



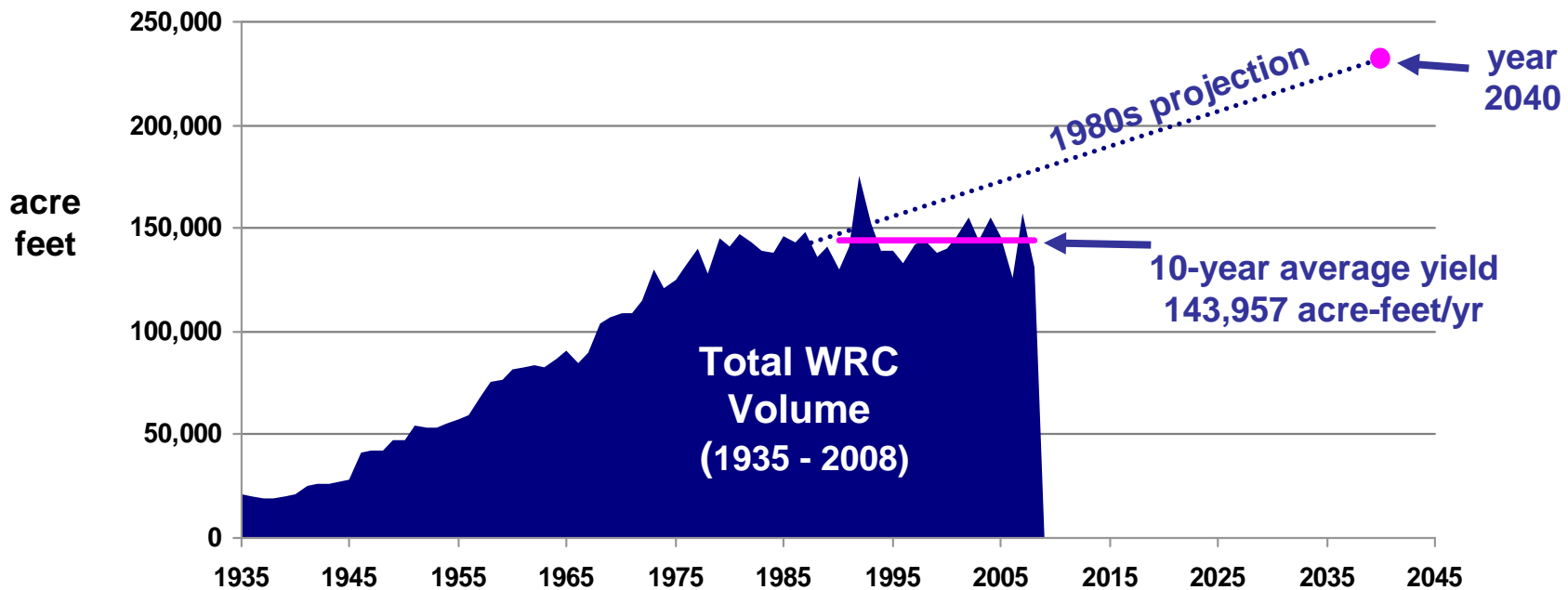
# Recycled Water Program briefing for Rates Advisory Committee

October 1, 2009

Steve Clouse  
Chief Operating Officer

# Water Recycling Center Flows

- SAWS Water Recycling Centers currently produce:
  - a minimum planning yield of 125,691 acre-feet/yr (2006)
  - an average yield of 143,957 acre-feet/yr (last 10 years)
- 2008 production was 131,180 acre-feet
- Flows have not increased since 1980s

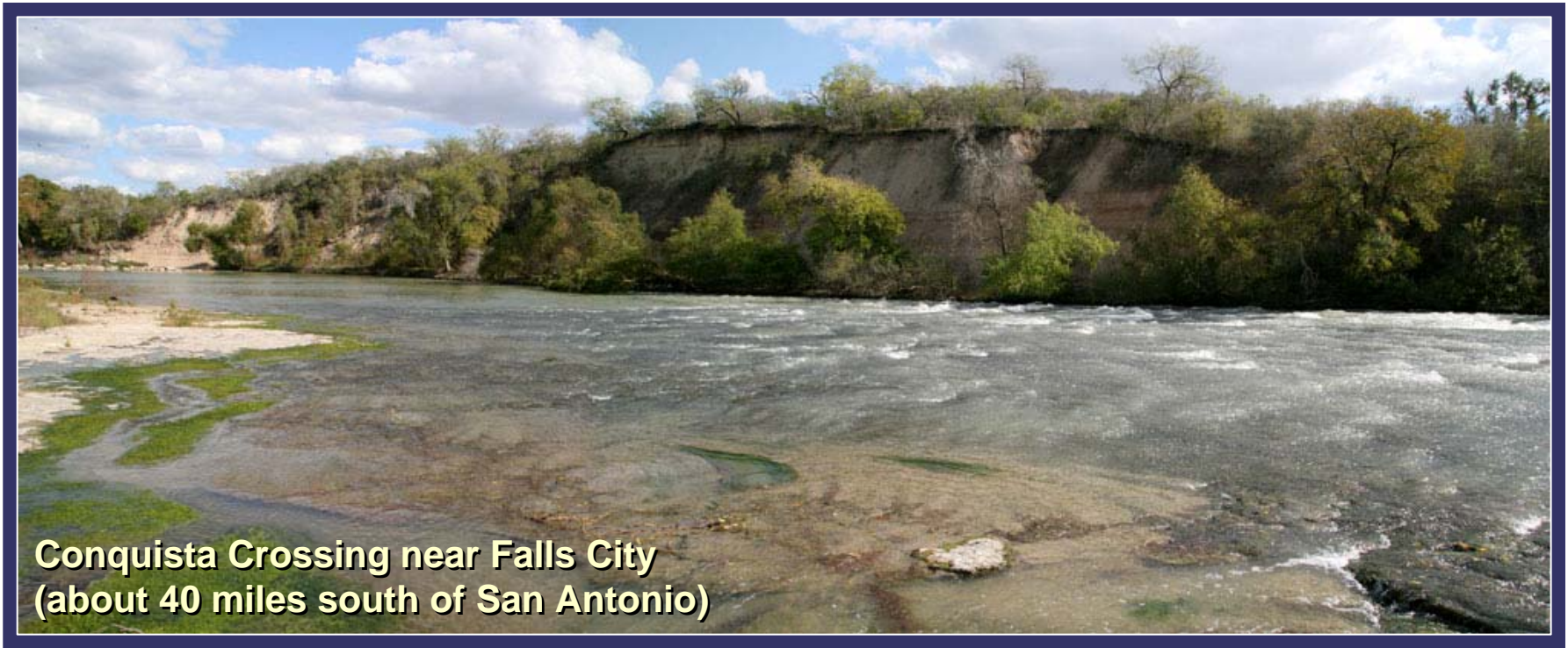


# Concept flows versus Current flows

<b>Program volumes in acre feet per year</b>	<b>Concept supply 1996</b>	<b>Current supply 2009</b>
<b>Recycled Water Yield</b>	<b>130,000+</b>	<b>120,000 - 125,000</b>
<b>Downstream Flows</b>	<b>55,000</b>	<b>?</b>
<b>CPS Energy Plants</b>	<b>40,000</b>	<b>50,000</b>
<b>Recycle Water Program</b>	<b>35,000</b>	<b>35,000</b>

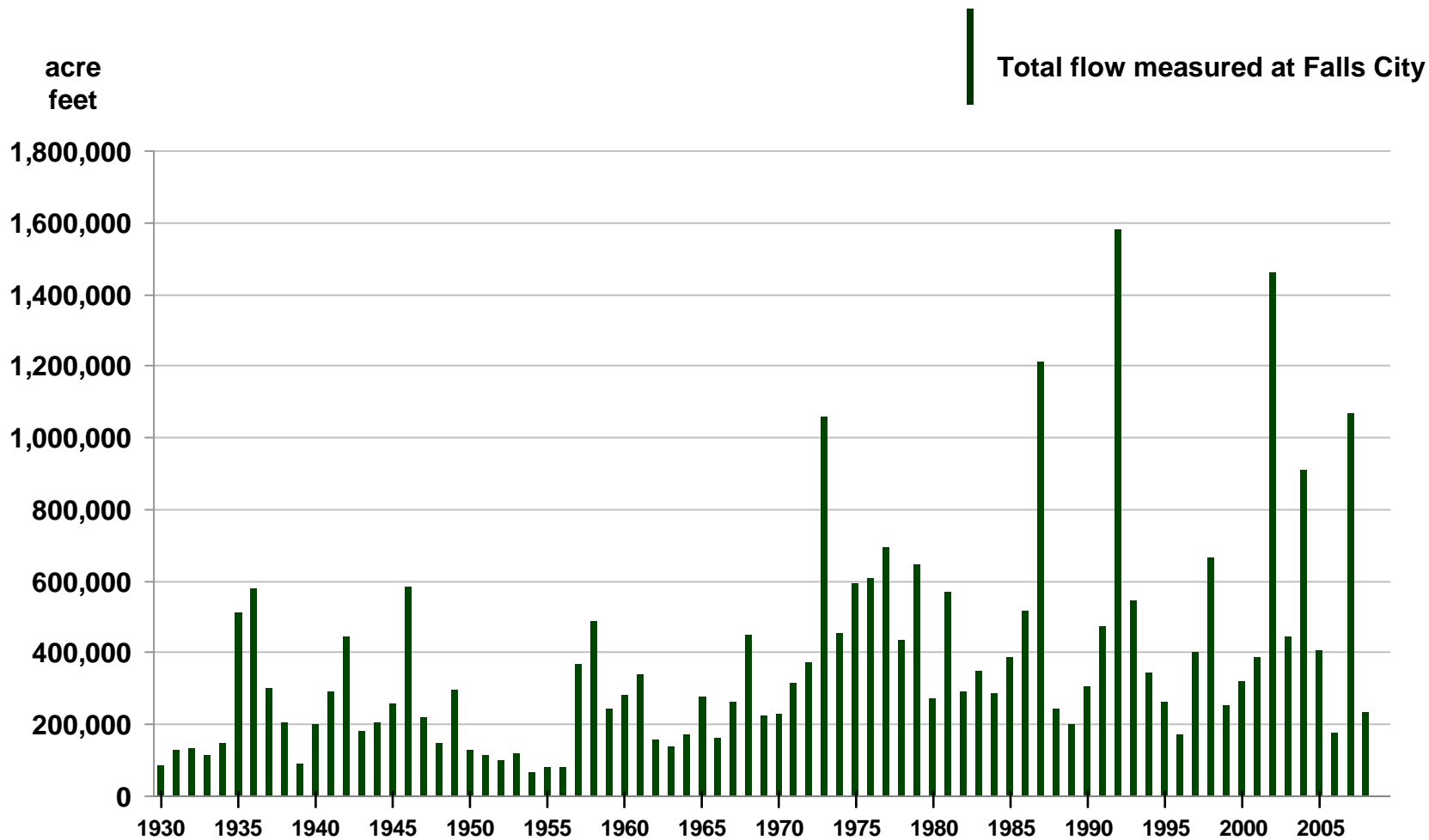
# San Antonio River

- Healthy ecosystem
- Supported mainly by effluent during dry times



# San Antonio River flows at Falls City

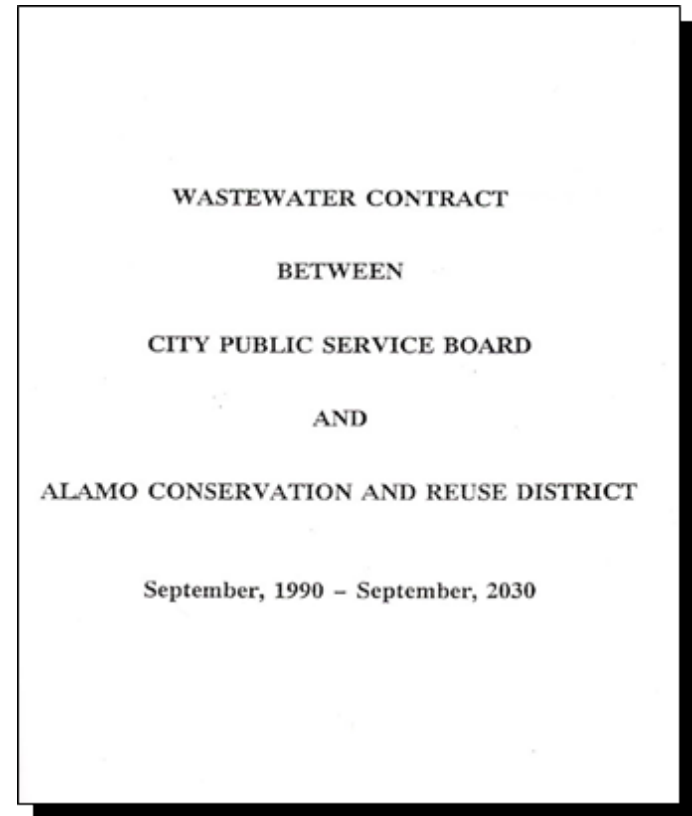
1930 - 2008



# The beginning of Recycling in San Antonio

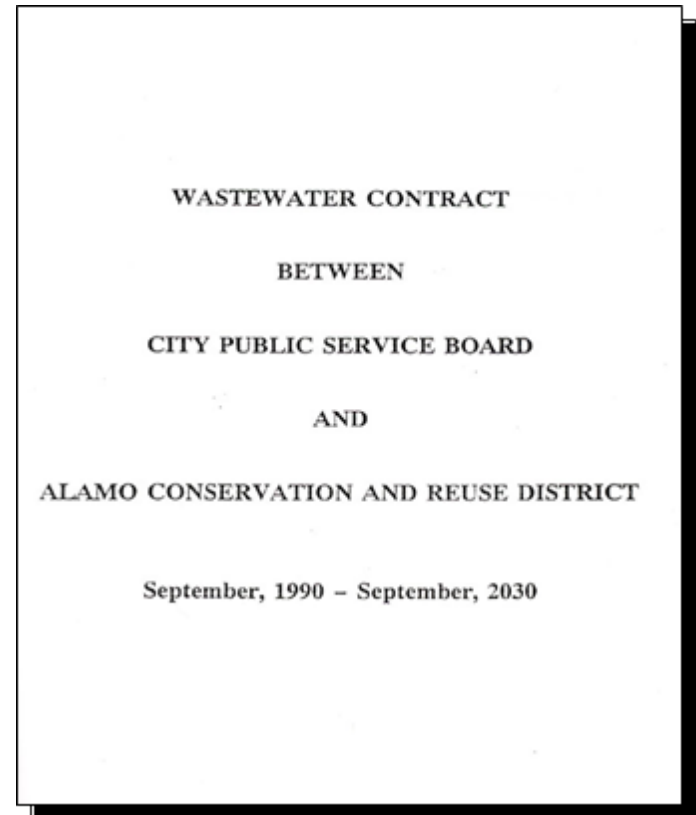
## The CPSE contract

- 1990 Basic Requirements
  - CPSE has a priority right over all other recycled water customers
  - 40,000 acre-feet per year
  - Summer month maximum = 8,220 acre-feet
- Two Firm Options
  - 5,000 acre-feet each
  - Both options not exercised
- Two Contingent Options
  - Both exercised, effective 2008 and 2010
  - Summer maximum increased by 500 acre-feet for each option
- Direct delivery option at CPSE expense
- CPSE currently paying SAWS approximately \$3 Million/year



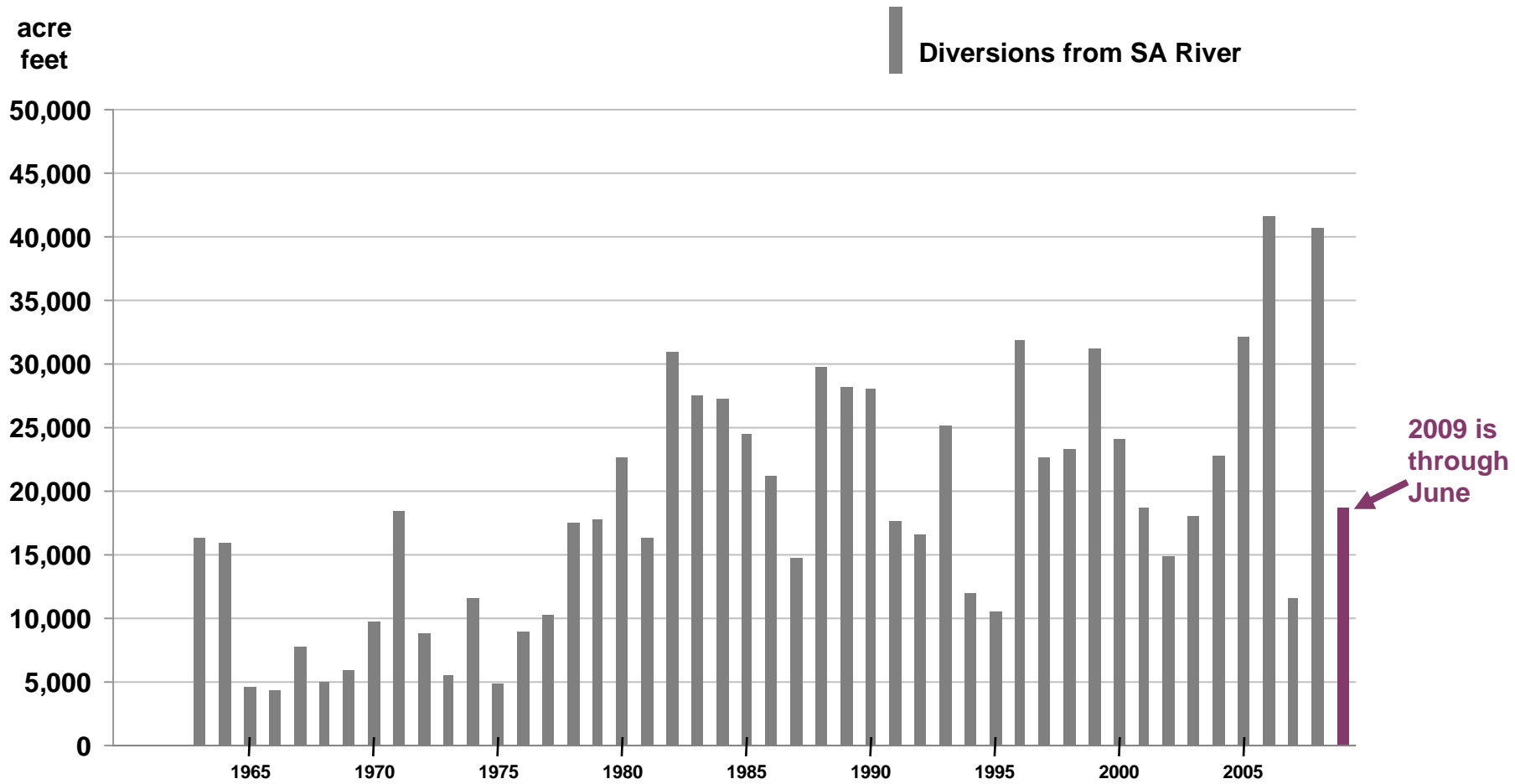
# CPSE contract – customer development requirement

- Obligates the development of other industrial and commercial customers
- Dedicated contract funding to be used for developing other water sources, water reuse and wastewater reuse projects
- Includes capital improvement projects

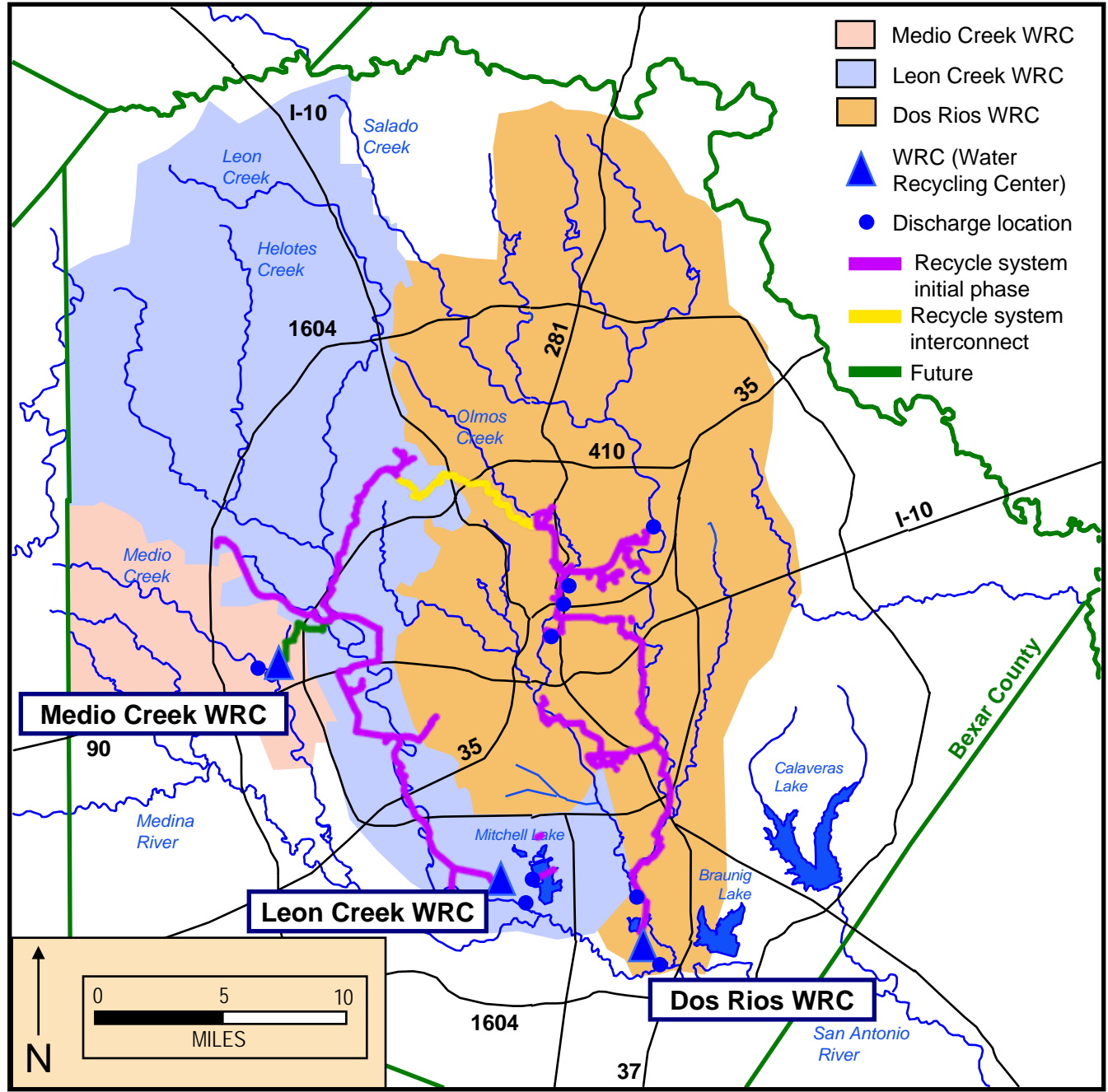


# Historical water diversions by CPSE

1963 - 2009 (through June)



# Recycled Water System



# Recycled water customers



landscaping



River Walk



cooling towers



golf courses



Toyota

Microsoft



industrial processes

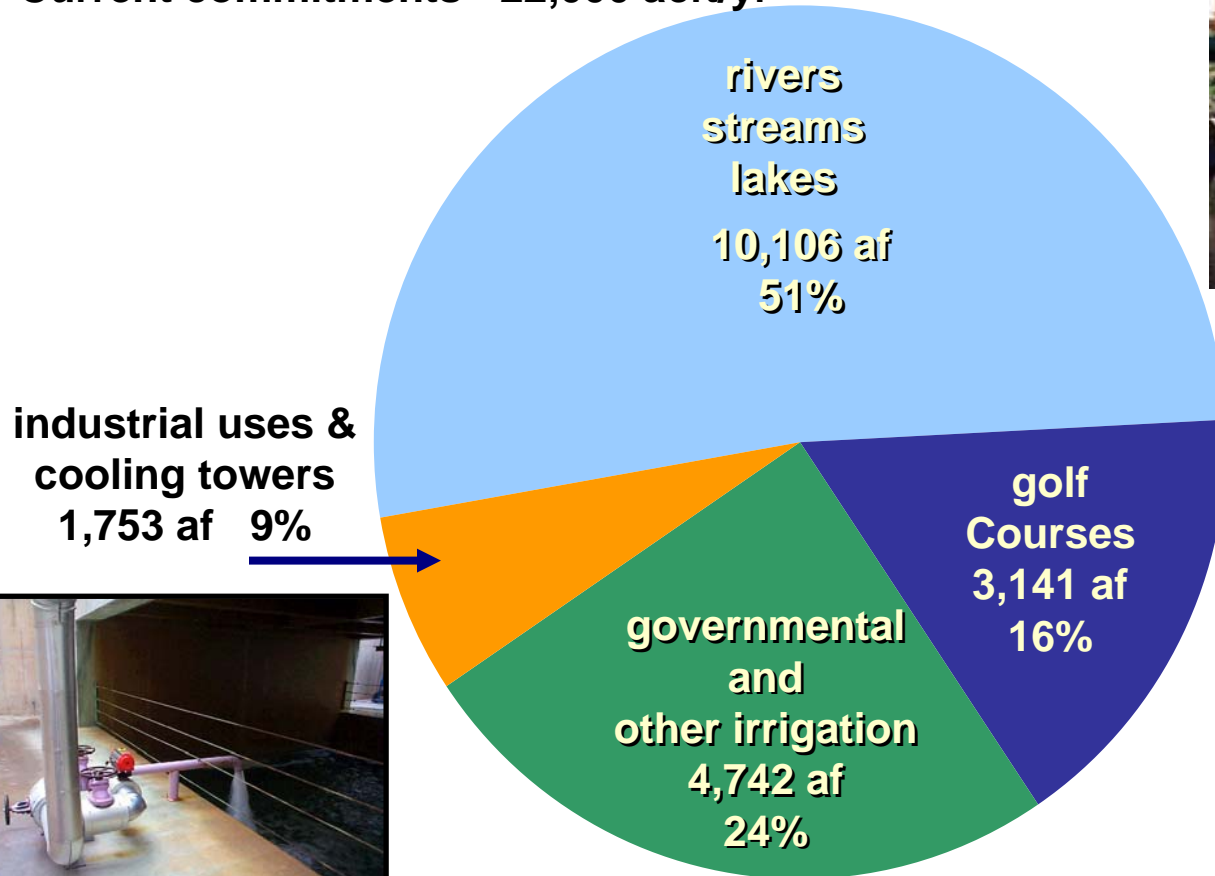


grass farming

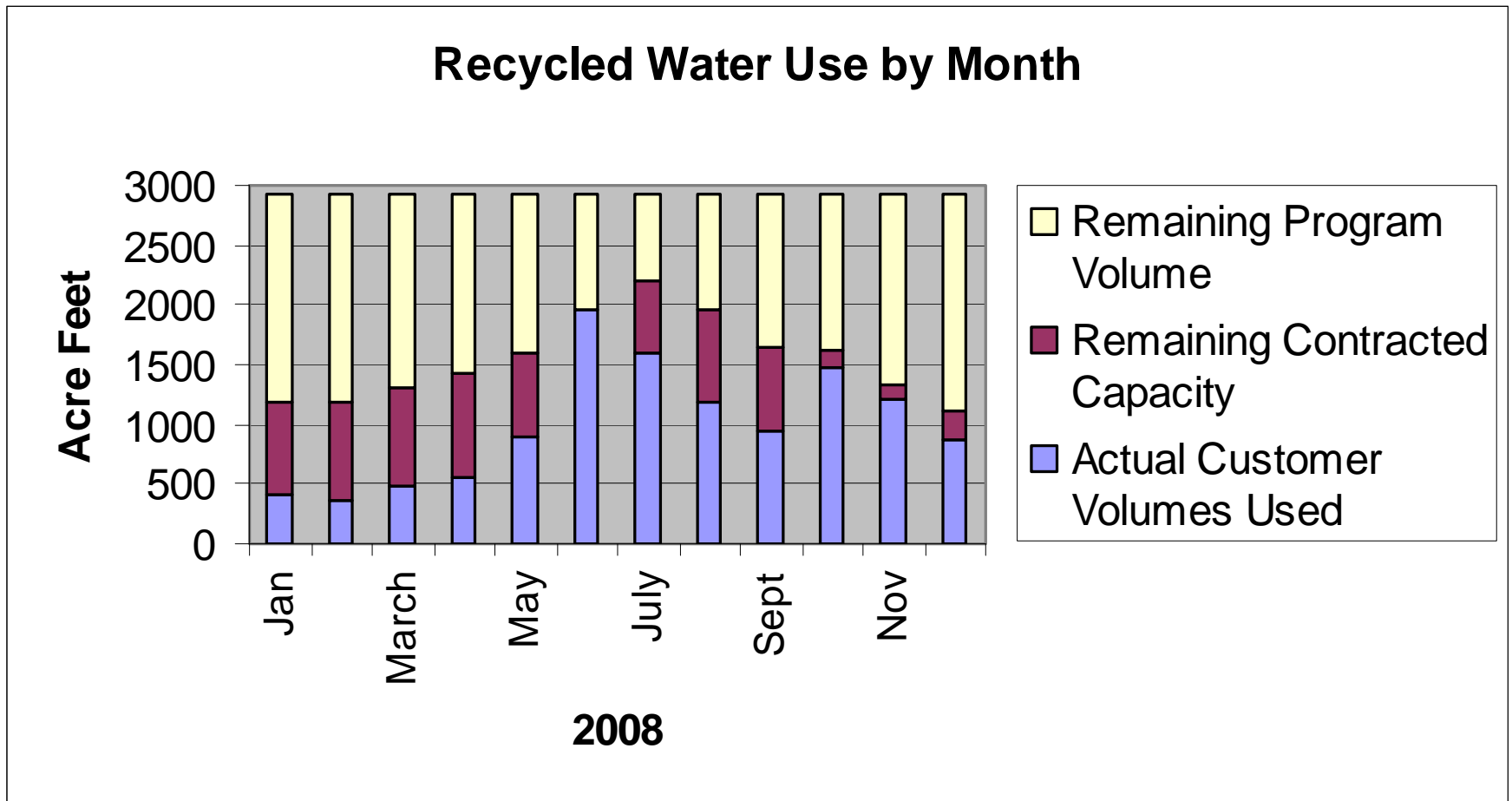
# Existing Recycled Water Customers

Total System capacity - 35,000 acft/yr

Current commitments - 22,000 acft/yr



# Recycled water customers



# Residential Reuse Challenges

- Challenges in retrofitting neighborhoods
- Residential commitment to install appropriate lawn irrigation systems
- Cross connection & control requirements
- Management of a Residential Reuse Inspections program

# Residential v. Commercial Application

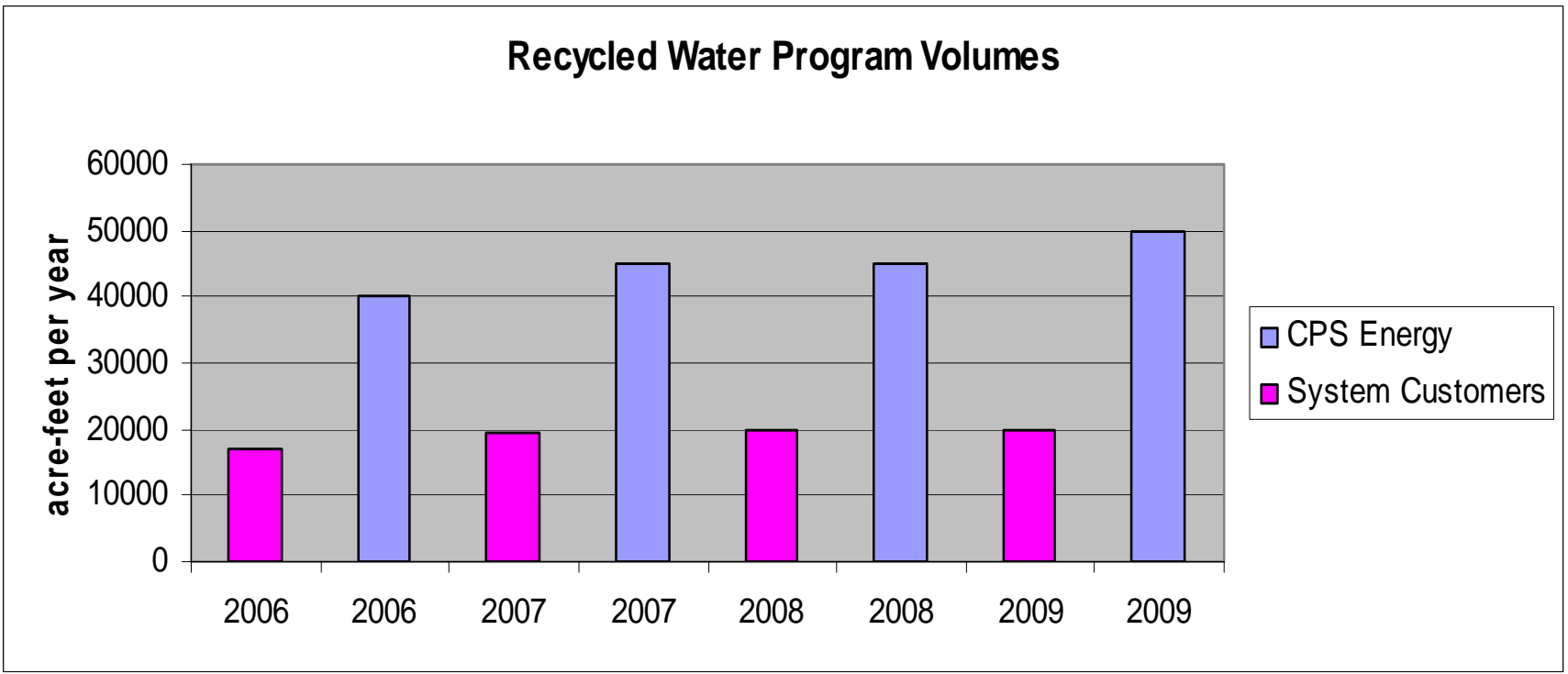
- Plumbing & Inspection Requirements for recycle customers are extensive
- Commercial recycle customers can use up to 40 million gallons per month
- Residential irrigation use smaller quantities compared to commercial recycle customers
- Economies of scale favor large volume users for recycled water applications

# Cross Connection Control Programs

- EPA manual and best practices guide illustrate the importance of Cross Connection Control programs
- Cross-connections can occur at many points throughout a distribution system and a community's plumbing infrastructure
- Cross-connections can be identified by looking for physical inter – connections (or arrangements) between a customer's plumbing and the water system



# Recycled Water Program Growth





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