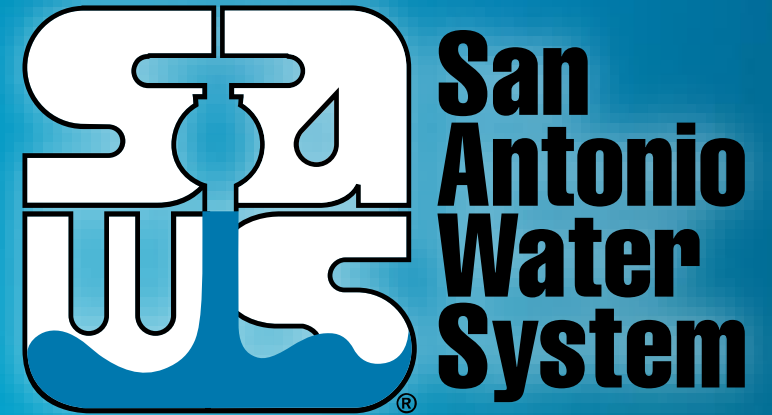


2017 Water Management Plan

Darren Thompson
Director / Water Resources

Capital Improvements Advisory Committee
February 21, 2018



MAKING SAN ANTONIO
WATERFUL 

Planning for our Future, Benefitting Today

S.A. tackling how to plan for a million more people
Express-News

Texas economy faces rough waves if water shortages ignored

AUSTIN BUSINESS JOURNAL

The Economic Impact of Potential Water Shortages on San Antonio's Economy



San Antonio Chamber of Commerce

The link between long-term water needs and San Antonio's economic future

TEXAS PUBLIC RADIO

Water Management Plan Overview

- Updated on 5-year intervals
- Drought of Record Planning
 - Duration of 1950s drought
 - Intensity of 2011-2014 drought
- Planning variables
 - Population & Demand projections
 - Firm supply yield in drought
 - Timing of Supplies



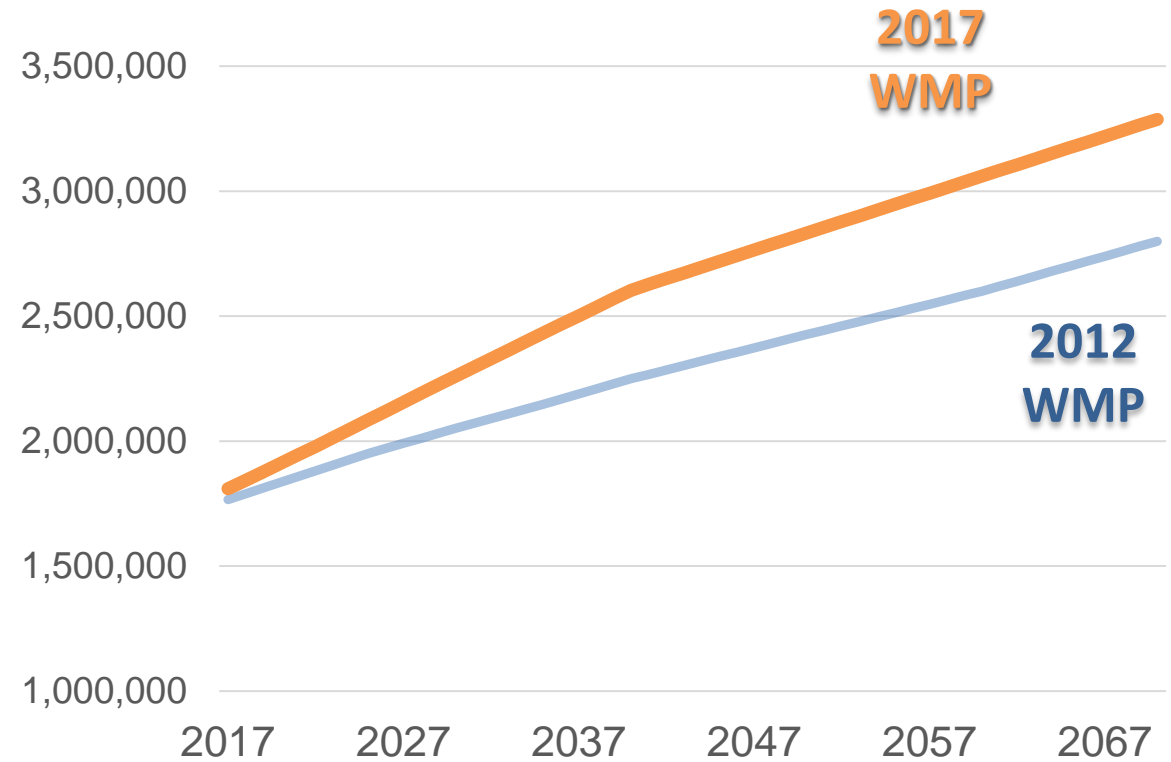
Projecting Population

New Neighbors

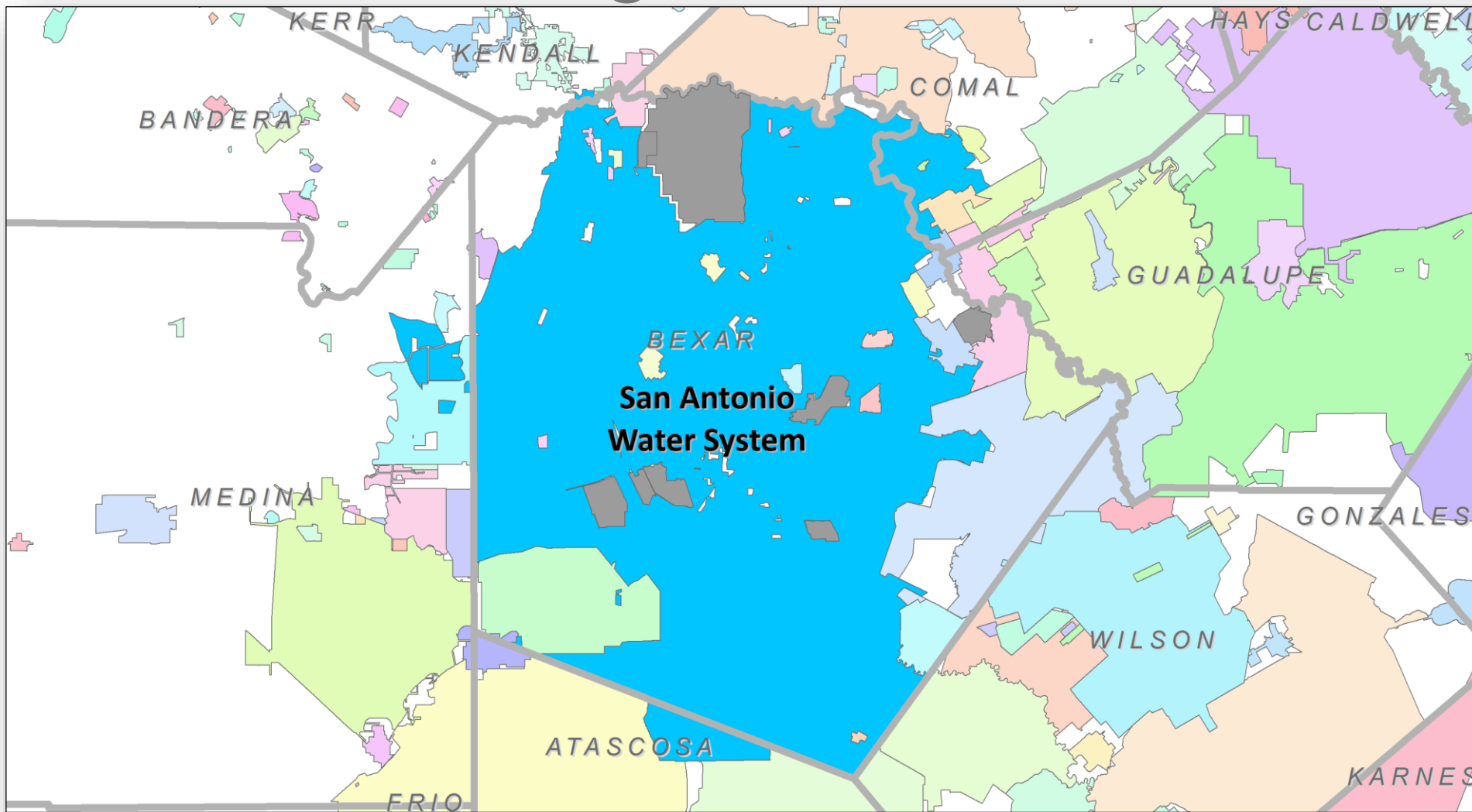
- Fastest growing city in Texas, third fastest in the nation



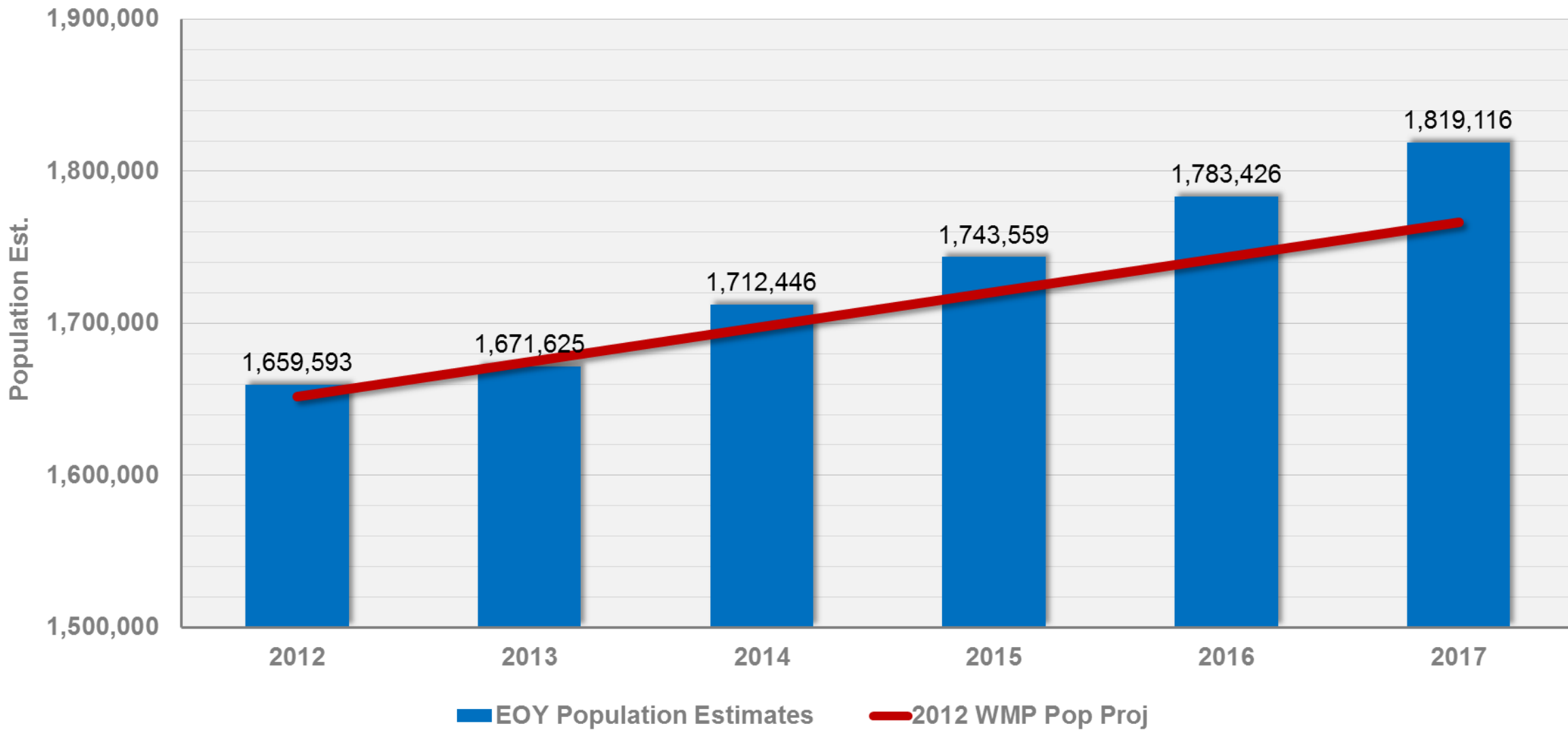
- 800,000 more people by 2040
- 80% increase in projected population by 2070



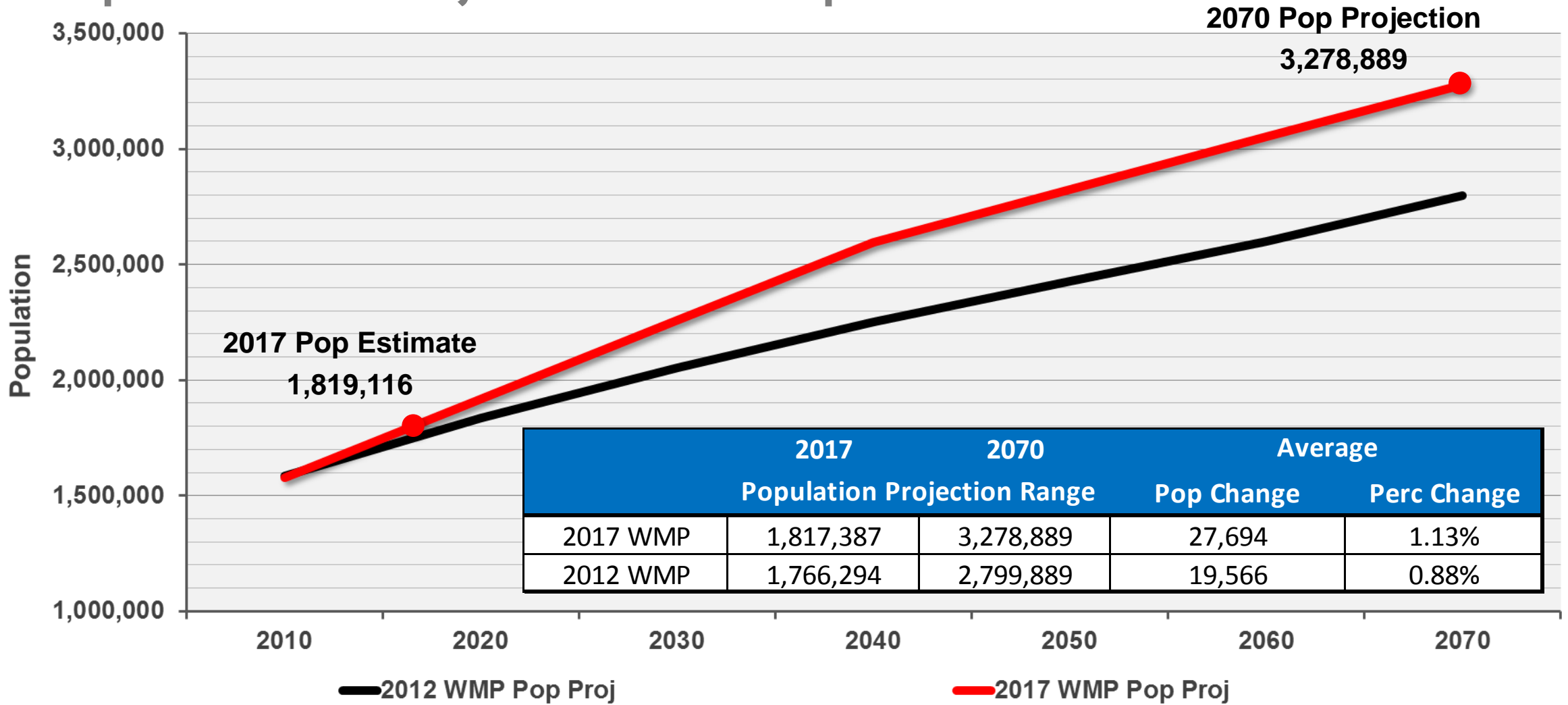
SAWS and Surrounding CCNs



Population Comparison



Population Projection Comparison



Water Management Plan Guiding Principles



Conservation

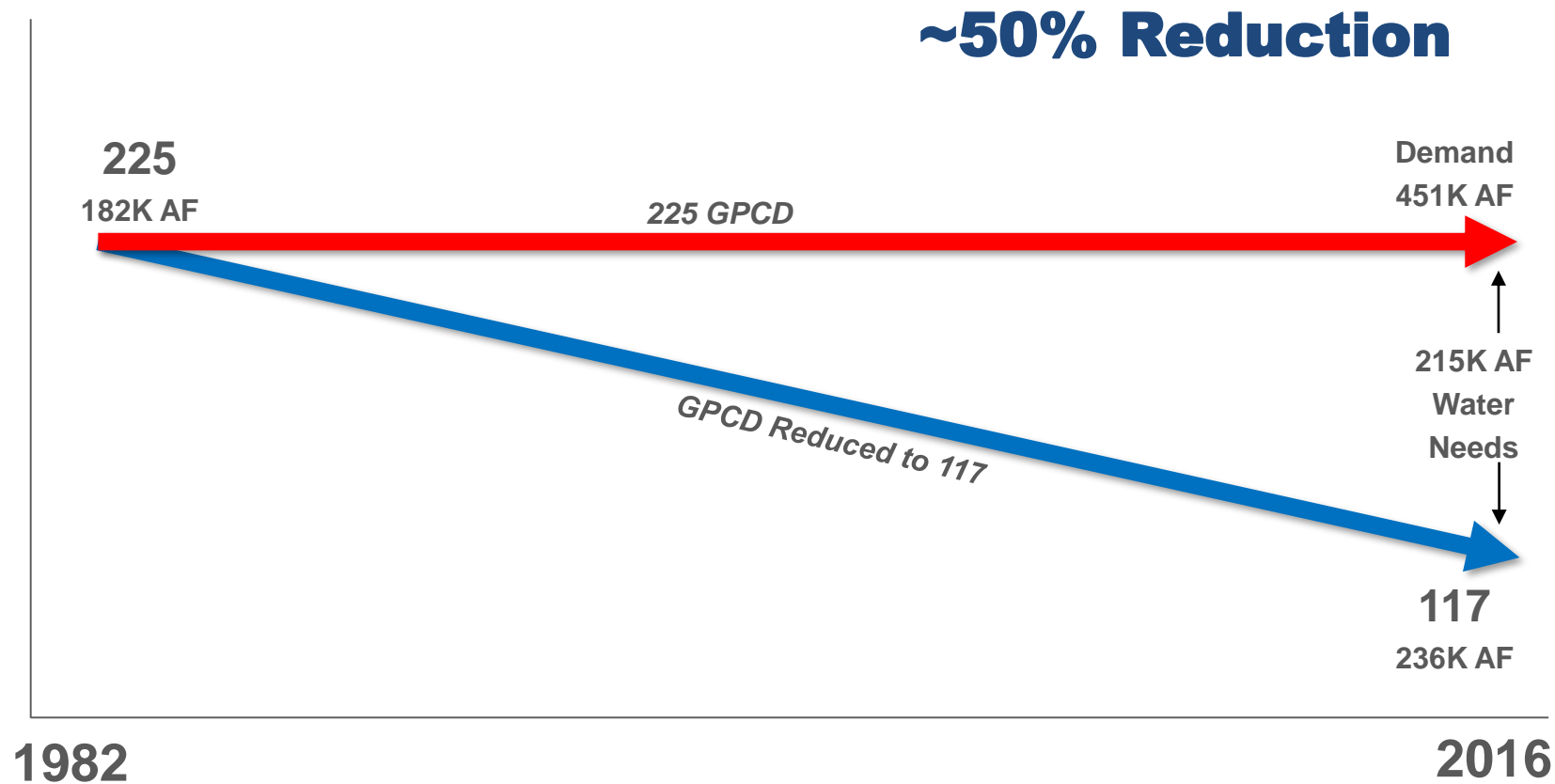
Technology

Diversified Water Sources

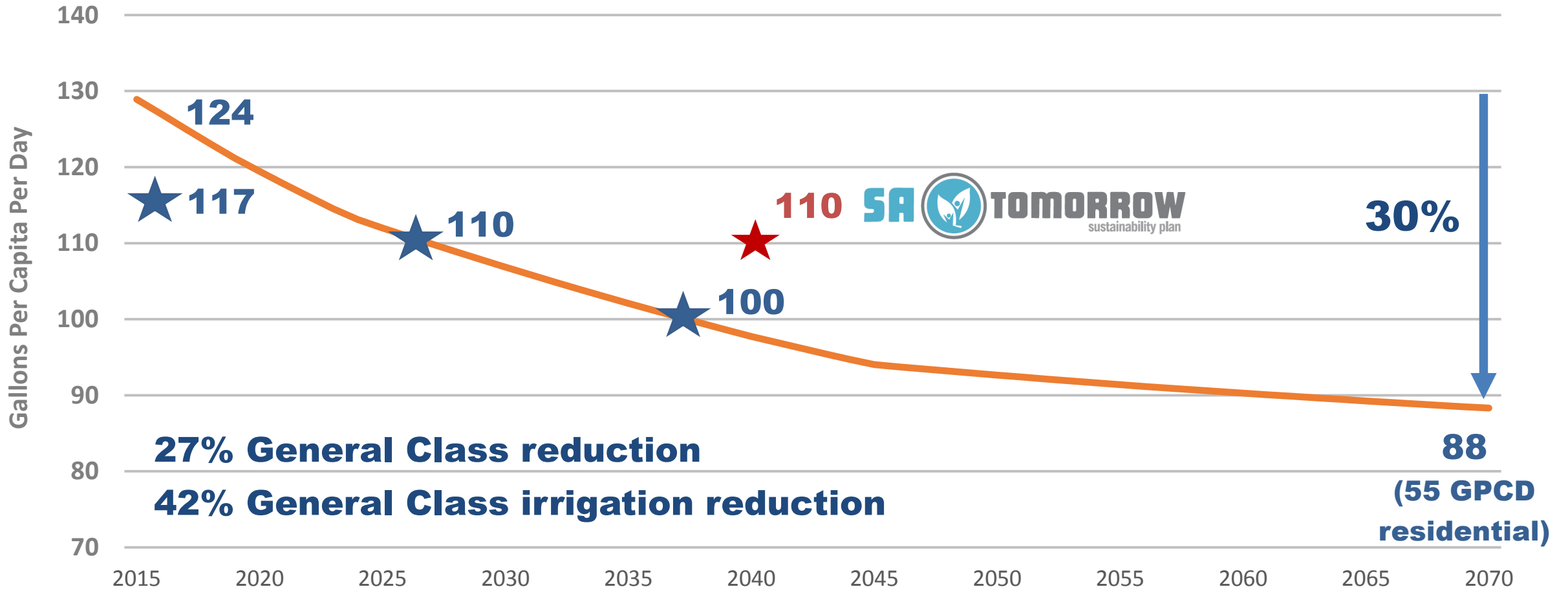
Regional Partnerships

Early Nationwide Leader in Water Conservation

Conservation as a Business Model



Progressive Conservation Goals to Continue



Utilizing Technology

Progress through Modern Tools

- Automated Metering
- Smart Phone Apps
- Personalized Customer Reports
- Infrastructure Assessment
- Data Analysis



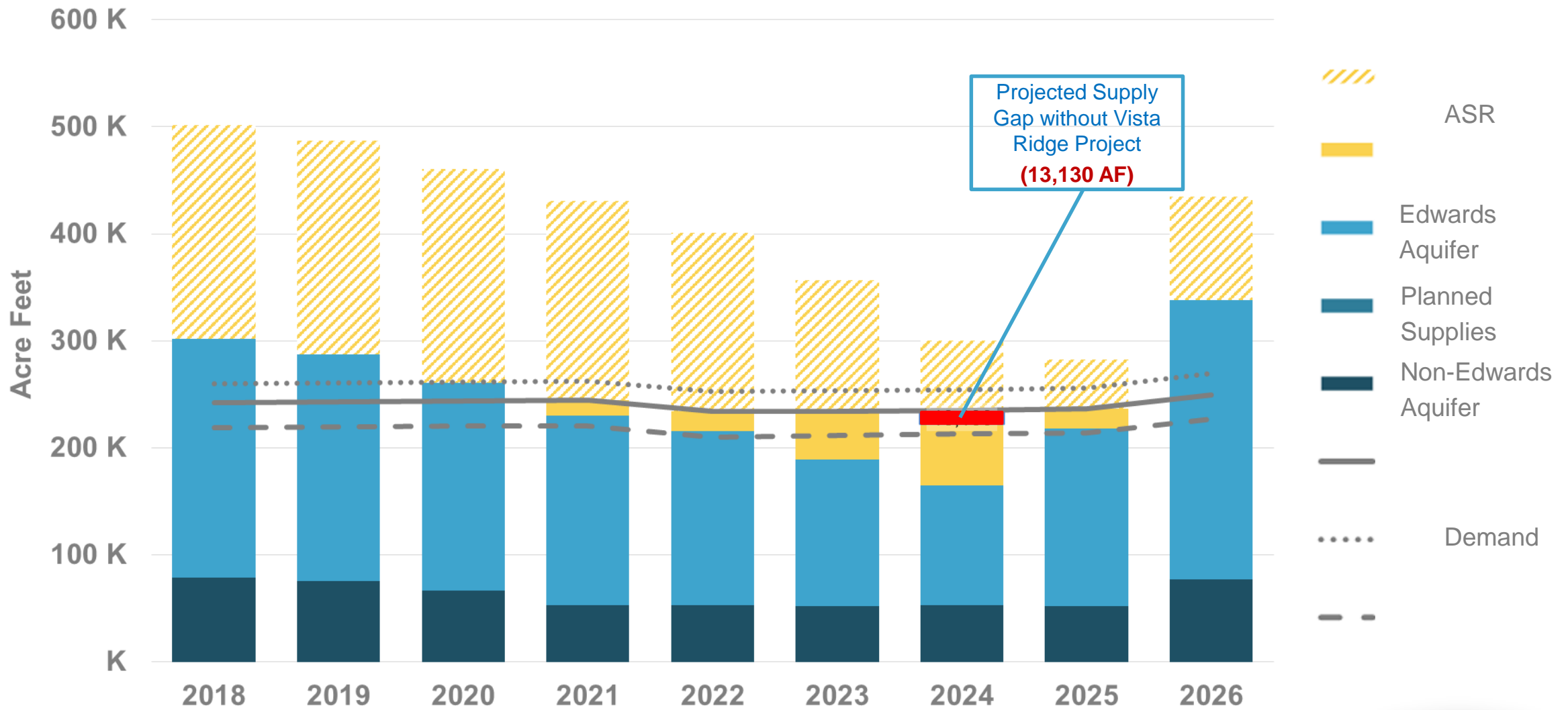
Supply Diversification

Optimizing Local and Regional Sources

- 15 water supply projects from 8 water sources
 - Largest groundwater-based ASR in the nation
 - Newest inland desalination plant in the nation

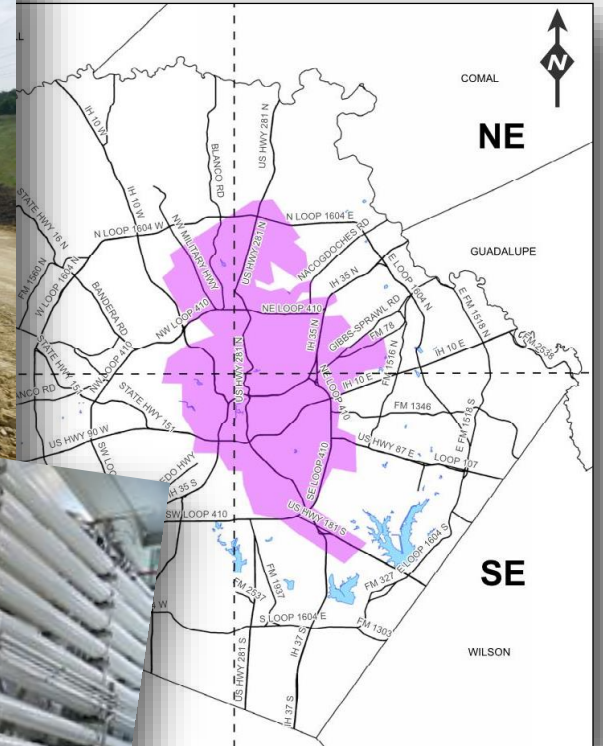


Securing San Antonio's Water Future



Increasing Supply Diversification

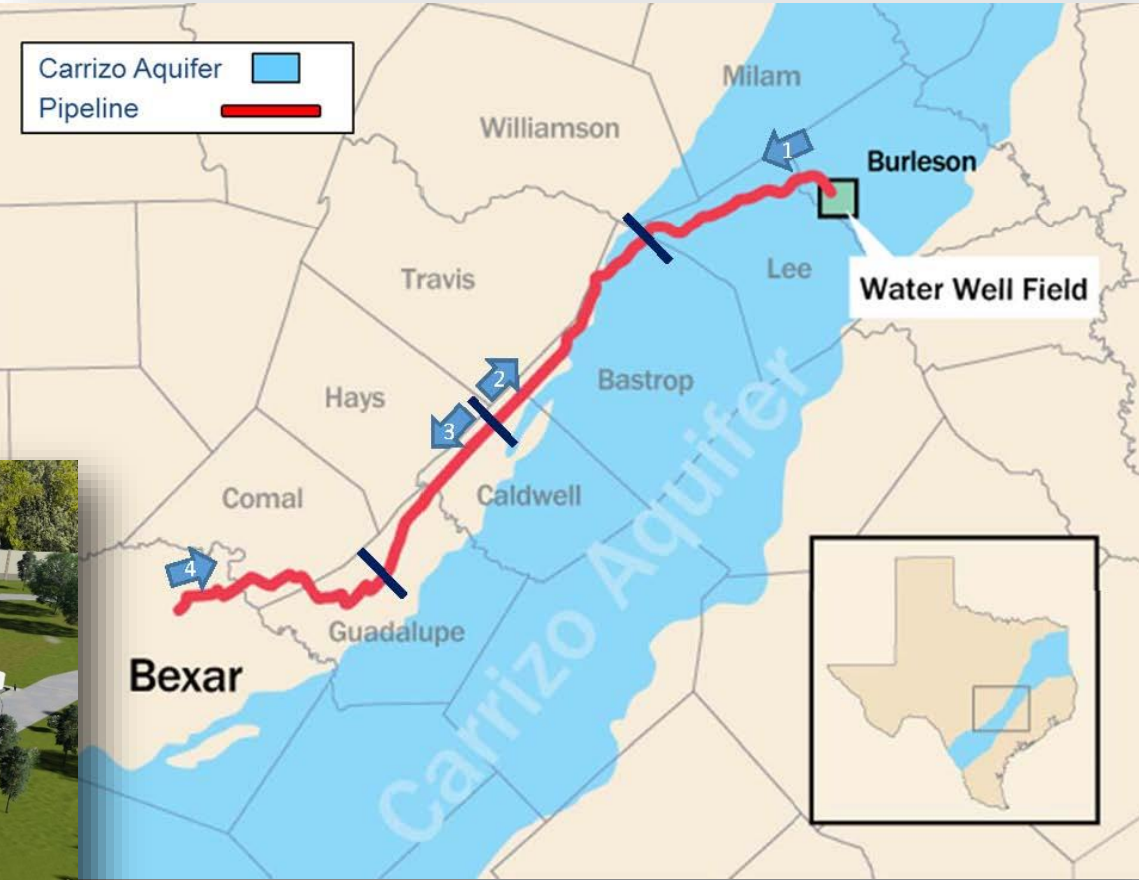
- Near Term
 - Vista Ridge by 2020
- Long Term
 - Expansion of Local Carrizo
 - Additional phases of brackish groundwater desalination



Increasing Supply Diversification

Vista Ridge Project

- 18 Wells
- 140 miles
- 3 pump stations

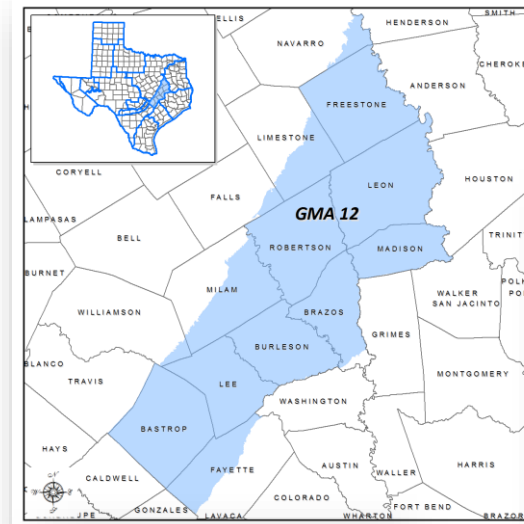


Construction Underway



Leveraging Regional Partnerships

- Plan for local management of groundwater sources
- Commitment to Edwards Aquifer Habitat Conservation Plan
- Protecting instream flows through Bed and Banks Project
- Wholesale water opportunities



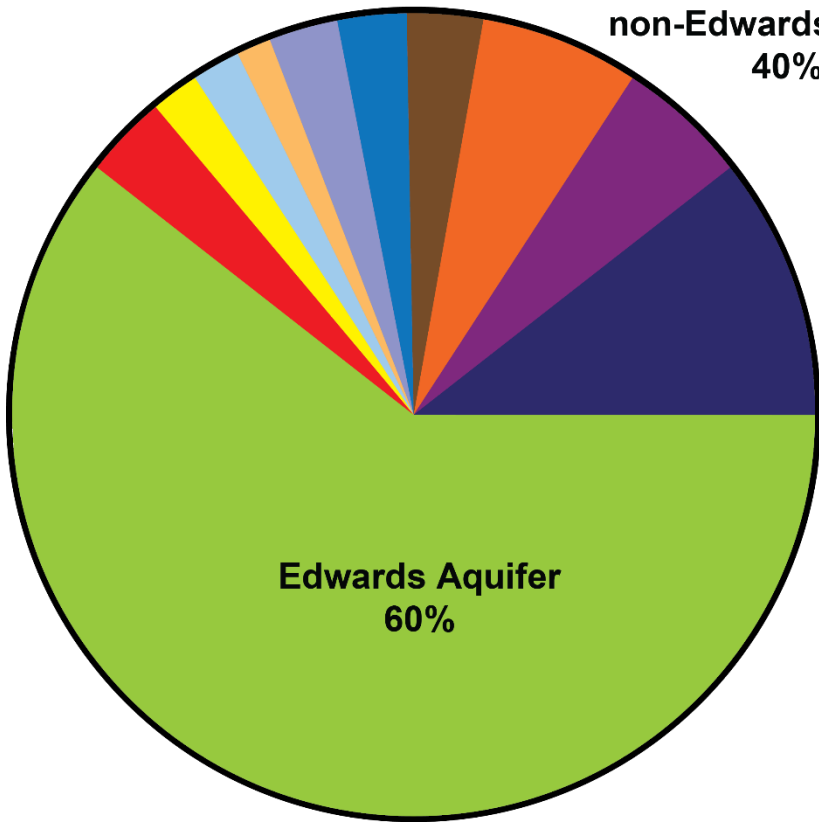
Addressing Extreme Climatic Conditions

WMP Shows San Antonio is Well-Positioned

- Rising temperatures and flashy rainfall
- Resiliency via diversification
- ASR, groundwater sources, conservation

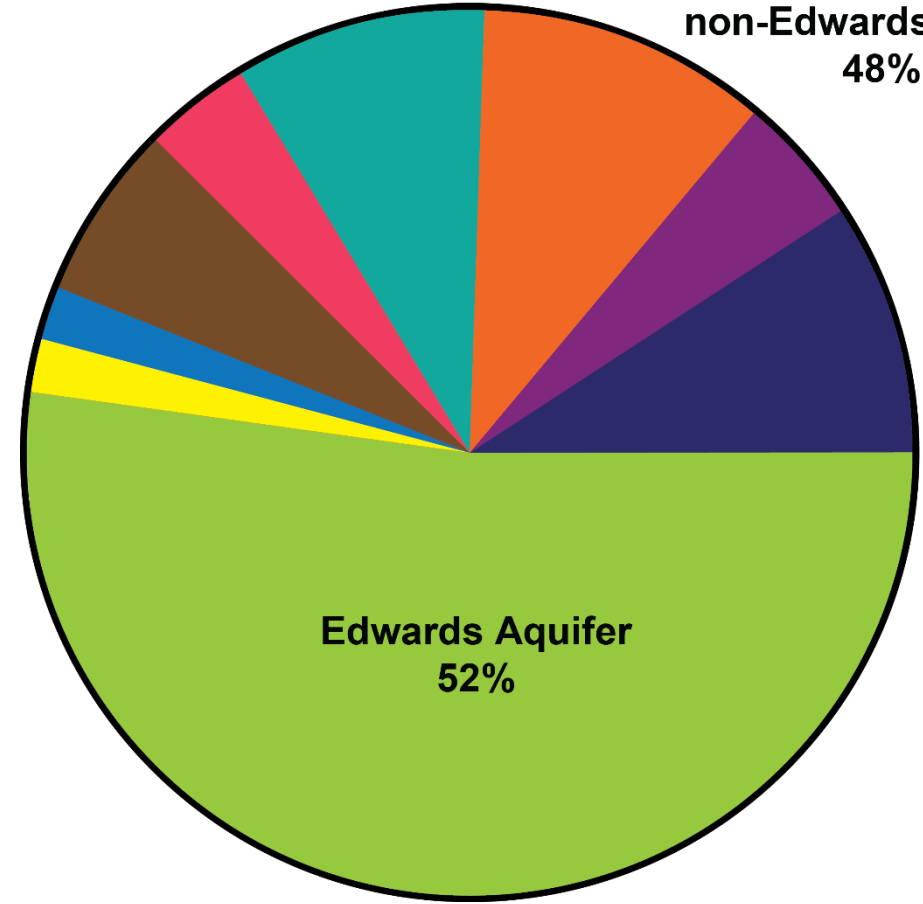


Supply Portfolio Diversification (average year)



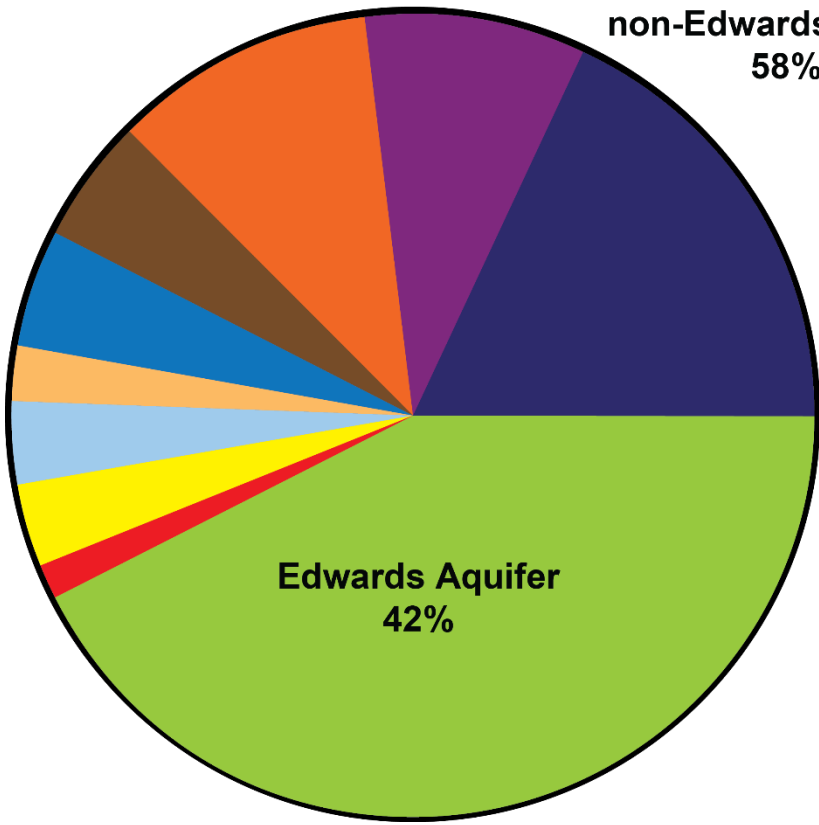
470,000 AF

2017 → 2070

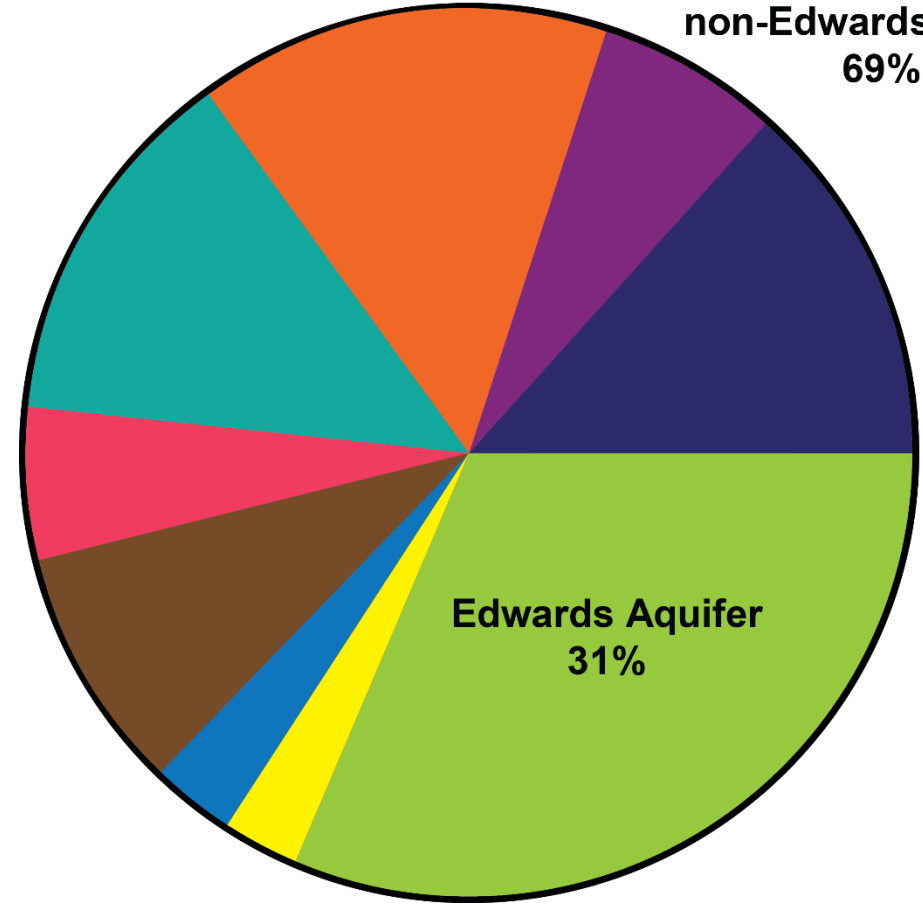


540,000 AF

Supply Portfolio Diversification (drought year)



- Recycled Water (CPSE)
- Recycled Water (Direct)
- ASR Recovery
- Expanded Carrizo
- Vista Ridge
- Brackish Desal
- Regional Carrizo
- Medina System
- Canyon Regional
- Canyon Lake
- Local Carrizo
- Trinity Aquifer
- Edwards Aquifer



280,000 AF

2017 → **2070**

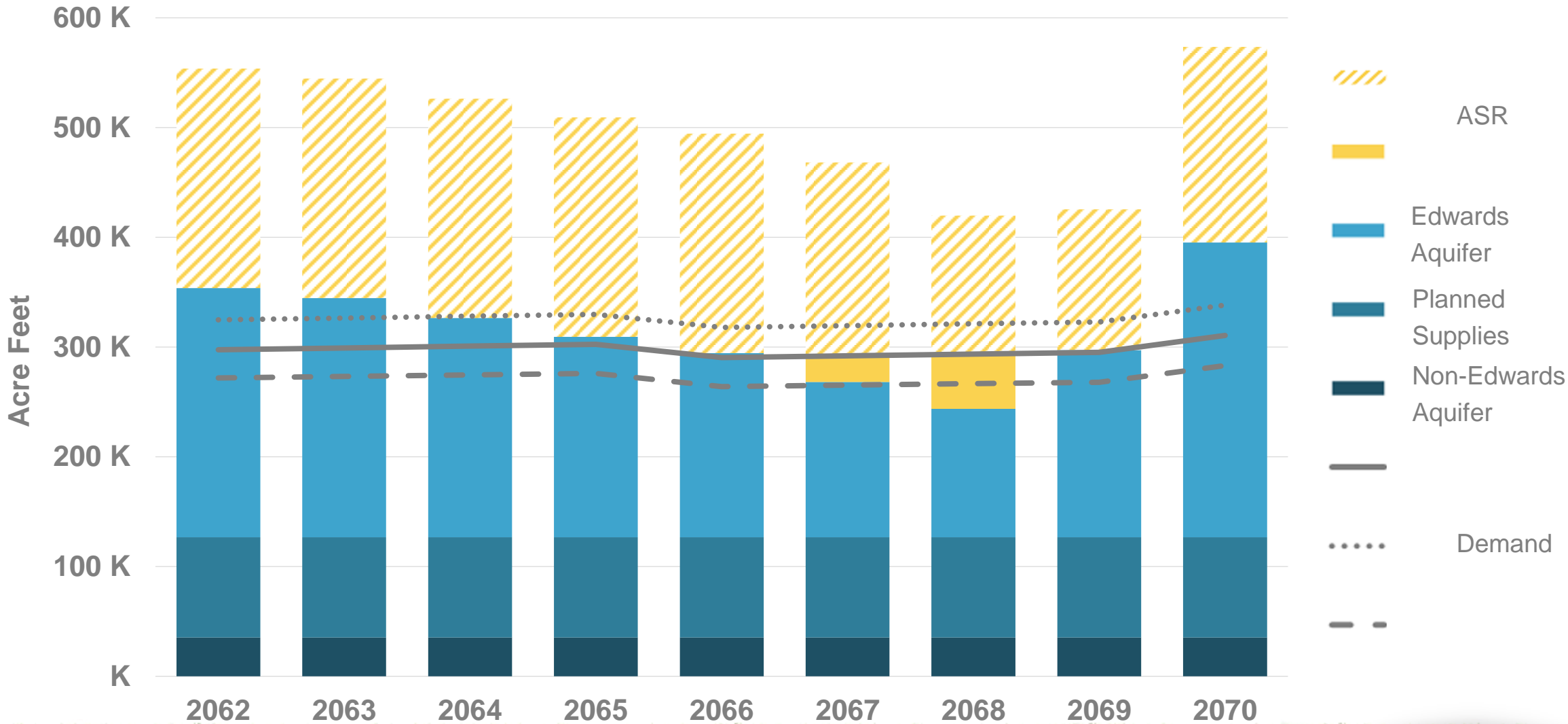
376,000 AF

Summary of 2017 Water Management Plan

Progressive Conservation and Continued Diversification

Planning Source/Variable	Yield/Goal
Vista Ridge	50,000 acre-feet per year (AFY) in 2020
Brackish Groundwater Desalination	Additional 20,000 AFY by 2050s
Expanded Carrizo	Additional 21,000 AFY by 2050s
Progressive Conservation	88 GPCD by 2070 (55 GPCD residential)
Nonrevenue Water	14% by total volume
Population Projections	800,000 additional 2017-2040, 1.5 million additional 2017-2070 (80% increase)
Total Demand Projections	253,000 AFY in 2017, 324,000 AFY in 2070 (only 25% increase)

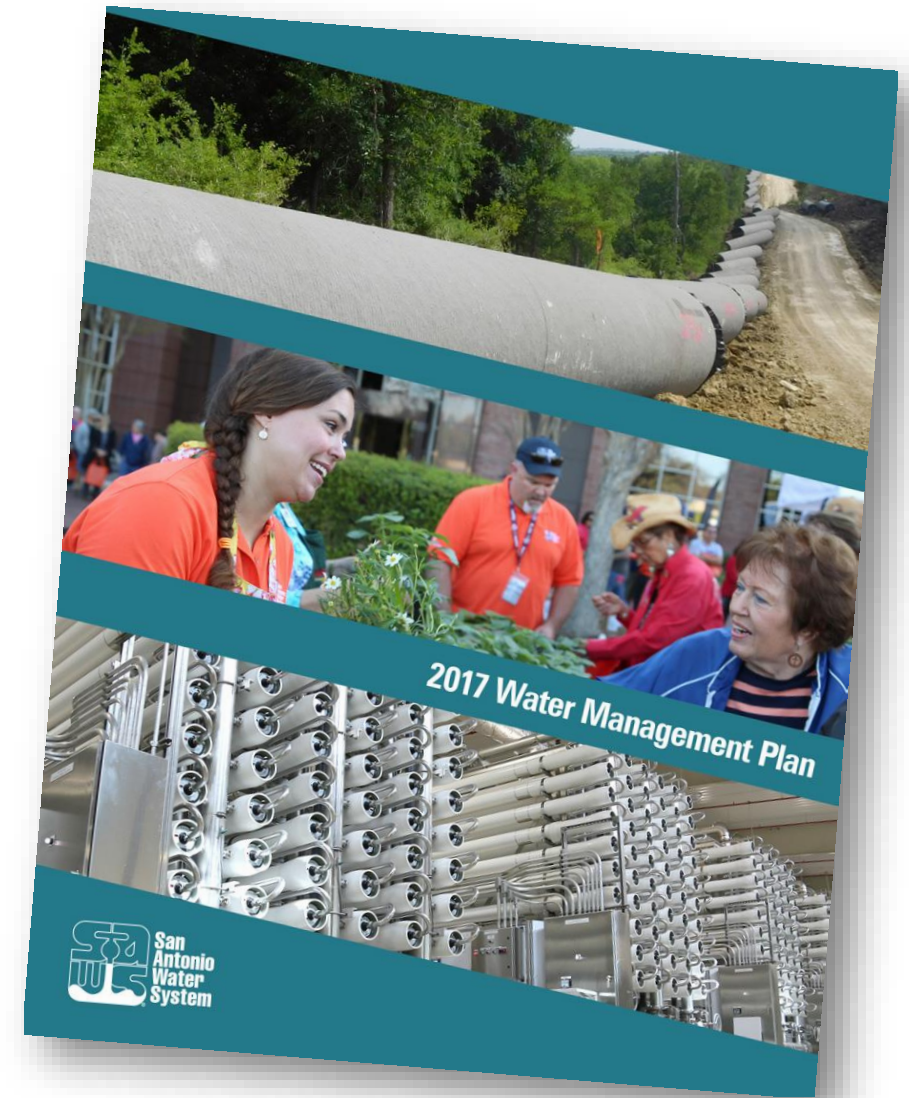
Securing San Antonio's Water Future



2017 Water Management Plan

Supporting a Thriving Economy

- Commitment to Conservation
- Diversified Water Supply already underway or under construction
- Progress through Technology
- Water security for decades



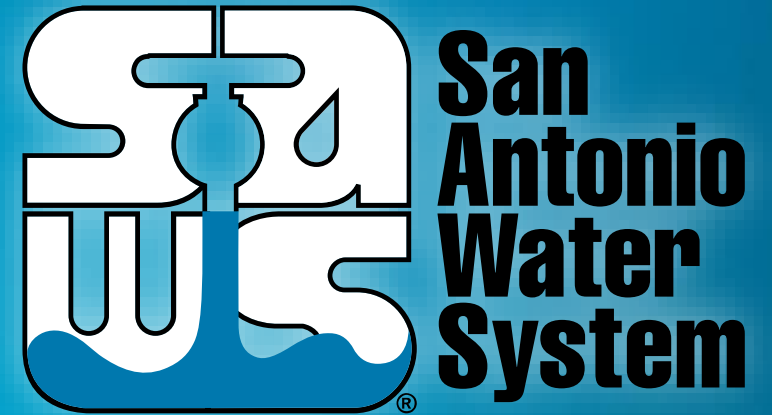
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