



# Saving Water: Challenges & Opportunity

October, 2010

## Pathways to Sustainability

Karen Guz  
Director – Conservation

# Background: San Antonio



- **San Antonio is America's 7<sup>th</sup> largest city and growing fast**
- **SAWS is largest local provider of water and wastewater services provided for over 1.3 million people**
- **Primary supply is an aquifer which also feeds springs and rivers key to sustaining endangered species, aquatic habitats and estuaries**
- **All new supply options are expensive and politically controversial**
- **Region is drought prone with extreme precipitation fluctuations**

# Catalyst for Change; Federal Law

# San Antonio Express-News

Serving South Texas since 1865

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## 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 decried 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



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— 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/1B

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 resi-

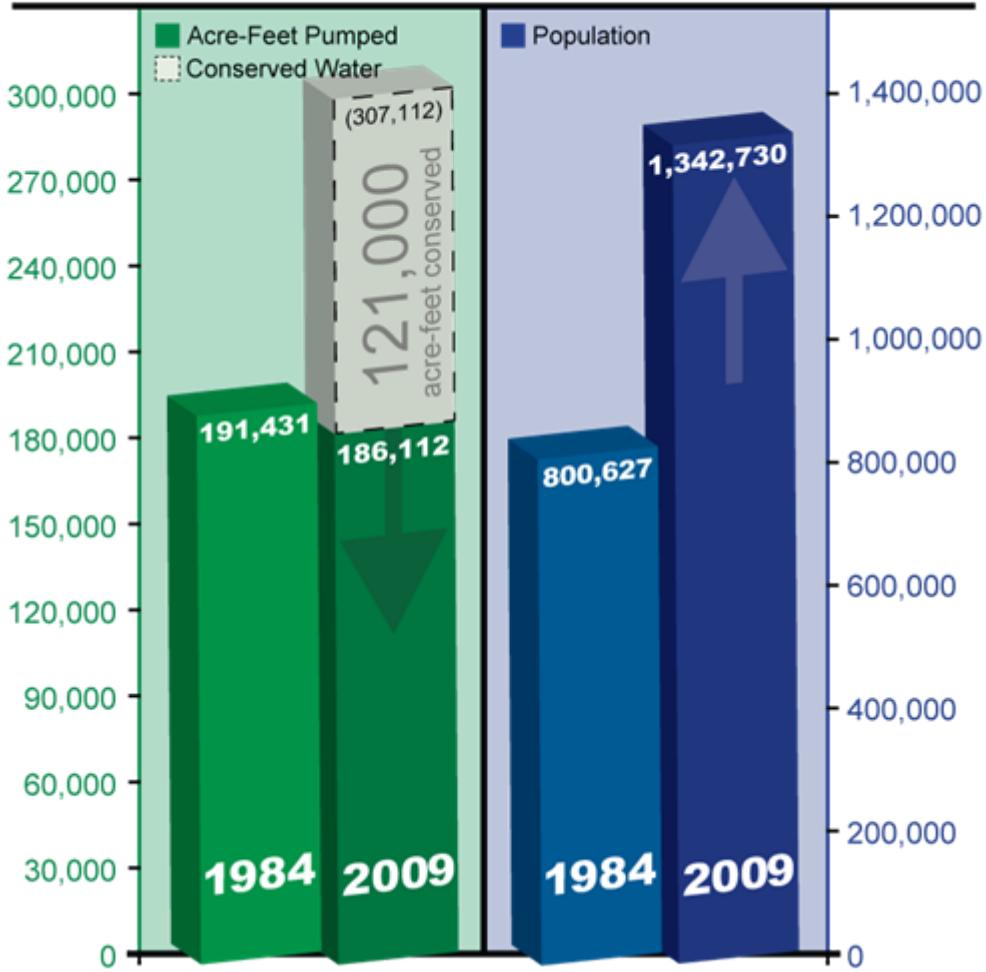
■ See FEDERAL/8A

Leaders feared San Antonio could not thrive with pumping restrictions.

# Managing Water Demand

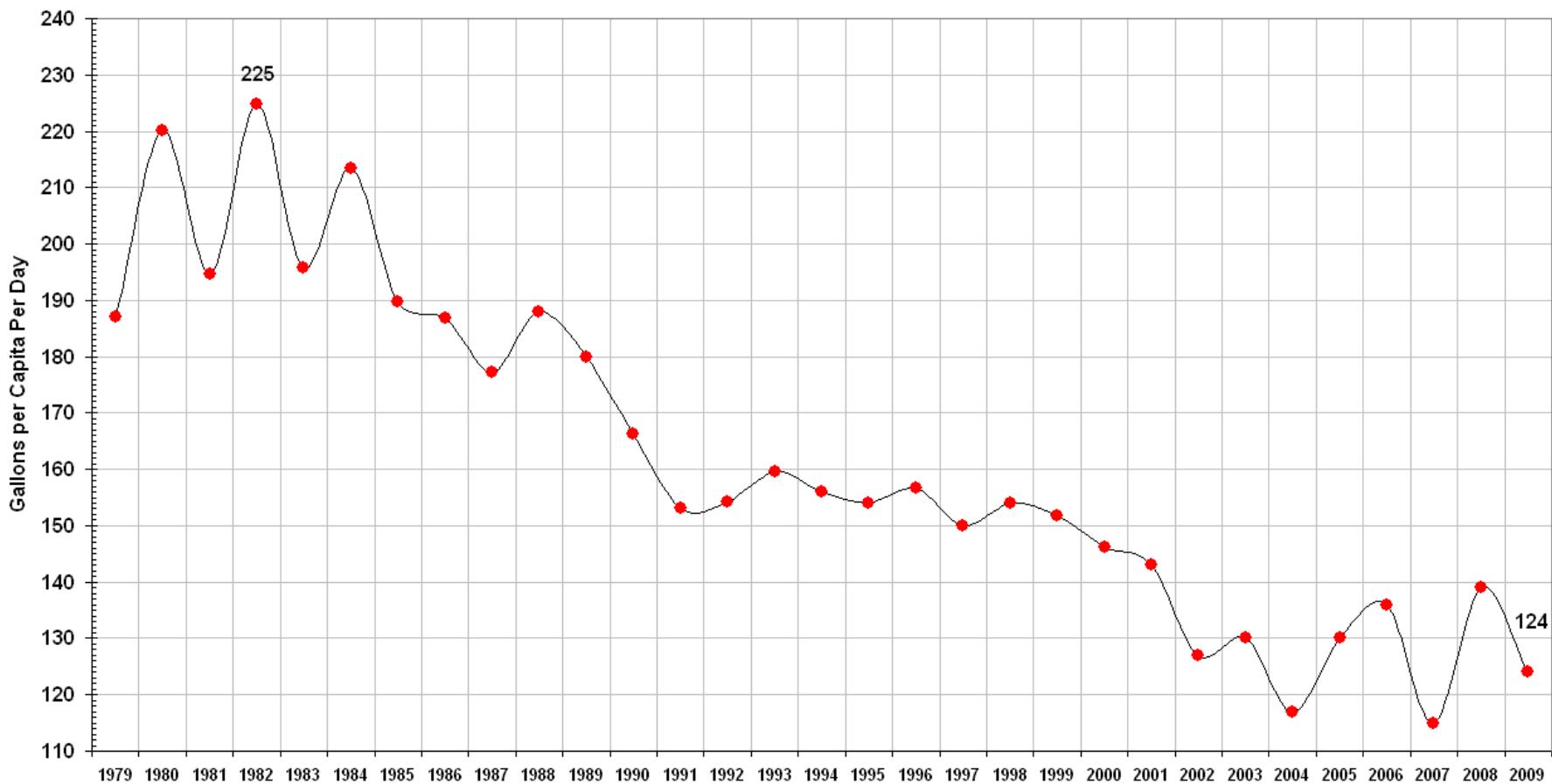
67% More  
Customers  
0% More  
Water

**SAWS Total Production (1984 vs. 2009)**



# San Antonio GPCD

San Antonio Water System  
Gallons Per Capita Per Day (GPCD)  
1979 - 2009



# What Is the Good News?

- It is possible to grow and thrive economically while meeting water management challenges
- Drastic lifestyle changes are not required to make dramatic changes in gallons per capita
- Water rates will go up less if existing water supplies are maximized

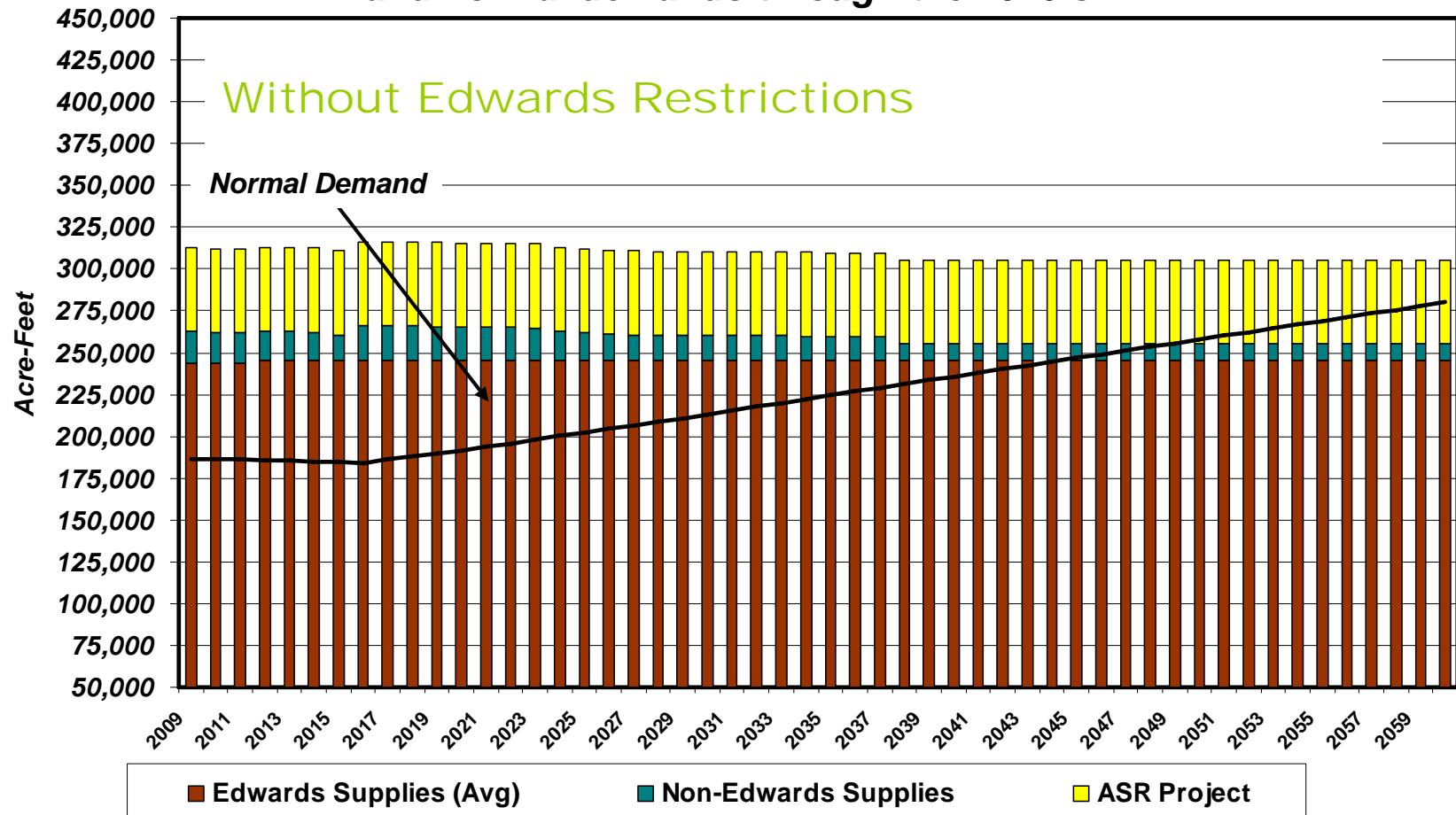
# What Are Key Choices ?

## Management of demand manages cost

- Conservation is critical to the Water Management Plan
- New supplies are being planned, but are less expensive due to conservation
- Peak demand is particularly critical due to restrictions on available water in summer months
- The permanent water plans for San Antonio include
  - Continue strong community ethic to conserve water
  - Set aggressive conservation goals & investment
  - Continue reasonable rules of use
  - Utilize drought management when needed

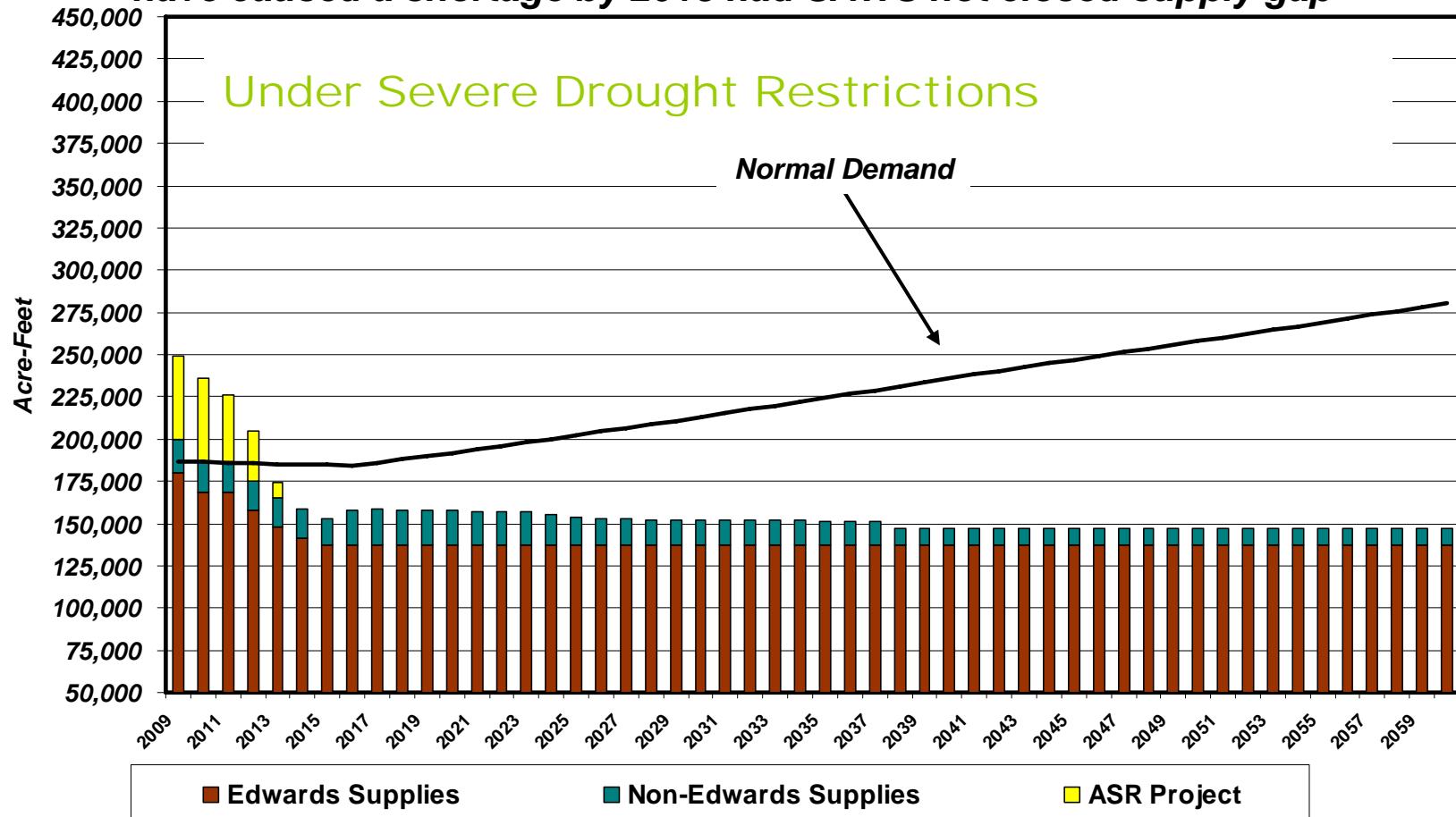
# Supply and Demand (Average Conditions)

*Current water supplies in average conditions would meet high and normal demands through the 2040's*



# Supply and Demand (Drought Conditions)

*Edwards supplies are cut by 40% in extreme drought, which would have caused a shortage by 2013 had SAWS not closed supply gap*



# What Are Program Components?

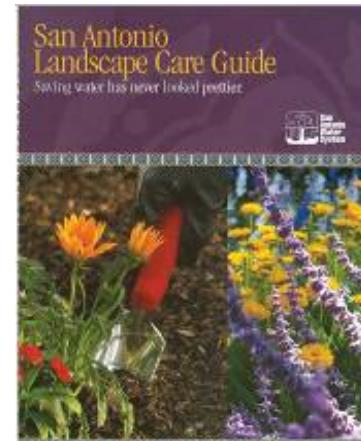
## 1. Financial Incentives

- Rebates & other incentives to encourage new equipment at homes and businesses
- Rate structures to discourage high discretionary usage



### Kick the Can

It's a great ways to save money and water.



## 2. Education & Outreach

- Many events, e-newsletter, & Home Consultations

## 3. Reasonable Regulations

- Far reaching ordinances that cover a wide range of activities involving water



### Conservation

# Program Goal: 1 billion gallons/year



**Kick the Can  
FREE Toilets**



**Watersaver Landscape  
Rebates**



**Wash Right  
Washing Machine Rebate**



**Hot Water  
On Demand Rebate**



**Home Water  
Conservation Audits**



**San Antonio  
Landscape Care Guide**



**E-Newsletter with  
Irrigation Advice**



**Drought Restriction  
Enforcement**



**Reporting Water Waste**



**Large-Scale Retrofit  
Rebate Program**



**Toilet  
Retrofit Program**



**Commercial Cooling  
Tower Audits**



**Restaurant Certified  
WaterSaver Program**



**On-Site Cooling  
Water Reclamation**

# Customer Education Efforts

## Community Based Marketing Programs



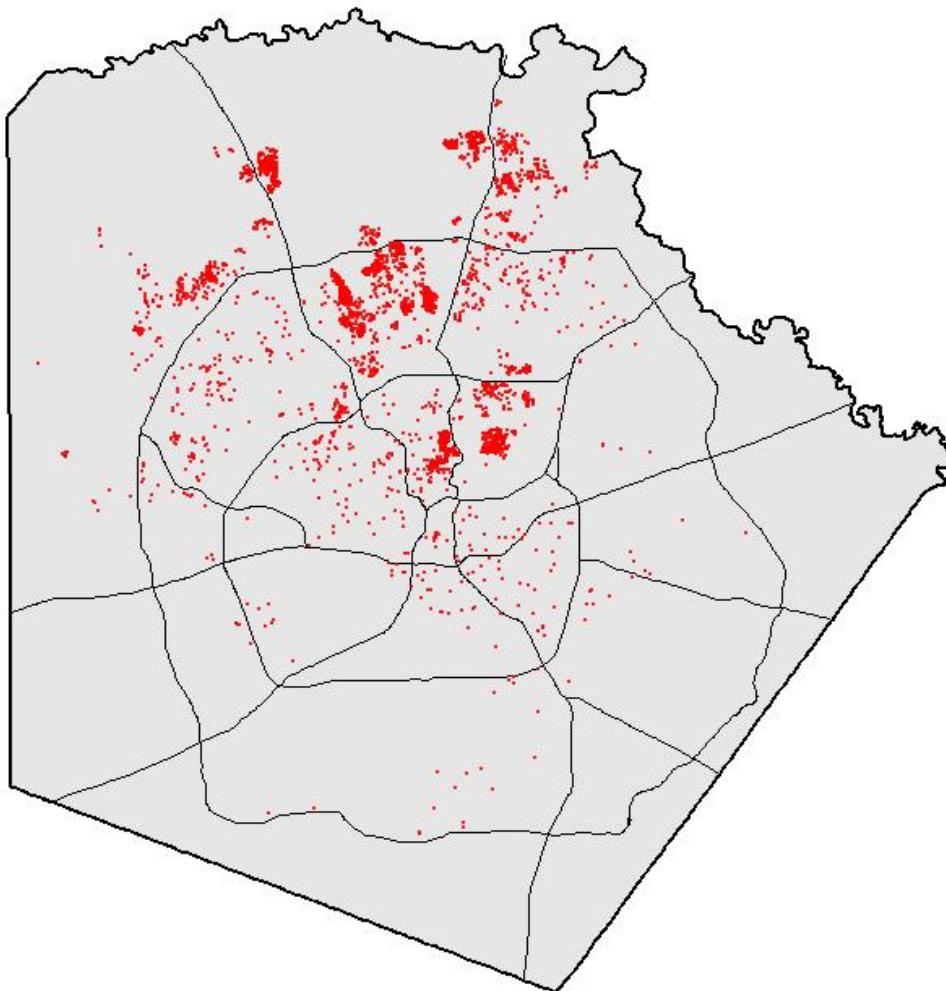
Model also drives retrofits where needed.

### Fix A Leak

- EPA WaterSense program promotes checking for leaks each spring
- Non-profit groups received payment for households that completed water audits
- Homeowners received rebates
- Generated community wide response

# Top 1% Residential Water Users

Outreach Targeted to Top Water Users



# Reasonable Regulations

- Water Waste Against the Law
- Time of Day Irrigation
- Drought Rules
- San Antonio Irrigation Standards; above state
- Rain Sensor Requirement
- Cooling Tower Efficiencies
- Power Washing Rules of Use
- Irrigation Check-Ups for Large Properties/Large Users
- Making Condensate Water Accessible on Commercial Construction
- Turfgrass Selection & Soil Under Turfgrass
- High Efficiency Toilets, Urinals, Faucets & Showerheads During Construction; to EPA WaterSense standards
- Limited total irrigation size for residential
- Water on request only in restaurants
- Charity car washes only at car wash operations
- Soon: pool construction standards

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

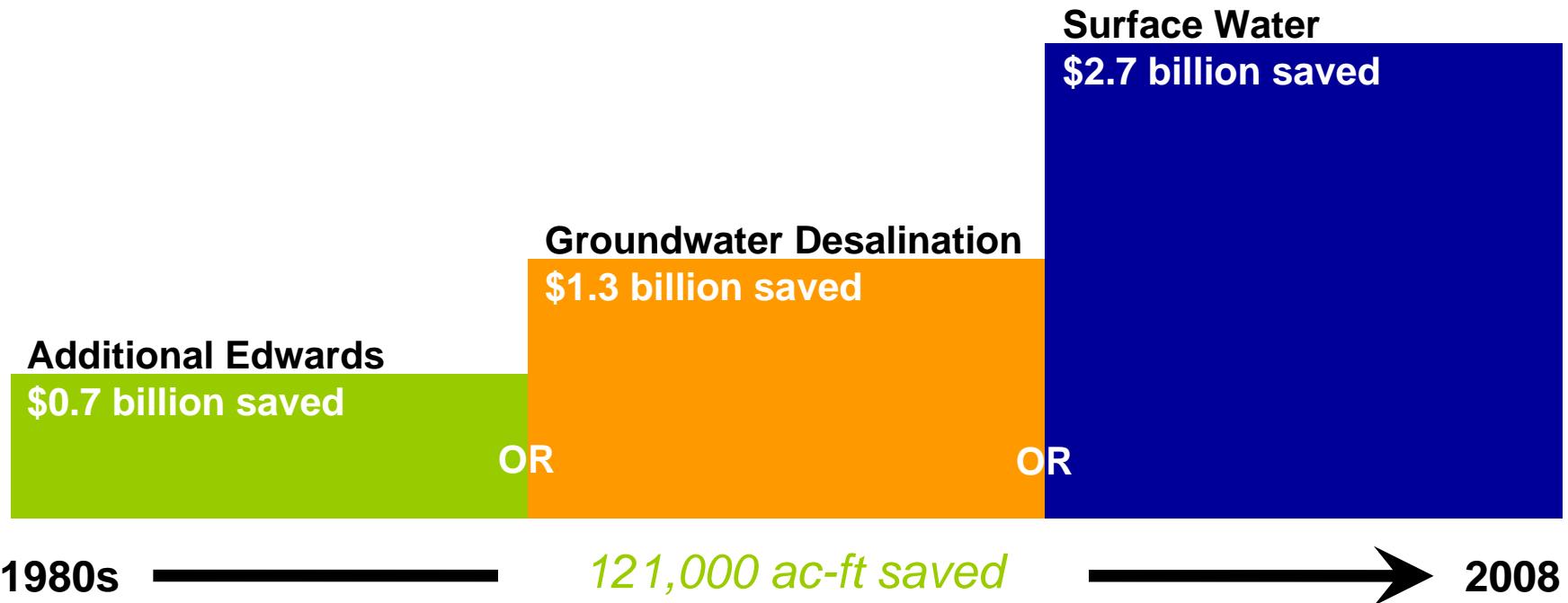
# How Does It Work Financially?

Conservation is fully supported by financial analysis.

- San Antonio expects to continue growth in population during the next 50 years
- Access to our primary supply will not become easier; it may become more restricted
- There are no cheap or non-controversial supply options available surrounding San Antonio
- Every analysis done by our Finance Department supports tremendous long-term savings as a result of conservation success
- YES...rates go up to cover expenses, but LESS than they would without conservation working.

# Water Management - Conservation

## Water Supply Savings



Deferred alternative supplies would have cost  
**up to \$2.7 billion**

# Water Management - Conservation

## Wastewater Treatment Savings



1980s ————— *89.3 MGD Treatment Capacity Savings* ————— 2008

Additional treatment capacity would have cost  
**up to \$1.1 billion**

# Conservation vs. Efficiency

- True sustainability requires both a conservation and an efficiency mindset
- Efficiency alone will not lead us to the gains required to reduce water or energy demands needed to continue to thrive
  - Highly “efficient” irrigation can use up to 100,000 gallons/month on large single family lots.
  - A “conservation” mind-set in the community is open in communicating to citizens that this is inappropriate and unsustainable

# Contact Information

Karen Guz

Conservation Director

San Antonio Water System

[Karen.guz@saws.org](mailto:Karen.guz@saws.org)

210 233-3671

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

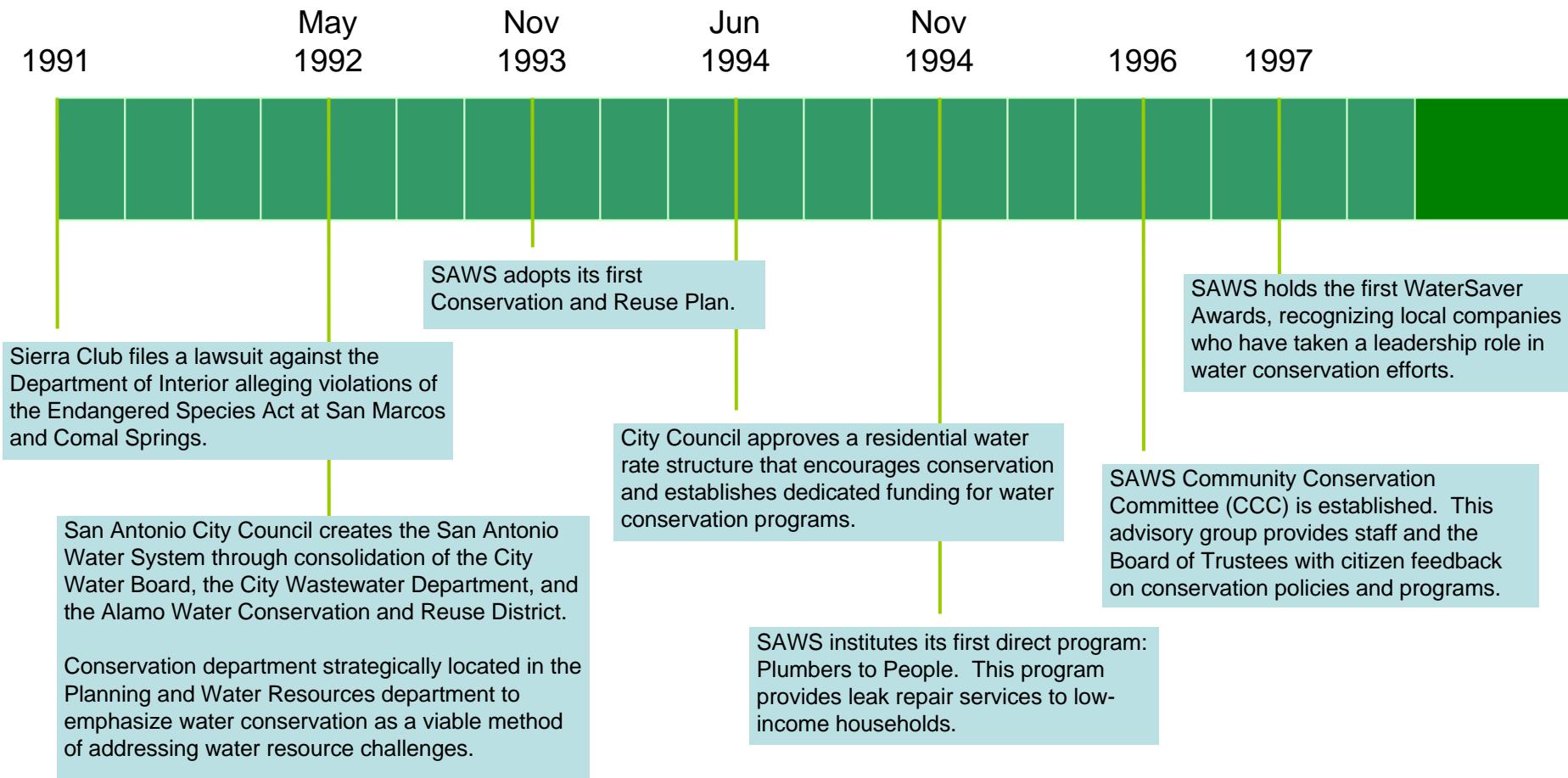


# Saving Water: Challenges & Opportunities

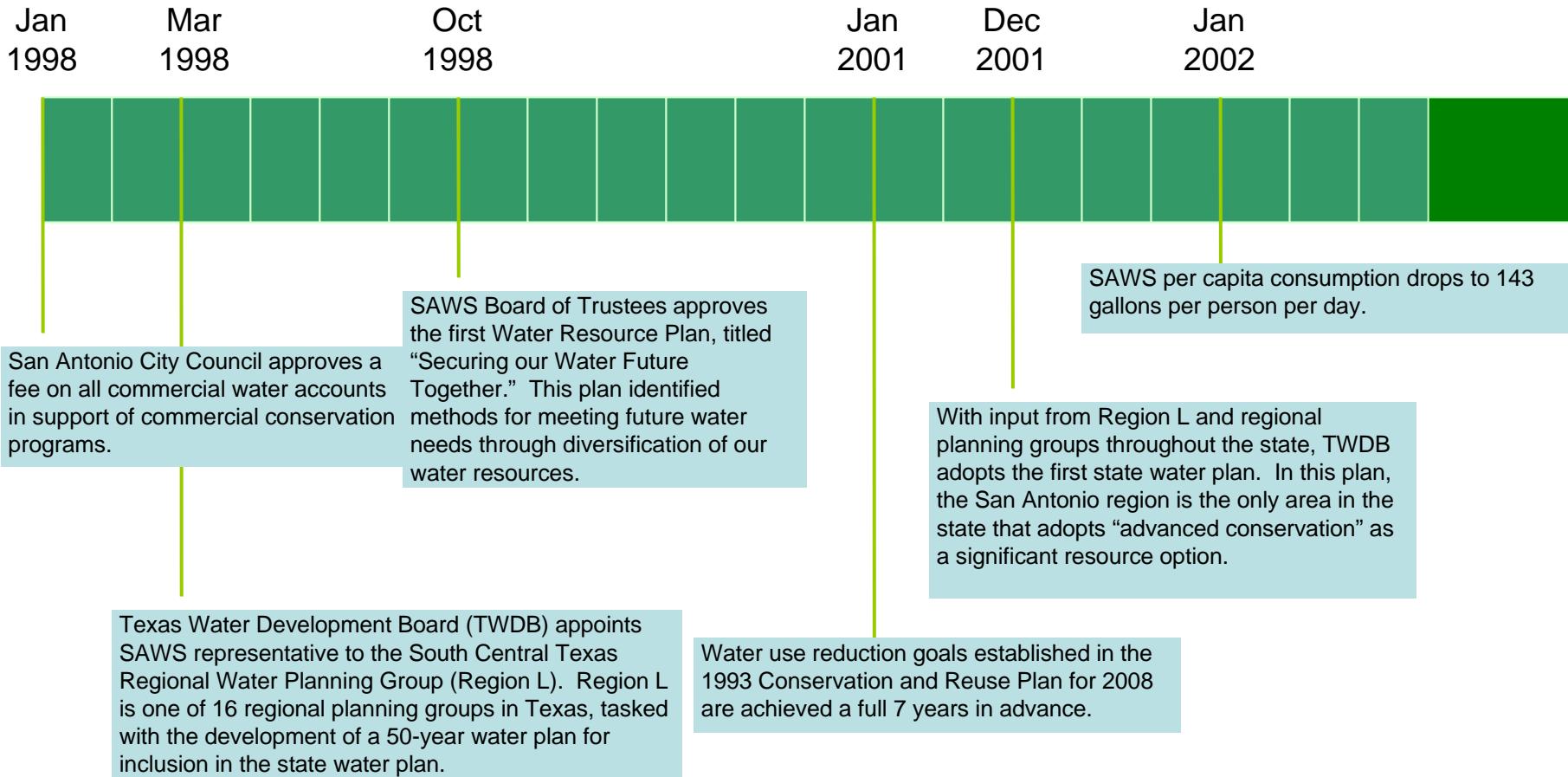
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# History of Conservation



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