E-newsletter + watering advice
- Custom home water use reports

## Financial Investment

- Incentives for efficiency: \$1 = \$7

## Reasonable Regulation

- Water waste against the law in San Antonio
- Large property Irrigation Checkups



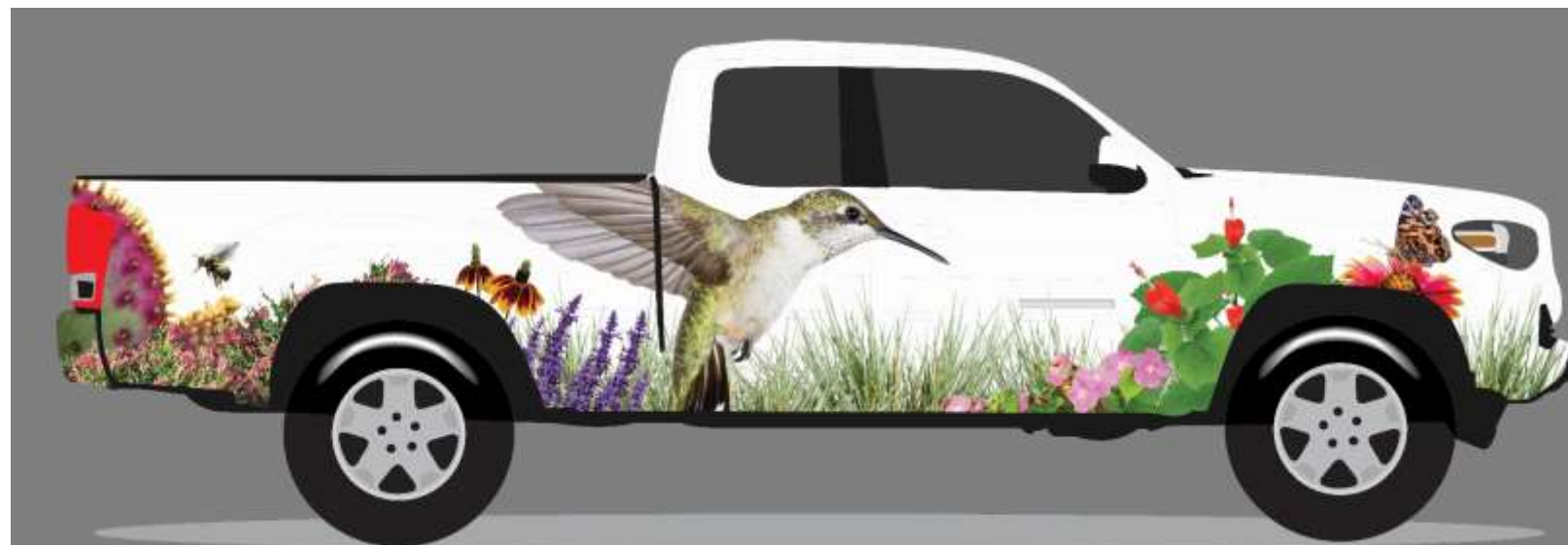
# Community-wide Messaging

## Programs relevant to all customers

- Landscape coupons
- Rewards Program
- [GardenStyleSA.com](http://GardenStyleSA.com) eNewsletter
- Watering rules

## Traditional messaging

- Radio spots/ Press releases
- SAWS.org and [GardenStyleSA.com](http://GardenStyleSA.com)
- Bill inserts
- Truck Wraps



# Moving Toward *Targeted* Programs

## Based on relevance to the individuals needs

- Conservation Consultations and Irrigation Design Rebate
  - Offered to those who have irrigation systems only
- Uplift and Plumbers to People
  - A suite of programs for low income and senior customers



# Rain Barrels for Everyone – False Hope

## SAWS first (and only) rain barrel event – January 14, 2017

5,714 barrels – 3,251 customers

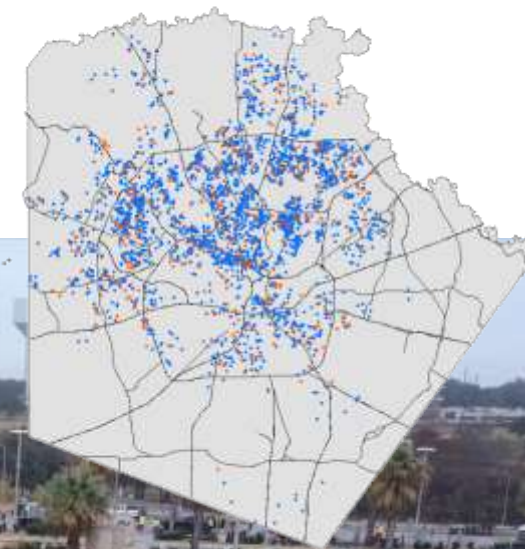
↓ Engaged less in additional conservation

↑ Used 4% more water

↓ 34% **decreased use**  
91.2% believed they decreased

↑ 63% **increased use**  
8.8 % believed they increased

Survey answered by 1,102 of the 3251 customers who received 6000 rainbarrels





**40** Rain Barrels are needed to run the average irrigation system once



# Cisterns

## New program for cisterns coming soon

- Rebate \$1 per gallon of storage
- Minimum size 500 gallons
- Maximum rebate \$2000
- Must attend approved class before work has begun
- Submit written plan for approval
- Pass a TCEQ Customer Service Inspection (CSI)
- Pass SAWS inspection
- Comply with additional regulations if needed
- No potable water back up
- No irrigation system on property



# Rain Gardens: intercept the rain like nature

One Water Solution at the individual lot level. Building soils and retaining rain onsite preferable in the city

## What's a Rain Garden?

- A rain garden is a great way to conserve water, reduce community flooding, improve the water quality in local streams and provide great wildlife habitat.
- The basic idea is to locate them in an area where they will intercept run-off from your roof and other impervious surfaces before it runs into the street.
- Use our [WaterSaver Landscape Coupon](#) to build yours.



# WaterSaver Landscape and Patioscape Coupons

Remove 200 square feet of grass and any irrigation.

Apply for coupons (lifetime limit 8 per household)

Redeem electronic coupon at participating local vendors

Replace grass with WaterSaver gardens or pervious patios





# Coupon Program

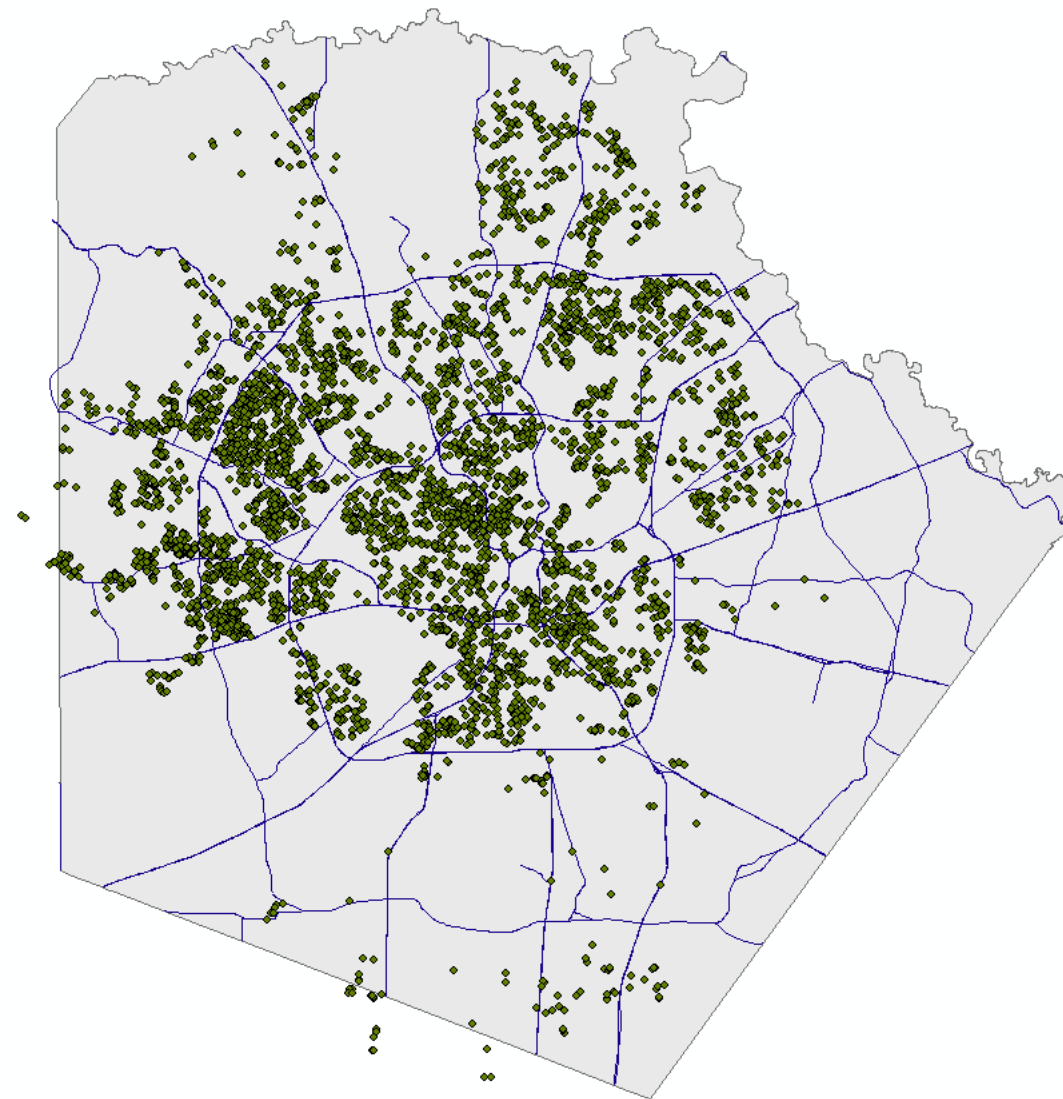
Total coupons 2014-2018 - 16,771

Total turf converted: 3,352,200 sf

Impact to local small businesses: \$1,677,100.

Does not include additional purchases or repeat unrelated business

	Landscape	Patioscape
2014	2250	1565
2015	3146	2507
2016	1896	593
2017	1456	430
2018	2523	405
<b>TOTAL</b>	<b>11,271</b>	<b>5,500</b>



# WaterSaver Landscape Coupon Garden and Co-Benefits

- Reduced carbon emission with less mowing
- Carbon Sequestration with diverse plants leading to healthy soils
- Mitigates climate change and restores habitat



# WaterSaver Rewards Program

Switched the model for rain barrels

- Sign up for Rewards Program
- Check [GardenStyleSA.com](http://GardenStyleSA.com) event calendar
- Attend activities that earn Rewards Points
- Get your coupon.



EVENTS CALENDAR

prev MARCH 2018 next

5	6	7	W	8	9	10
25	26	27	28	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	31

OPEN FULL CALENDAR



# Say So Long To the Lawn



By *Mark Peterson*

September 4, 2019

**Considering all the maintenance and watering a lawn requires, it's a wonder why anyone would even want one. The alternative: pretty perennials and a permeable patioscape.**

When it comes to your lawn, how much is too much? Prior to World War II, lawns were not a major component of the American landscape. But with the explosion of post-war suburbia, large expanses of grass became commonplace.

Considering all the maintenance and watering, it's a wonder why anyone would even



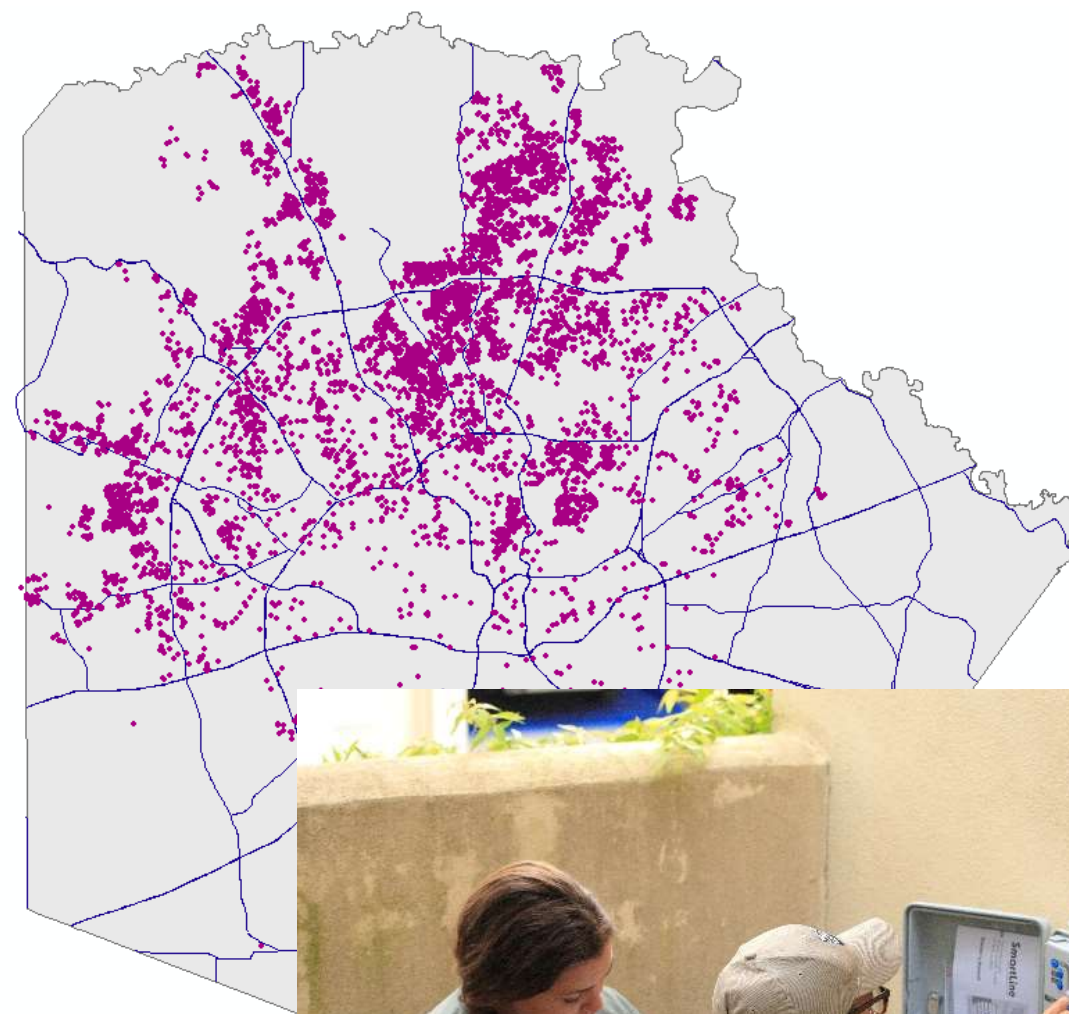
# Conservation Consults

## For irrigation systems

- Our best resource is our people
- Free to any SAWS water customer with irrigation
- Gives customers the confidence to make landscape changes

Avg. 2000 gals savings a month per consult.

- 12,429 consults conducted 2015 to date
  - 11,097 residential consults
  - 1332 commercial consults
- 9,621 unique accounts with a consultation

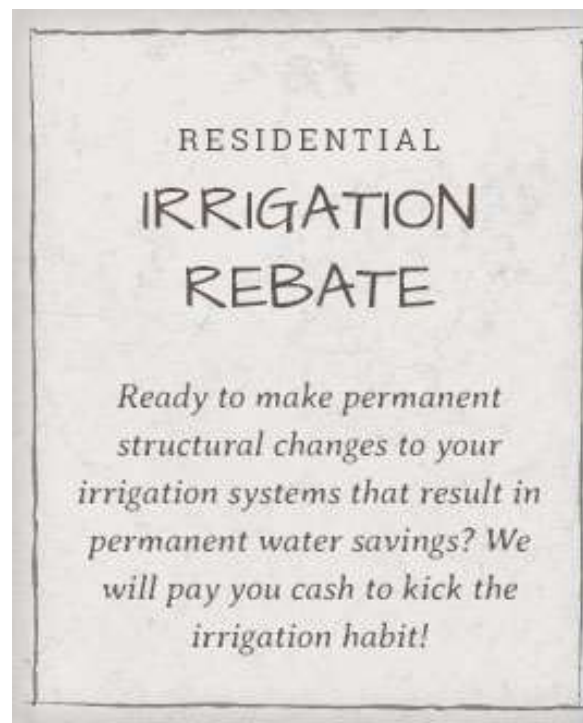


# Irrigation System Cash Rebate

- Pay on average **\$2500 cash** for the removal of irrigation in homes and businesses- **\$350** for a retired irrigation zone
- Payouts based on individual system analysis

2017-2018

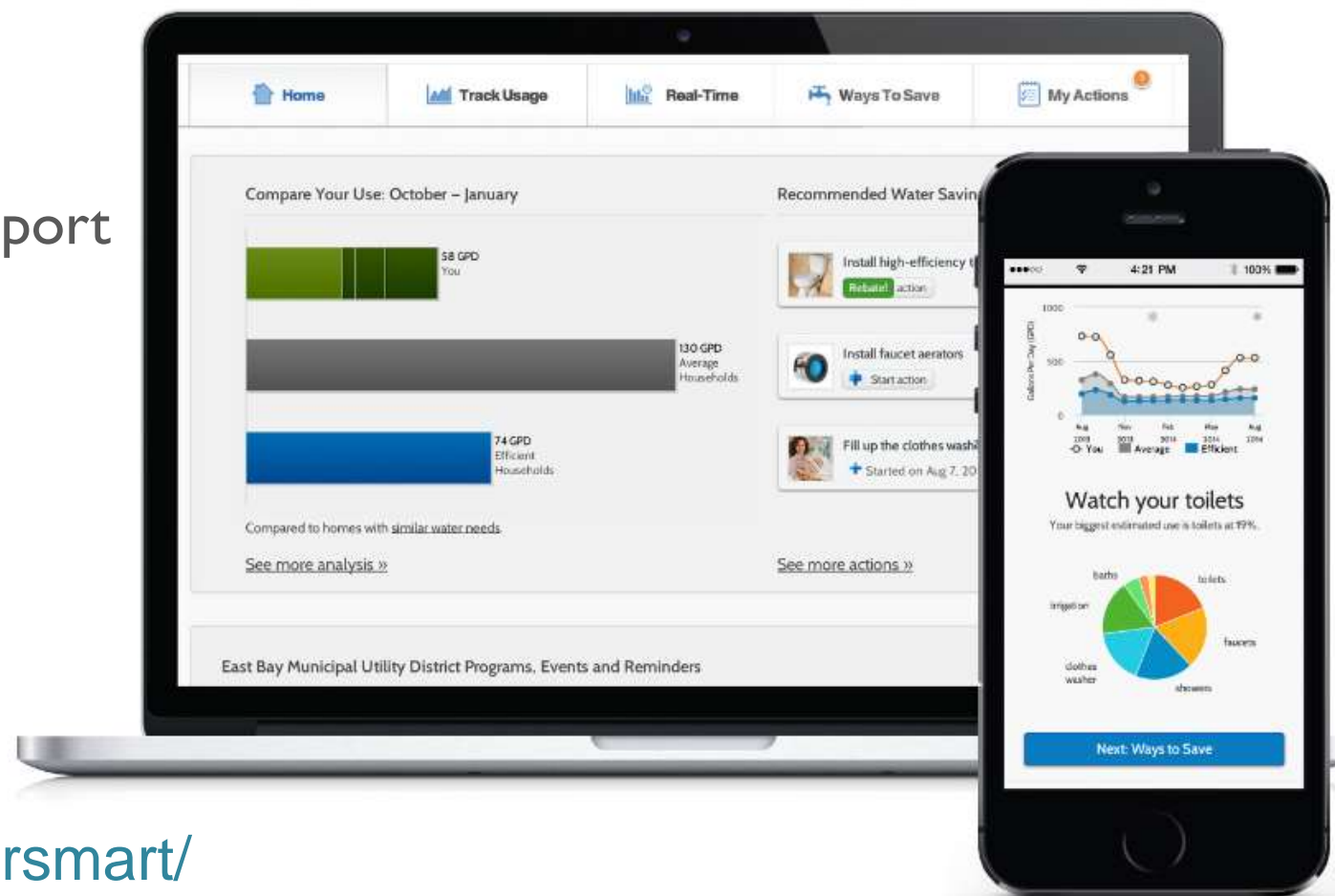
Type Of Rebate	Count
All	578
Functional System Retired	141
N/F System Retired	34
Drip Only	58
PRS Only	46
Capped Only	133
Mixed	
Capped and Drip	50
Drip and PRS	25
Capped and PRS	32
All Three	59



# WaterSmart: Personalized Reports

Compare your home to similar households

- Tailored to your household
  - Monthly personalized water report
  - Dashboard to explore savings
  - Leak alert option
- 45,000 Households



[www.saws.org/conservation/watersmart/](http://www.saws.org/conservation/watersmart/)

# New Water Sensor Products

- *Flume* easiest but there are others
- Designed to help customers detect leaks and understand water use
- SAWS currently offering rebates on purchase and installation





# One Trillion Gallons Conserved



2/3 of SAWS customers have participated in conservation programs.

# Contact Information

Dana Nichols: Manager  
Conservation Department

[dana.nichols@saws.org](mailto:dana.nichols@saws.org)

210-233-3656



An advertisement for GardenStyleSA.com. At the top, there is a logo of a stylized flower and the text "GARDENSTYLESA.COM". Below this, three gardening tools (a green trowel, a pink trowel, and a yellow trowel) are hanging on a wooden wall. To the right of the tools, a tablet displays the website's interface. At the bottom of the advertisement, there is a green banner with the text: "Stocked with tools, tips and techniques to take the guesswork out of landscaping."

[GardenStyleSA.com](http://GardenStyleSA.com)

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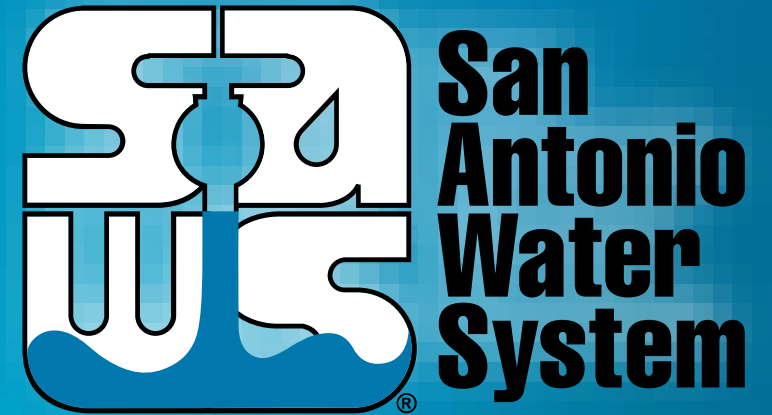
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