One Water Approach to Gardening

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Upper Guadalupe River Authority
Fall EduScape Seminar
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IF THERE IS MAGIC ON THIS PLANET
IT IS CONTAINED IN WATER.

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

- first Edwards wells
- watering hours, steep surcharges for landscape irrigation
- the Depression
- WW II
- drought of record
- peak of 225
- SAWS is formed

Gallons Per Person Per Day

Rainfall inches

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

<table>
<thead>
<tr>
<th>Edwards Stage</th>
<th>Edwards Supply</th>
<th>City Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 660 ft msl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Stage I</td>
<td>• Loss of 20%</td>
<td>• Water 1X/Week</td>
</tr>
<tr>
<td>• 650 ft msl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Stage II</td>
<td>• Loss of 30%</td>
<td>• Water 1X/Week</td>
</tr>
<tr>
<td>• 640 ft msl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Stage III</td>
<td>• Loss of 35%</td>
<td>• Reduced Hours</td>
</tr>
<tr>
<td>• 630 ft msl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Stage IV</td>
<td>• Loss of 40%</td>
<td>• All Above Plus</td>
</tr>
</tbody>
</table>

Other rules apply for car washing, power washing, pools, decorative fountains, and hotel linen programs.
Water conservation in San Antonio

Water use rules is not a new idea.
Application and Contract for Sprinkling.

I hereby apply for the Privilege of Sprinkling, for One Year, on my premises, No. 333 Street, (inside of lot), and agree to pay for same $47.40. 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.

San Antonio, May 1, 1901

Ed. Ford.

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
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
Water Conservation in San Antonio

2011

- 265 million gallons

- Drought rules start

- Indoor

- Outdoor
SAWS Daily Volume to Customers, 2018

301 Million Gallons

Outdoor

Indoor
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 eNewsletter
- Watering rules

Traditional messaging

- Radio spots/Press releases
- SAWS.org and 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

<table>
<thead>
<tr>
<th></th>
<th>Landscape</th>
<th>Patioscape</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>2250</td>
<td>1565</td>
</tr>
<tr>
<td>2015</td>
<td>3146</td>
<td>2507</td>
</tr>
<tr>
<td>2016</td>
<td>1896</td>
<td>593</td>
</tr>
<tr>
<td>2017</td>
<td>1456</td>
<td>430</td>
</tr>
<tr>
<td>2018</td>
<td>2523</td>
<td>405</td>
</tr>
<tr>
<td>TOTAL</td>
<td>11,271</td>
<td>5,500</td>
</tr>
</tbody>
</table>
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 event calendar
- Attend activities that earn Rewards Points
- Get your coupon.
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

<table>
<thead>
<tr>
<th>Type Of Rebate</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>578</td>
</tr>
<tr>
<td>Functional System</td>
<td></td>
</tr>
<tr>
<td>Retired</td>
<td>141</td>
</tr>
<tr>
<td>N/F System Retired</td>
<td>34</td>
</tr>
<tr>
<td>Drip Only</td>
<td>58</td>
</tr>
<tr>
<td>PRS Only</td>
<td>46</td>
</tr>
<tr>
<td>Capped Only</td>
<td>133</td>
</tr>
<tr>
<td>Mixed</td>
<td></td>
</tr>
<tr>
<td>Capped and Drip</td>
<td>50</td>
</tr>
<tr>
<td>Drip and PRS</td>
<td>25</td>
</tr>
<tr>
<td>Capped and PRS</td>
<td>32</td>
</tr>
<tr>
<td>All Three</td>
<td>59</td>
</tr>
</tbody>
</table>

**SAWS conservation consultants will help identify design flaws in your irrigation system that, if changed, can result in both water savings and healthier landscapes.**
WaterSmart: Personalized Reports

Compare your home to similar households

• Tailored to your household
  o Monthly personalized water report
  o Dashboard to explore savings
  o Leak alert option

• 45,000 Households

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

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