



San Antonio and Drought: Here We Go Again

February 13, 2012

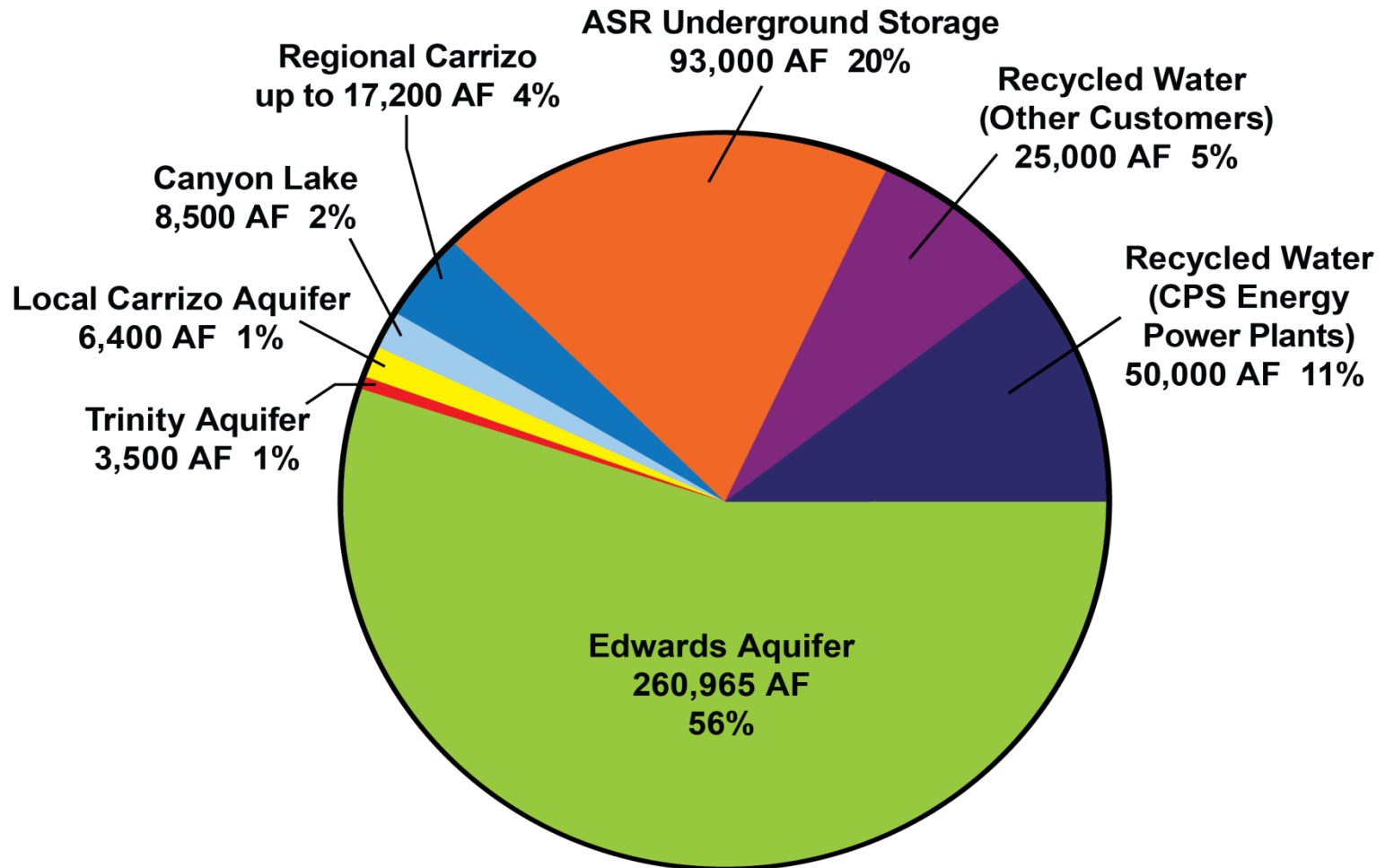
CIESS Water Forum

Kelley Neumann

Senior Vice President / Strategic Resources

More information at www.saws.org

SAWS Current Supplies



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History of the Edwards Issue

1990's Litigation

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 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



“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/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 residen-

■ See FEDERAL/8A

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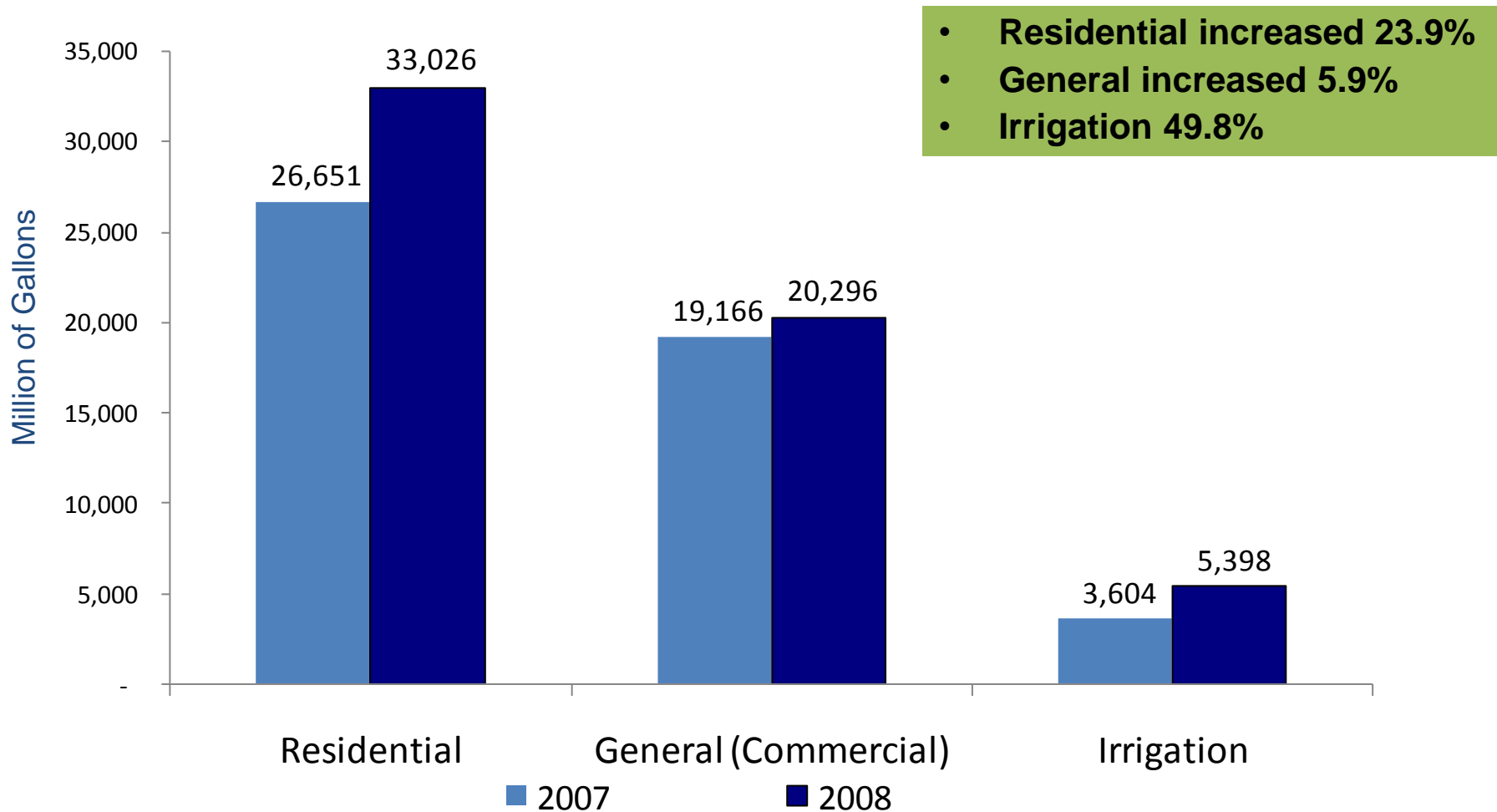
Edwards Water Restrictions

Index Well Level	Historical Experience	Supply Reduction
660'+	67.6%	
650-660'	14.9%	20%
640-650'	9.4%	30%
630-640'	4.3%	35%
625-630'	2.7%	45%
625'-	1.1%	44%

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2007(wet) and 2008 (dry) Water Use

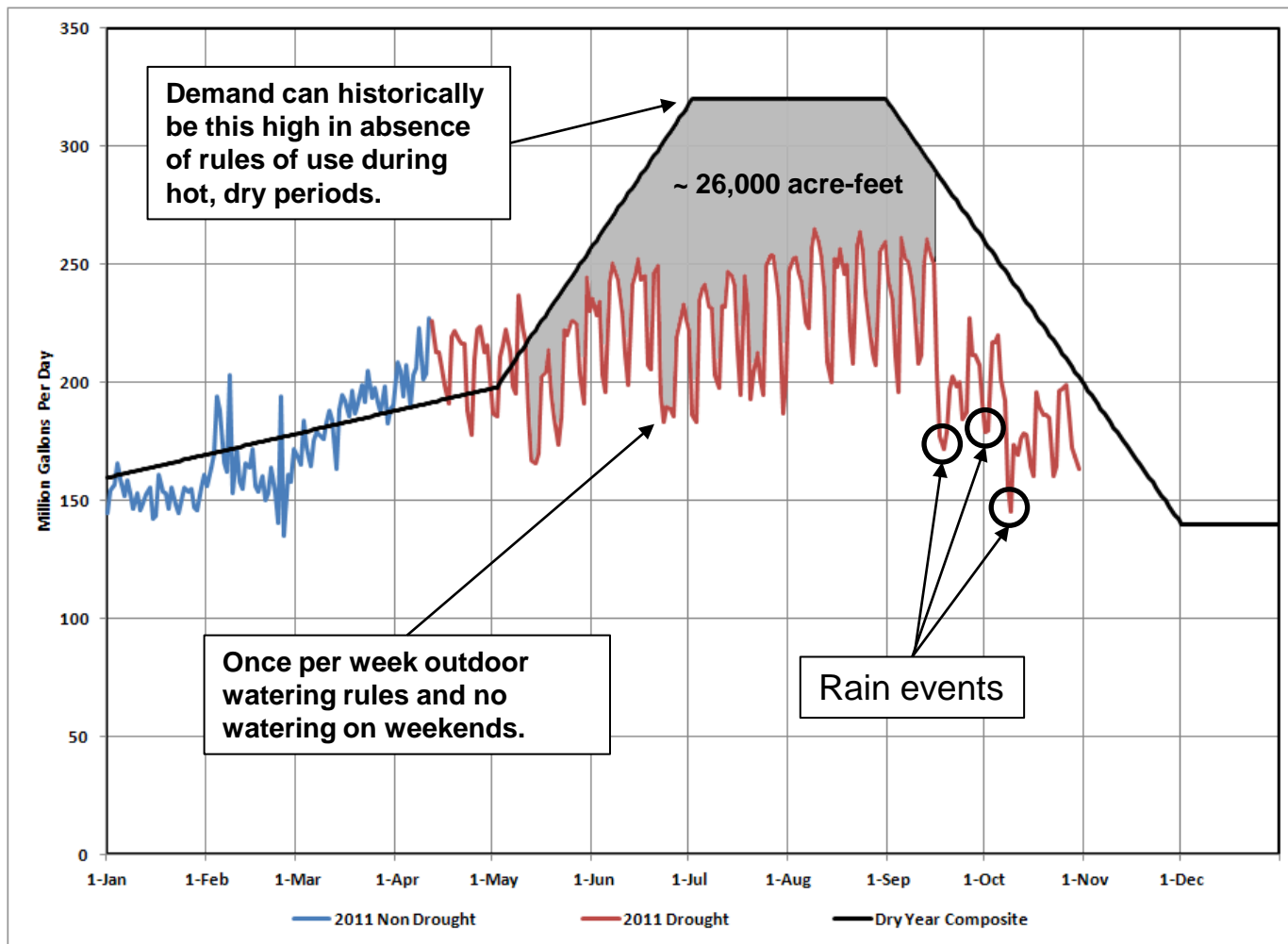


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2011 Drought Demand

Reduced by 50 million gallons/day or more



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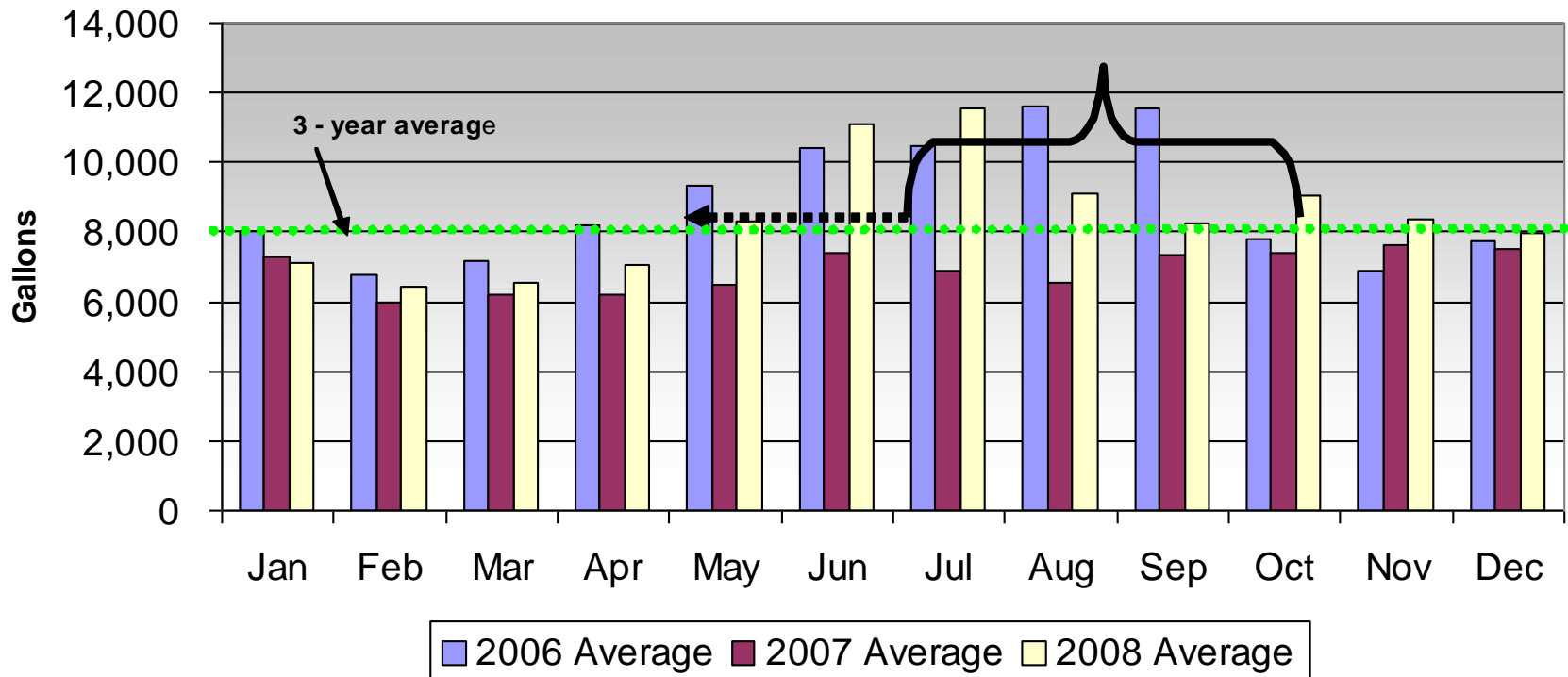
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Residential Seasonal Usage

Seasonal Rate Extended to Manage Peak Demand

Average Monthly Usage Per Residential Inside-City Customer



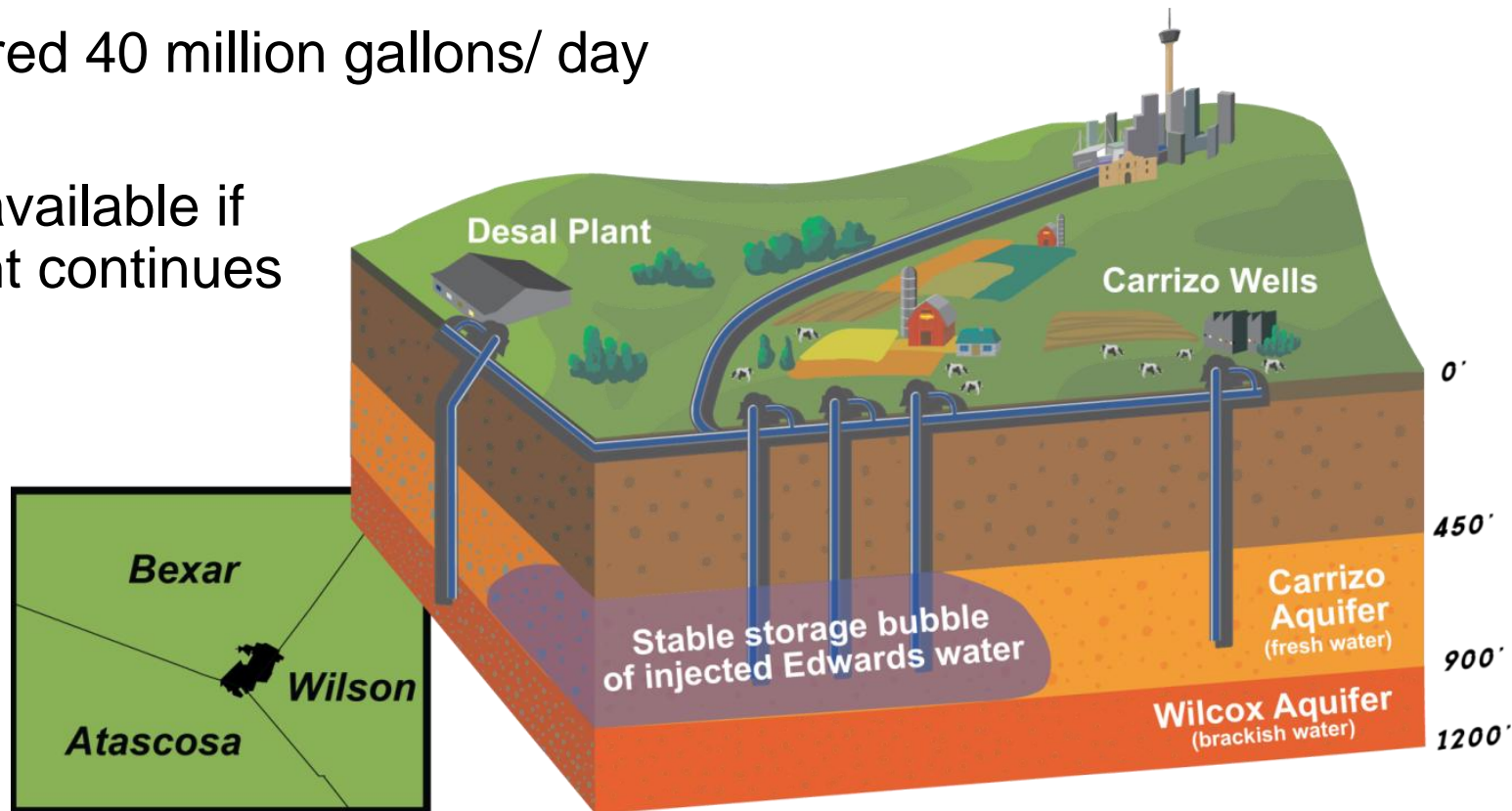
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Saving For a Dry Day

Aquifer Storage & Recovery (ASR)

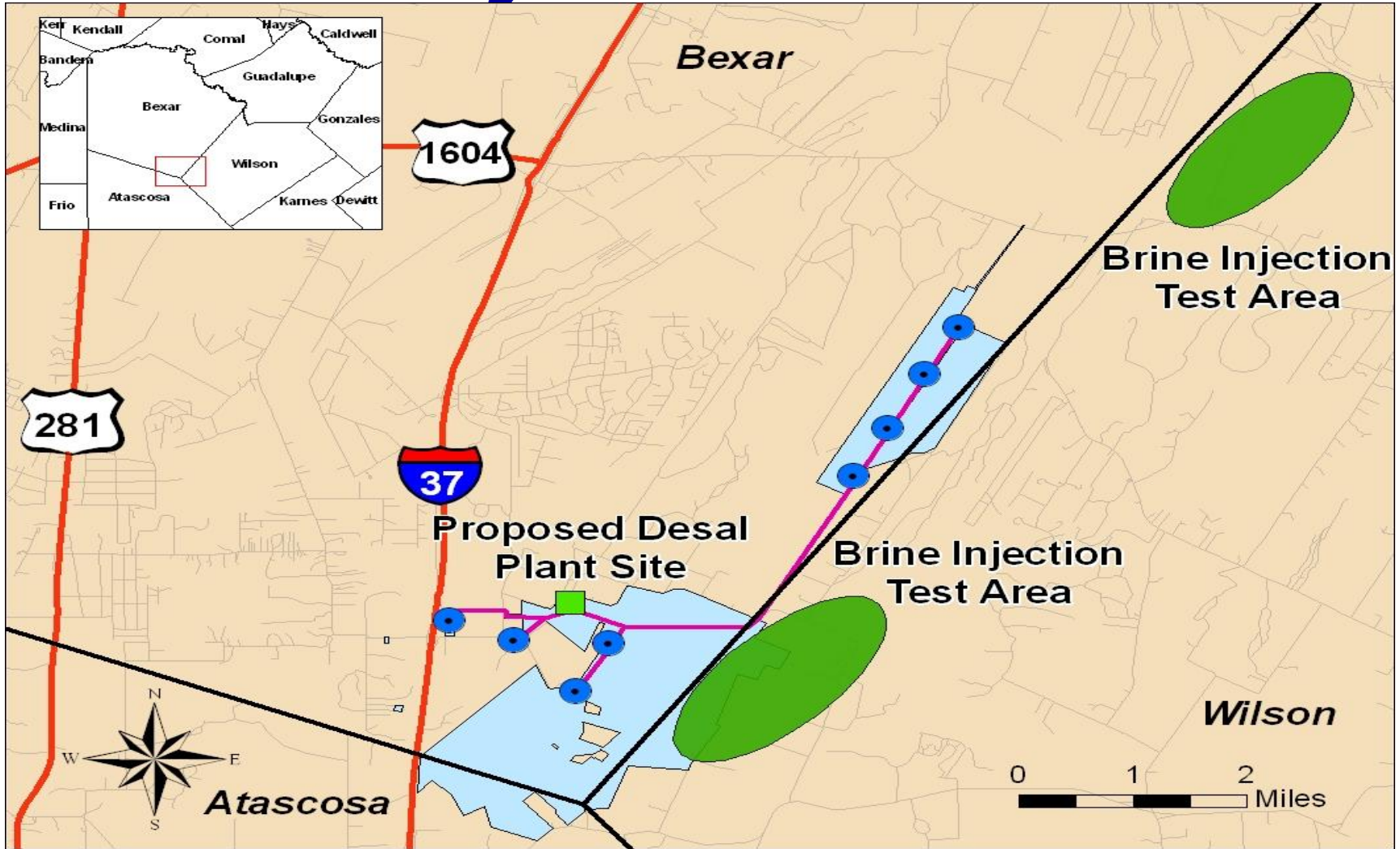
- \$250 million Investment
 - Delivered 40 million gallons/ day in 2011
 - More available if drought continues



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SAWS Project & Location



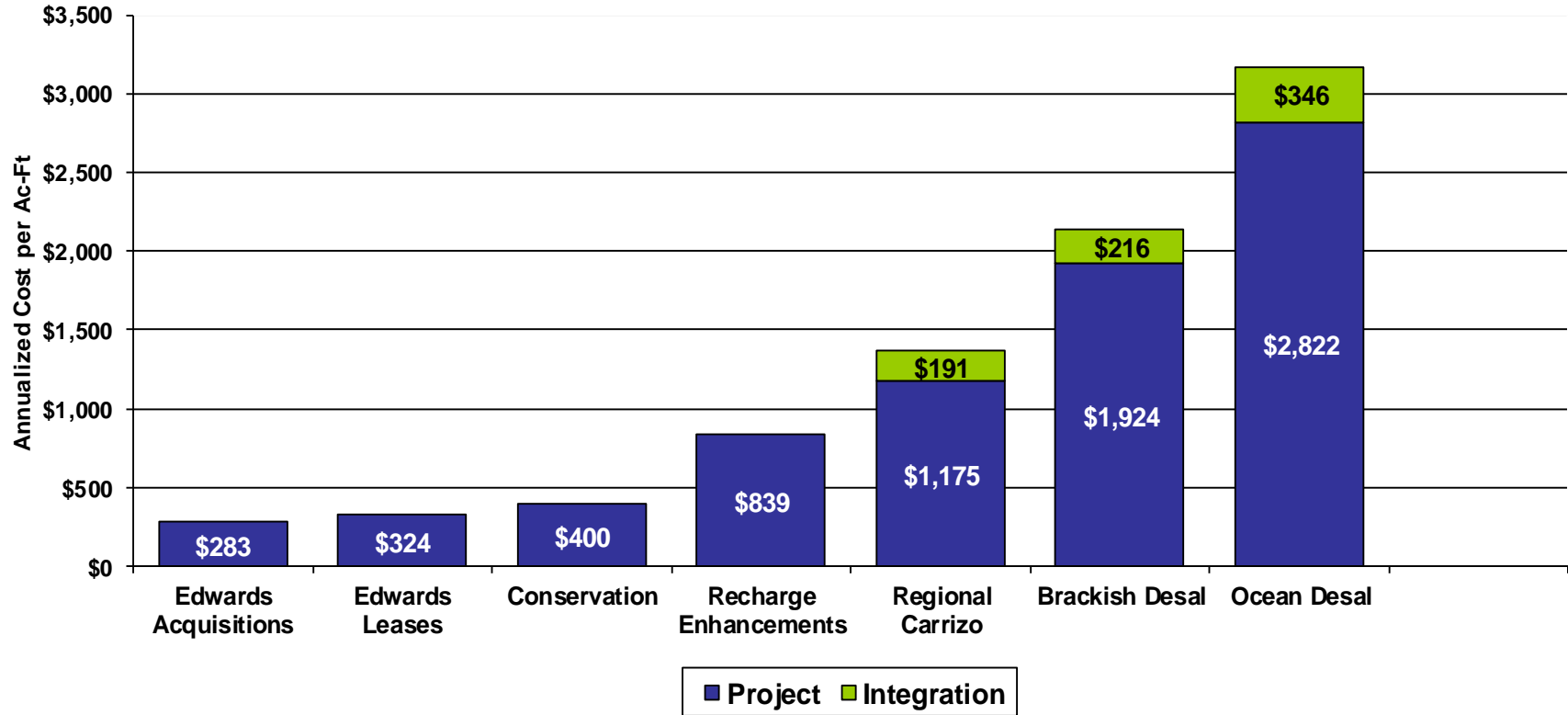
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Water Management

Annualized Project Costs



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Research Wish List

- Better Groundwater models for Edwards Aquifer
- Better Groundwater models for all of Texas
 - Communication tools to explain GAMs to non-scientist
- Improvements to desalination equipment
 - Seasonal operations
 - Energy efficiency
 - Brine disposal
- Future meteorological conditions
 - Duration and frequency of drought cycles
 - Implications of climate change

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