



# 2009 Proposed Water Management Plan

March 16, 2009

## ASCE San Antonio

Kelley Neumann

Senior Vice President of Engineering and Water Resources

# Managing Our Resources

## Overview

- Supply and Demand
- The Permitted Supply Gap
- Conservation
- The Proposed Water Management Plan
  - Filling the Permitted Supply Gaps

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# Supply and Demand

## Proposal - New Parameters

- **Plan to meet SAWS Service Area Demand**
  - Acknowledge and honor feedback from other communities and purveyors.
  - Recognize the high ongoing cost to SAWS ratepayers to meet peaking demands of regional water purveyors.
  - Continuing to plan with other communities, as requested, on an equitable partnership basis.
- **Plan for Demand using the Drought of Record**
  - Region L uses the Drought of Record
  - State of Texas uses the Drought of Record

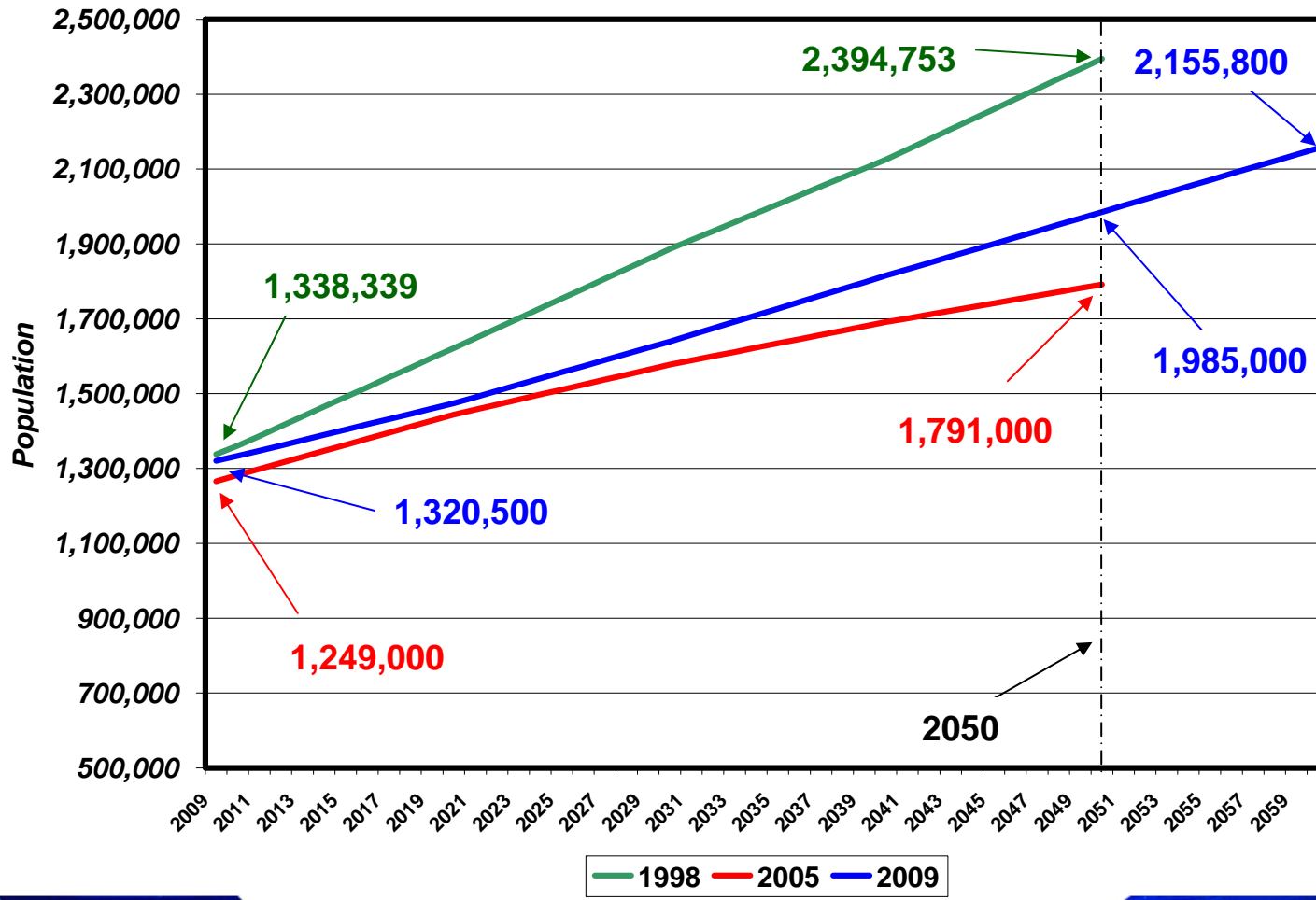
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# Supply and Demand

## Proposal – SAWS Service Area Population



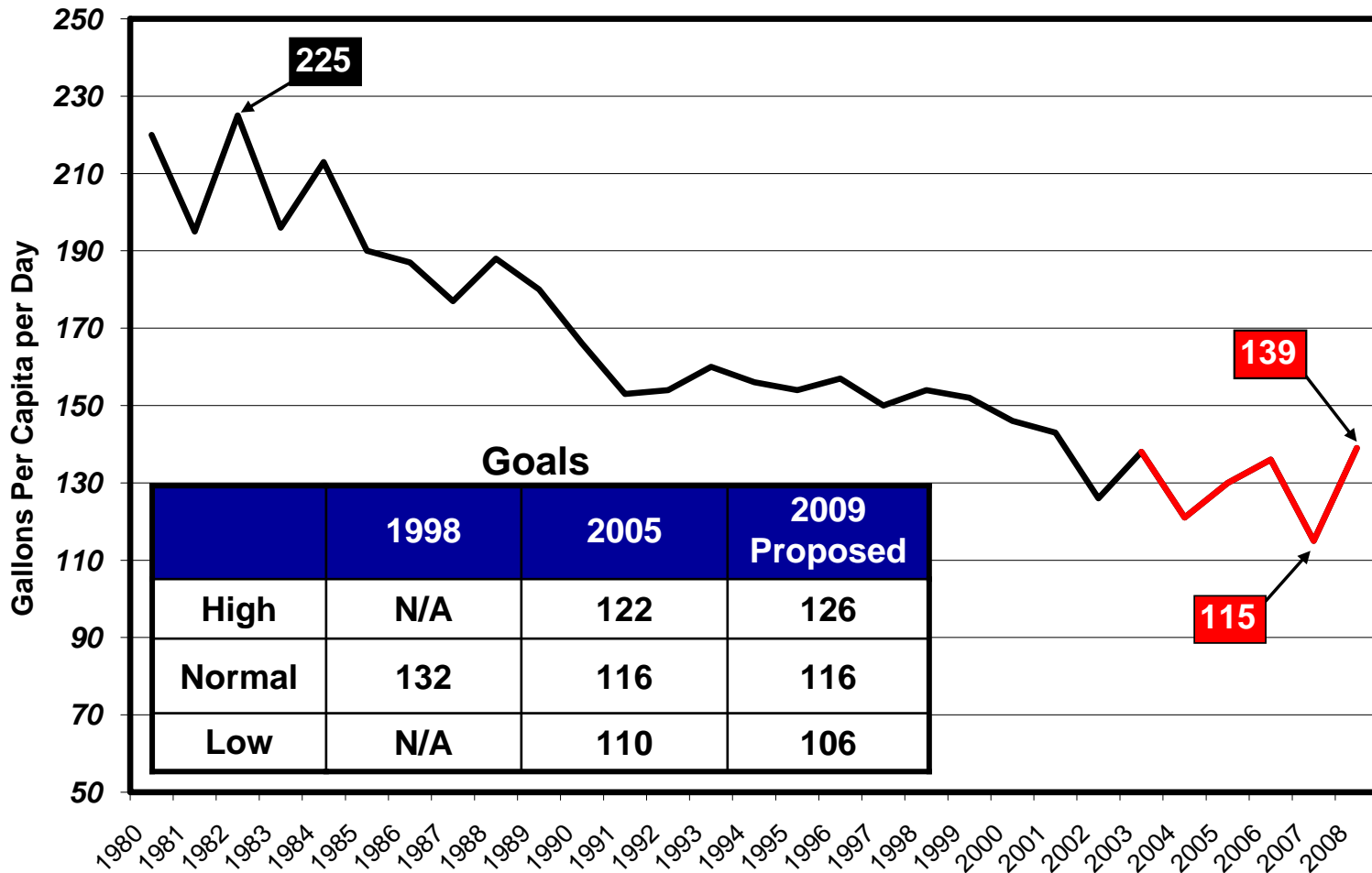
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# Supply and Demand

## Proposal – Demand Goals (GPCD)



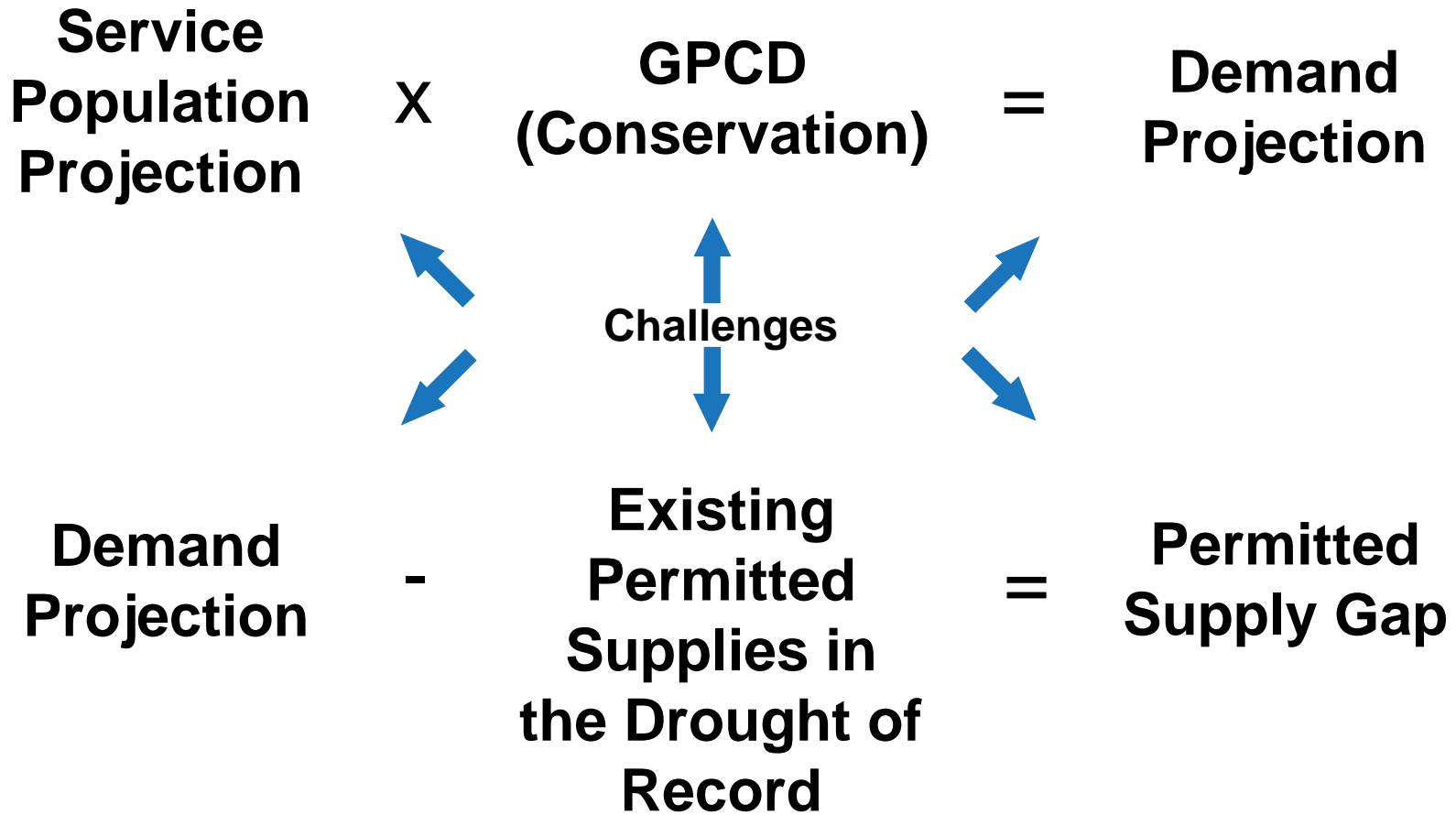
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# Review

## Supply and Demand Formulas

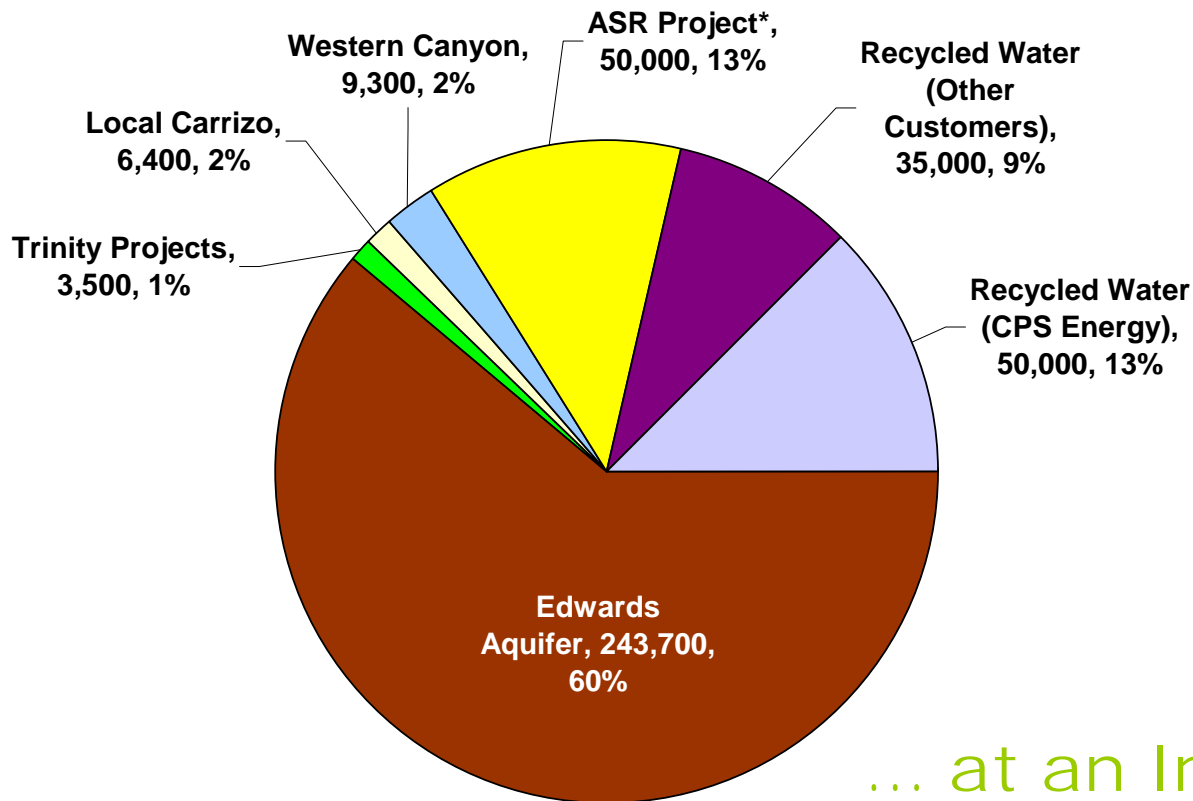


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# Supply and Demand

## Successful Diversification...



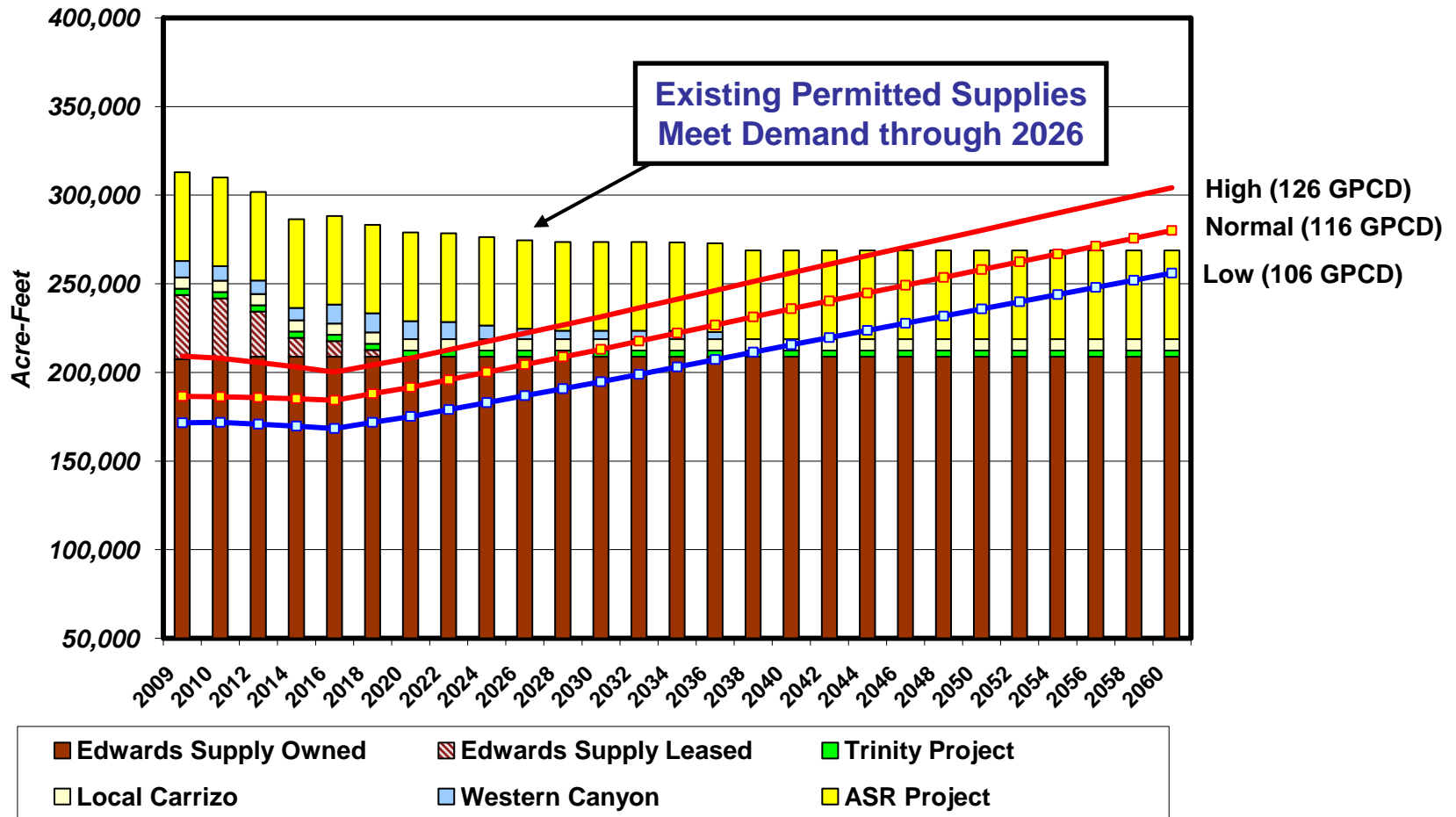
... at an Investment of over \$600 Million

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# Supply and Demand

Assuming Unrestricted Use of Existing Permitted Supplies



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# Existing Supplies

## Impact of the Drought of Record

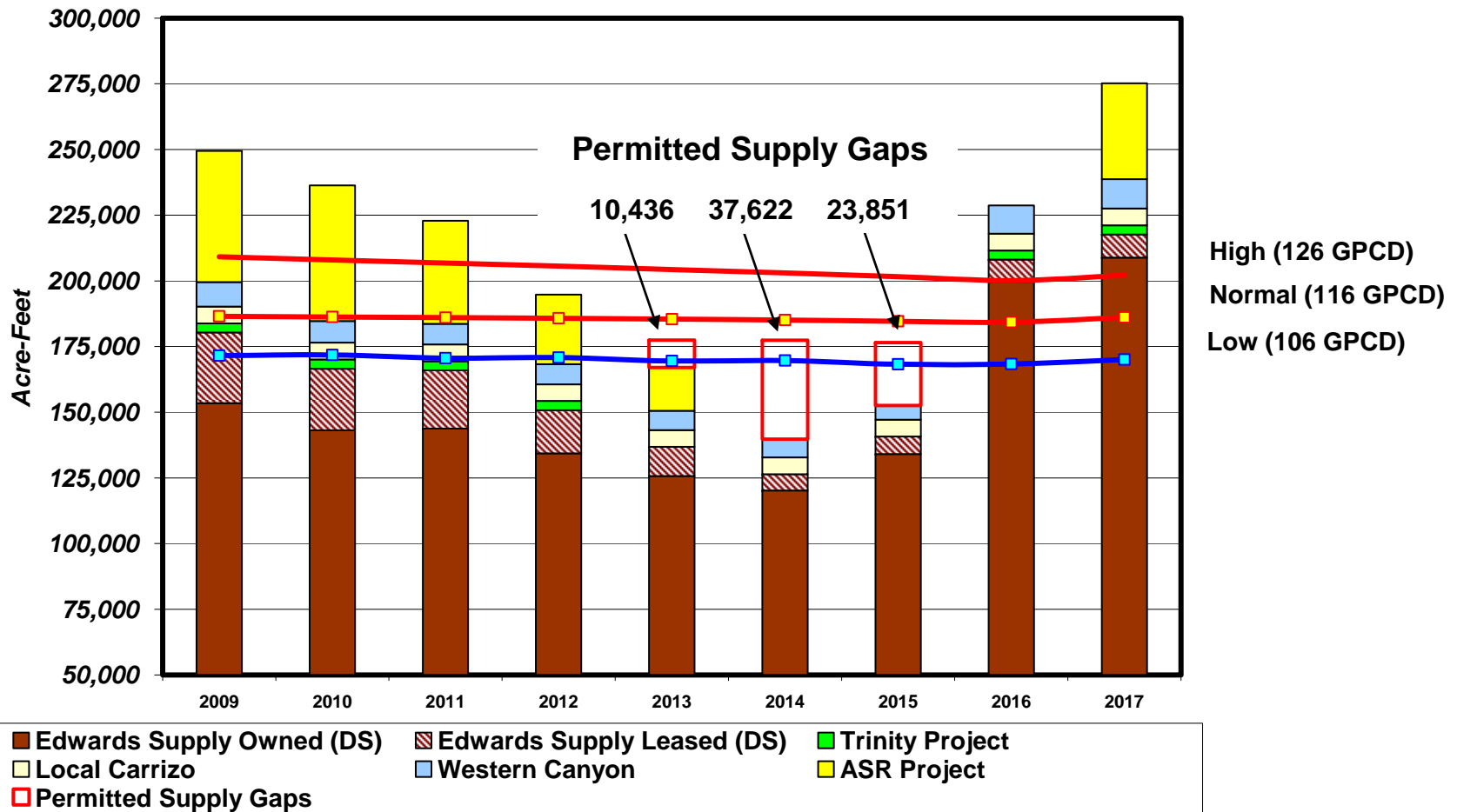
- What happens if
    - SAWS doesn't add supplies,
- AND
- We get no measurable rain until 2014?

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# Existing Permitted Supplies

## Drought of Record Impact Today



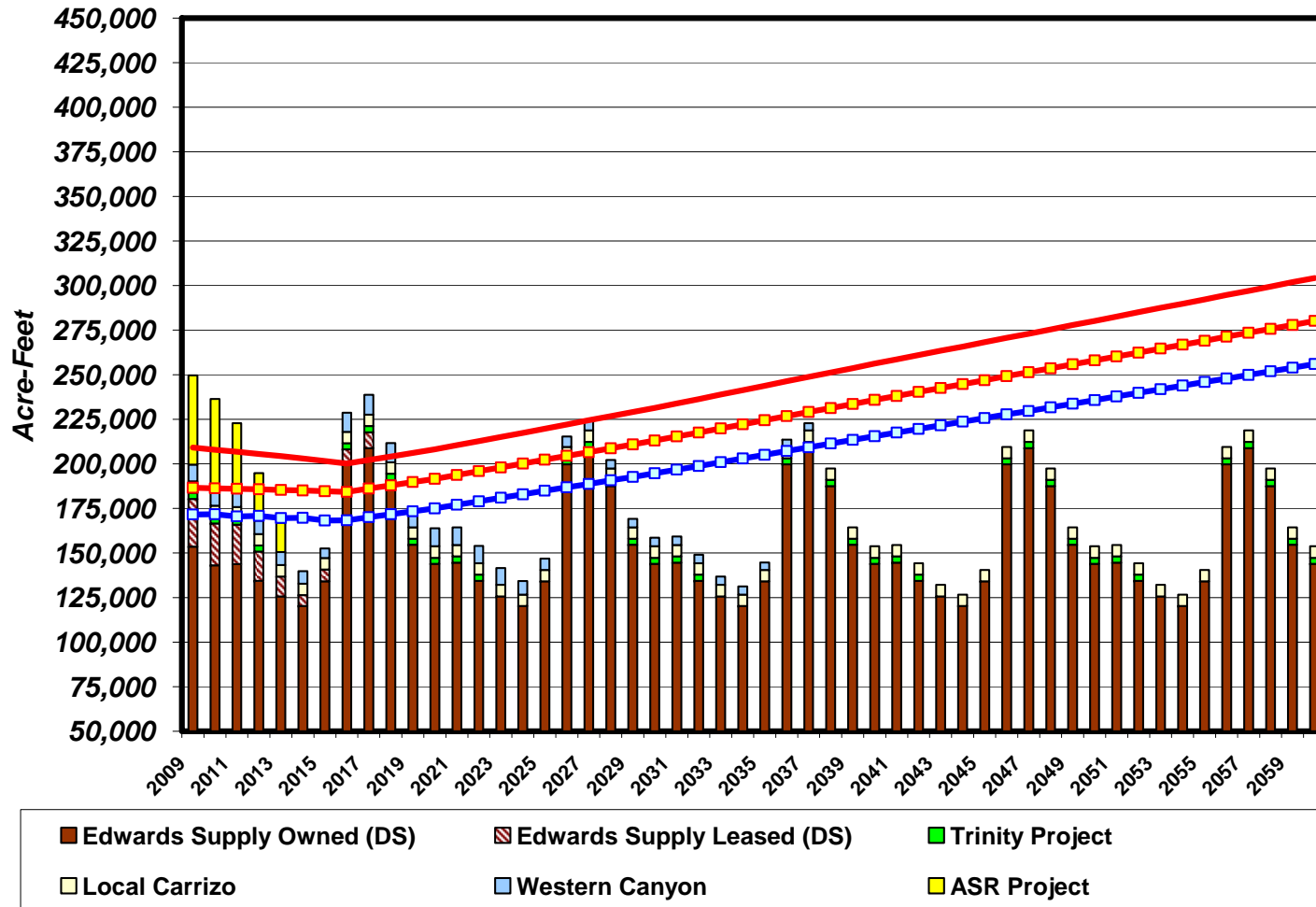
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# Permitted Supply Gap

Assuming *Stage IV Restrictions* in Recurring Drought



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# Permitted Supply Gap

*Assuming Stage IV Restrictions of Existing Permitted Supplies*

- Permitted Supply Gaps at midpoint of Normal and Low demands
  - 2014 : 37,000 acre-feet
  - 2034 : 81,000 acre-feet
  - 2060 : 141,000 acre-feet

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# Filling the Permitted Supply Gap

## Successful Management through Conservation

- Adjusted Drought Triggers
- Increase Resources
- Targeted Education and Awareness
- Review Rate Structure
- Consistent Landscape Irrigation Policy
- Analyze Unbilled Water
- Pursue Regulatory Reform at State and Federal Levels

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# Filling the Permitted Supply Gap\*

## Permitted Supply Gap

**2014**  
**37,000 ac-ft**

## Short Range Program (thru 2014)

**Maintain Current Edwards Permits  
(Lease Quantity = 26,000 ac-ft)**

**Acquire Edwards Permits  
(2,000 ac-ft/yr thru 2014)**

**Brackish Desalination in Bexar County**

**Current Aquifer Storage & Recovery**

**Integration Pipeline**

## Planned Firm Supplies

15,000	37,600
7,000	
11,800	
3,800	

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Leader in  
Recycled Water  
and  
Conservation**

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\*Assuming *the Single Worst Year* of the Drought of Record

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# Filling the Permitted Supply Gap\*

## Permitted Supply Gap

**2034**  
**81,000 ac-ft**

## Mid Range Program (2015-2034)

**Maintain Current Edwards Permits  
(Lease Quantity = 11,000 ac-ft)**

**Recharge Enhancement**

**Regional Carrizo, Acquire Edwards  
permits, or Expanded Brackish Desal**

**Current Aquifer Storage & Recovery**

**Recharge and Recirculation**

## Planned Firm Supplies

6,400

13,451

11,687

16,000

TBD

47,538

+ 33,800 of Firm non-ASR  
Supplies from Short Range  
Program

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and  
Conservation**

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\*Assuming *the Single Worst Year* of the Drought of Record

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# Filling the Permitted Supply Gap\*

## Permitted Supply Gap

**2060**  
**141,000 ac-ft**

## Long Range Program (2035-2060)

**Future Aquifer Storage & Recovery**  
**Other Groundwater Supplies**  
**Ocean Desalination**  
**LCRA**

## Planned Firm Supplies

**75,600**

+ 65,300 of Firm non-ASR  
Supplies from Short and Mid  
Range Programs

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and  
Conservation**

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\*Assuming *the Single Worst Year* of the Drought of Record

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# Filling the Permitted Supply Gap\*

## Permitted Supply Gap

**2014**  
**37,000 ac-ft**

**2034**  
**81,000 ac-ft**

**2060**  
**141,000 ac-ft**

## Short Range Program (thru 2014)

- Maintain Current Edwards Inventory (Lease Quantity = 26,000 ac-ft)
- Acquire Edwards Permits (2,000 ac-ft/yr thru 2014)
- Brackish Desalination in Bexar County
- Current Aquifer Storage & Recovery
- Integration Pipeline

## Mid Range Program (2015-2034)

- Maintain Current Edwards Inventory (Lease Quantity = 11,000 ac-ft)
- Recharge Enhancement
- Regional Carrizo, Acquire Edwards permits, or Expanded Brackish Desal
- Current Aquifer Storage & Recovery
- Recharge and Recirculation

## Long Range Program (2035-2060)

- Future Aquifer Storage & Recovery
- Other Groundwater Supplies
- Ocean Desalination
- LCRA

## Planned Firm Supplies

15,000  
7,000  
11,800  
3,800  
**37,600**

6,400  
13,451  
11,687  
16,000  
TBD  
**47,538**

**75,600**

**National Leader in Recycled Water and Conservation**

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\*Assuming *the Single Worst Year* of the Drought of Record

# Filling the Permitted Supply Gap

## Summary of Changes

- Planning for the Drought of Record and the SAWS Service Area
- Brackish Desalination
  - Initially in Bexar County, expandable to other counties
  - Soliciting the assistance of the State to help change the Regulatory Environment
- Regional Carrizo
  - Focus on Western Gonzales permit application
- Aquifer Storage and Recovery (ASR)
  - Additional supplies
  - Study optimal and maximum storage, and additional sites
- Study Recharge and Recirculation
- Study Ocean Desalination
- Issue RFP for Groundwater Supplies in Texas
- Enhanced Conservation

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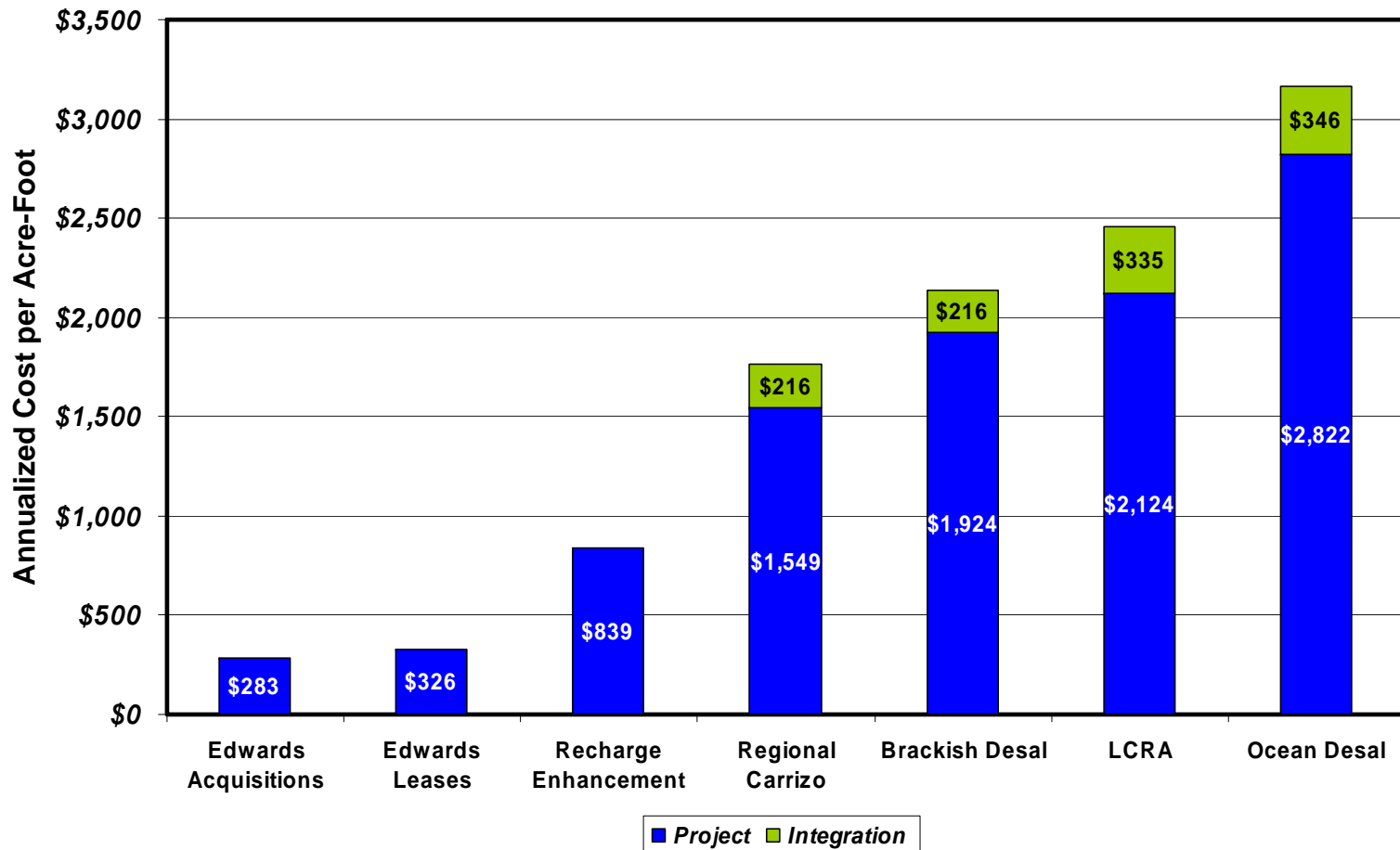
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# Project Costs

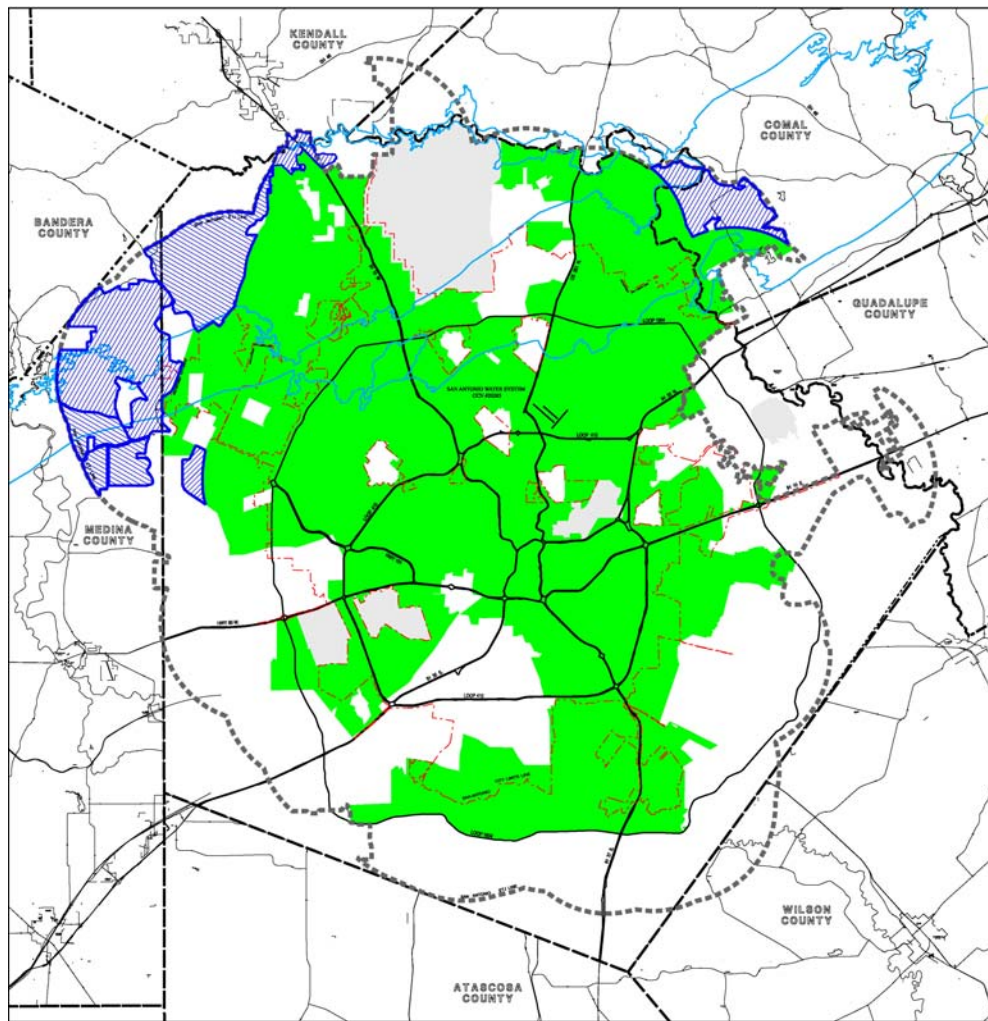
## Annualized



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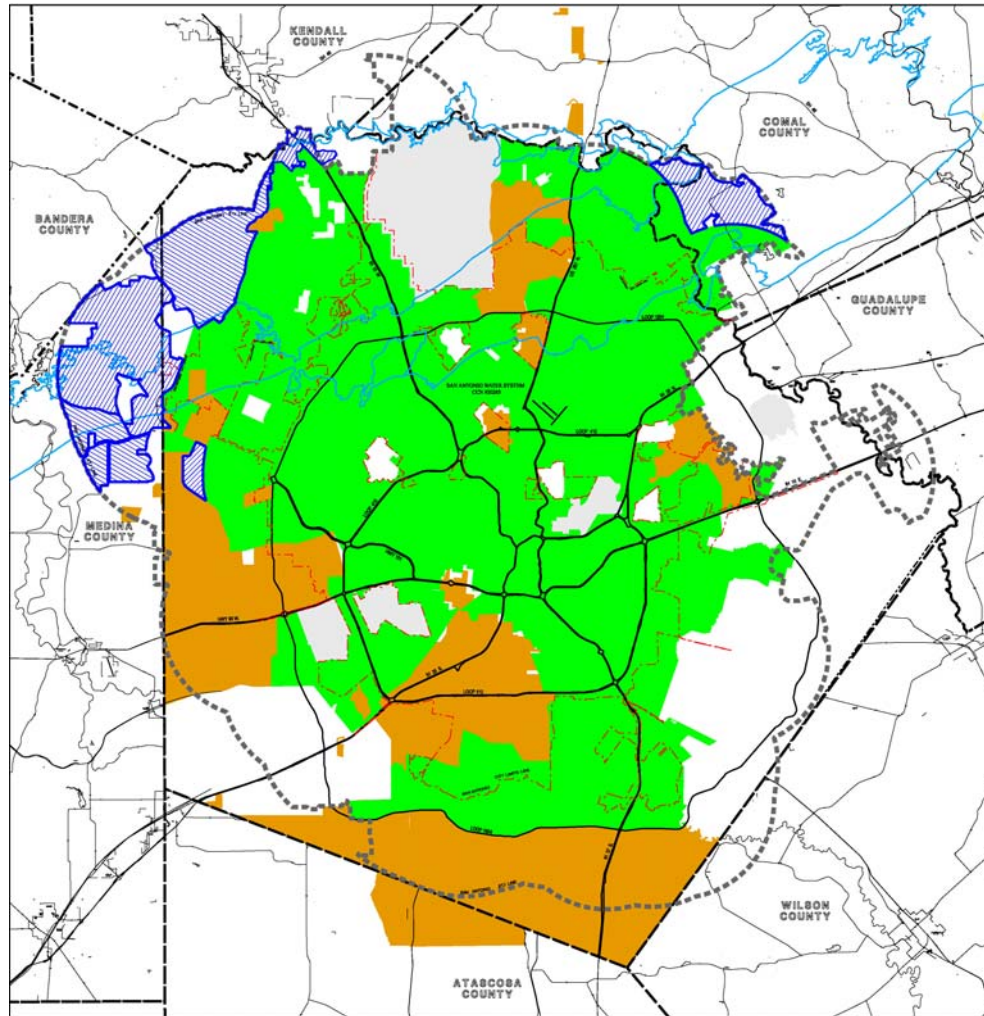
# SAWS Service Area



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# SAWS & BexarMet Service Areas

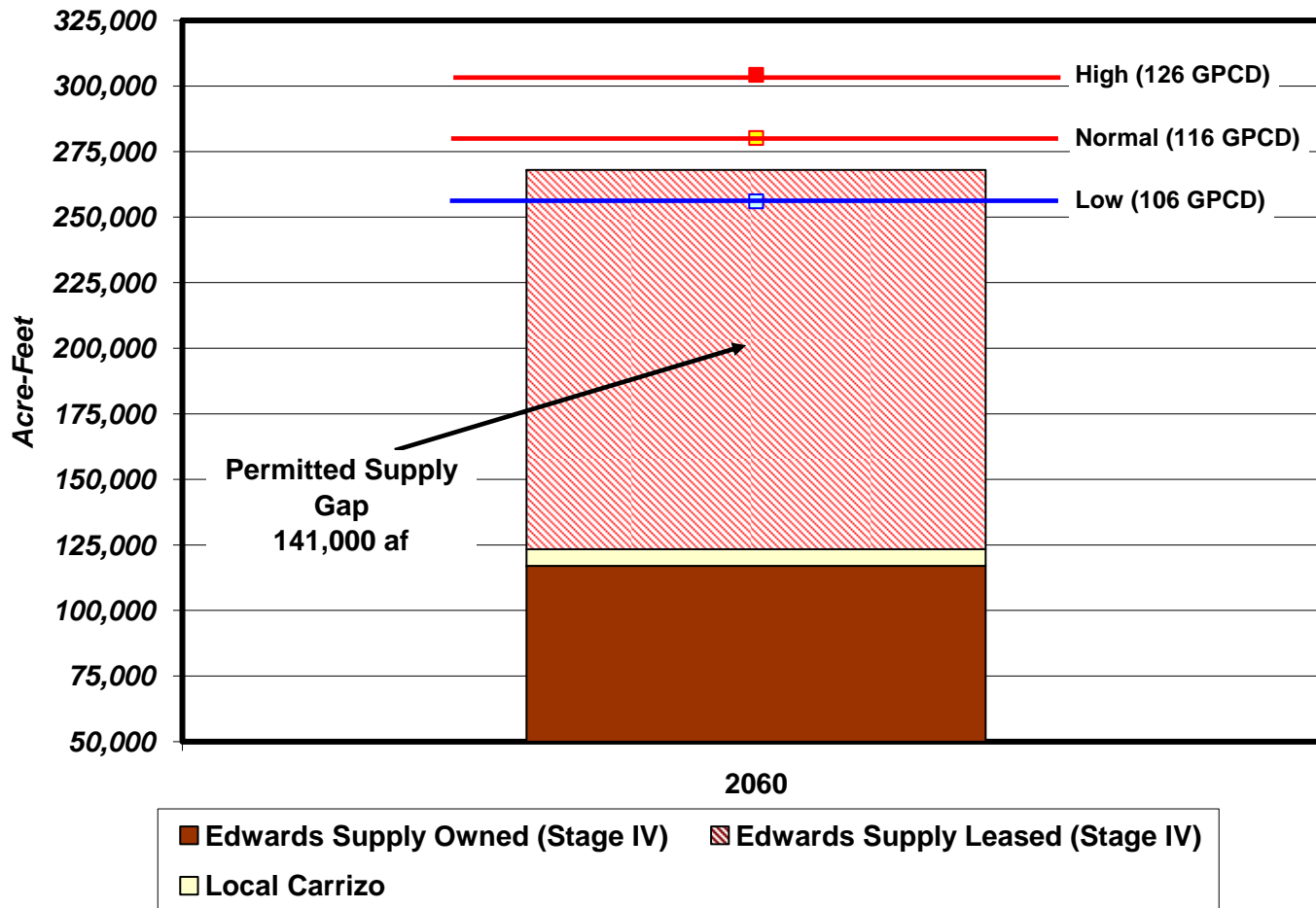


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# Existing Permitted Supplies

## Long-term Impact (2060) of the Drought of Record

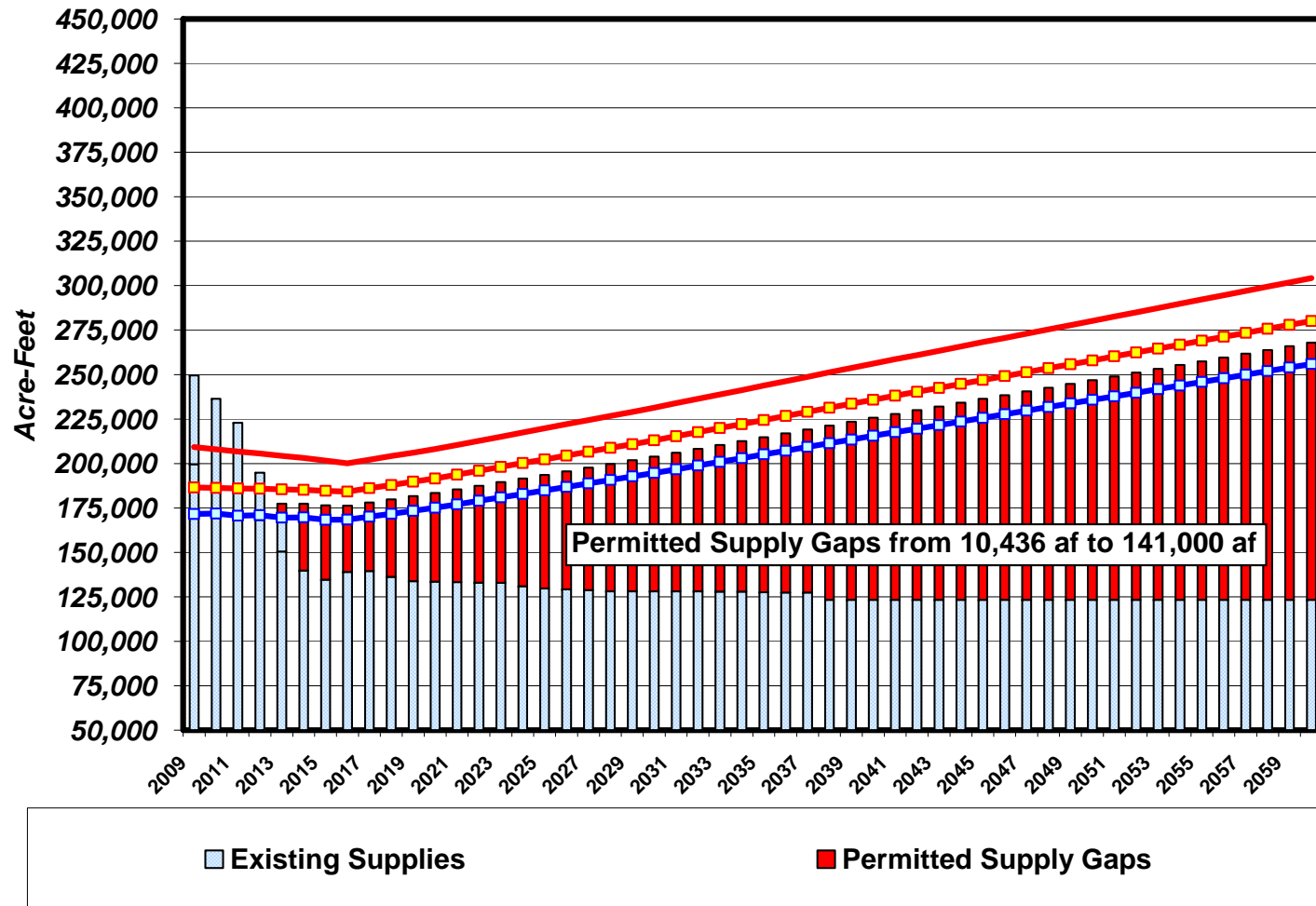


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# Permitted Supply Gap

Assuming *Stage IV Restrictions* of Existing Permitted Supplies



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