



# **City of San Marcos City Council Work Session**

## **Water System Capacity**

January 21, 2025

[sanmarcostx.gov](http://sanmarcostx.gov)



# Overview

- Water Supply Contracts and Terms
- Cumulative System Capacity – Time and Population, old and current
- Discussion on future water needs and solutions
- Paths forward

# Water Supplies



## Edwards Aquifer (EA)

- 5,433.42 Acre-Feet (AF) or 4.85 Million Gallons/Day (MGD)
- Stage 5 Drought Restriction “Firm Use”: 2.7 MGD
- Fixed fee: \$489,008 per year

## Canyon Lake Water (through GBRA)

- 10,000 AF or 8.9 MGD
- Full “take or pay” fee: \$1,700,000 per year

## Alliance Regional Water Authority, Carrizo Wilcox Aquifer (Initial Phase)

- 2,680 AF or 2.4 MGD
- Available EOY 2023
- Annual Debt payments: \$6,500,000

## Canyon Regional Water Authority (via Hays Caldwell Treatment Plant)

- 1,314 AF or 1.17 MGD
- Fixed fee: \$918,152 per year
- Available End of Year (EOY) 2025

## Alliance Regional Phase 1C/1D

- An additional 2,699 AF or 2.4 MGD
- Available EOY 2030
- Annual Debt payments: \$3,300,000

## Alliance Regional Phase 2

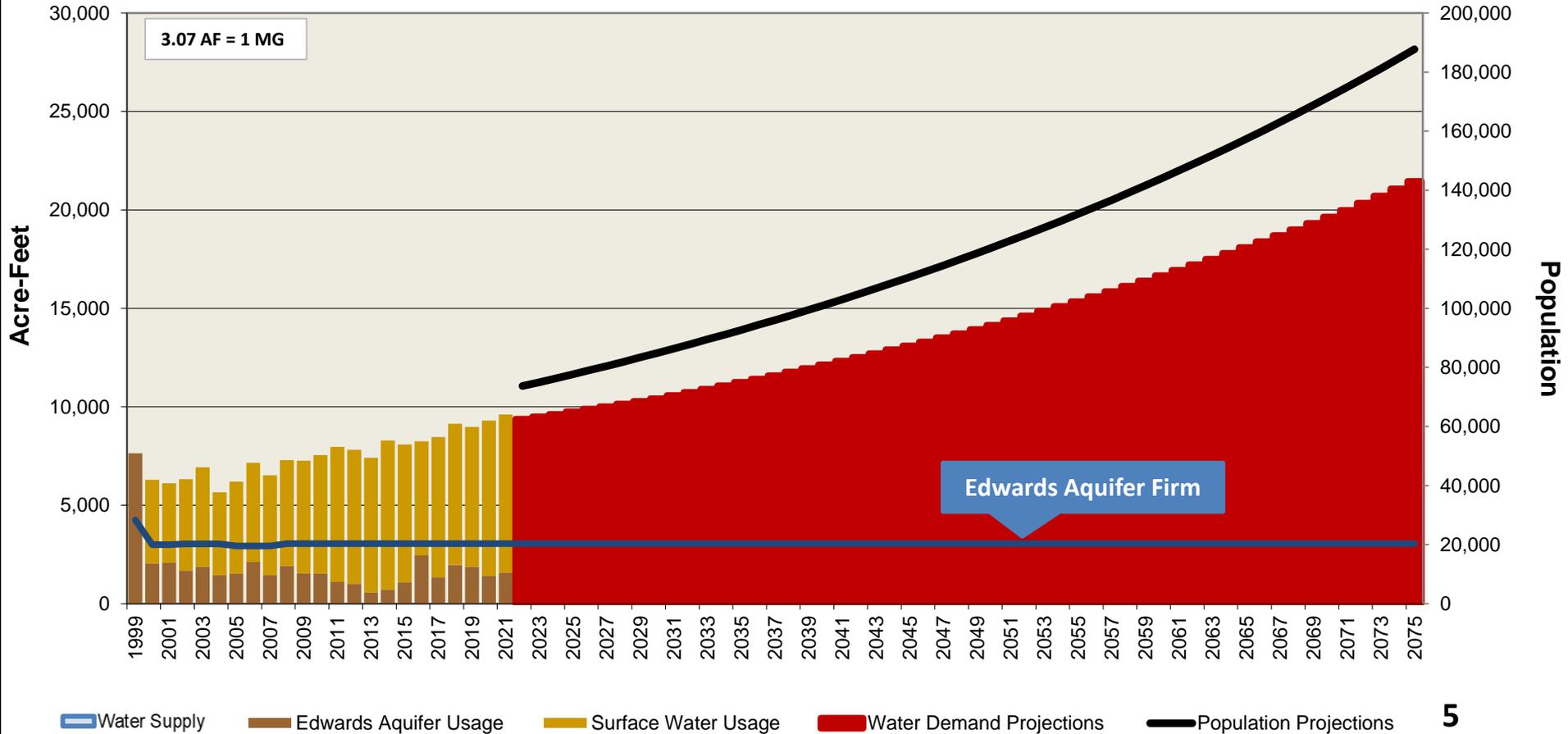
- An additional 7,800 AF or 6.4 MGD
- Available EOY 2040; cost to be determined

# System Capacity vs Time and Population

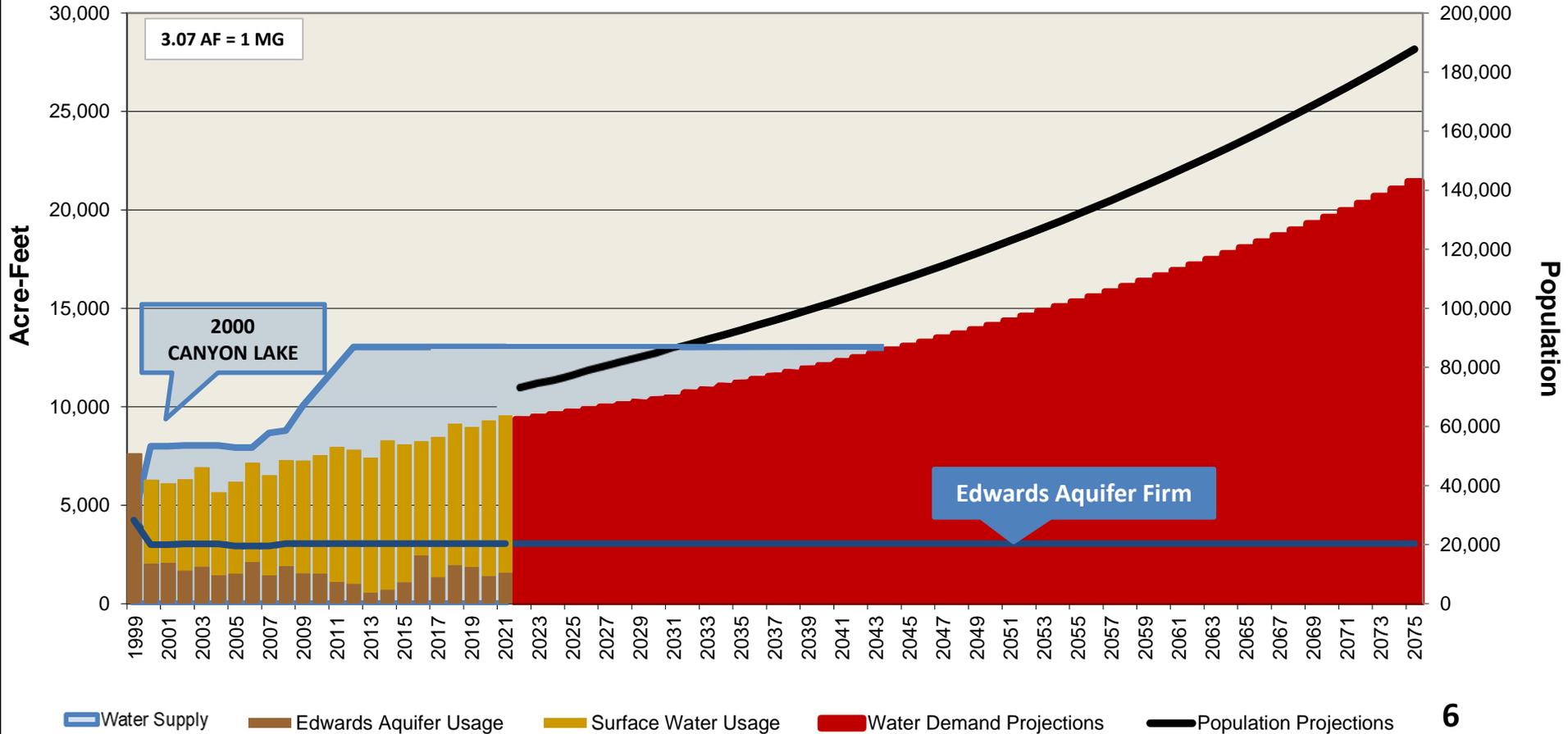


- 1999 – Edwards Aquifer (EA) minimum take 3.2 MGD
- 2000-2007 – Canyon Lake increases from 5.0 to 8.9 MGD
- 2024 – Alliance Regional Water Authority (ARWA) 2.4 MGD
- 2027 – Canyon Regional Water Authority (CRWA) 1.2 MGD
- 2027 – ARWA 2.4 MGD (4.8 MGD Total)
- 2036 – ARWA 6.4 MGD (11.2 MGD Total)

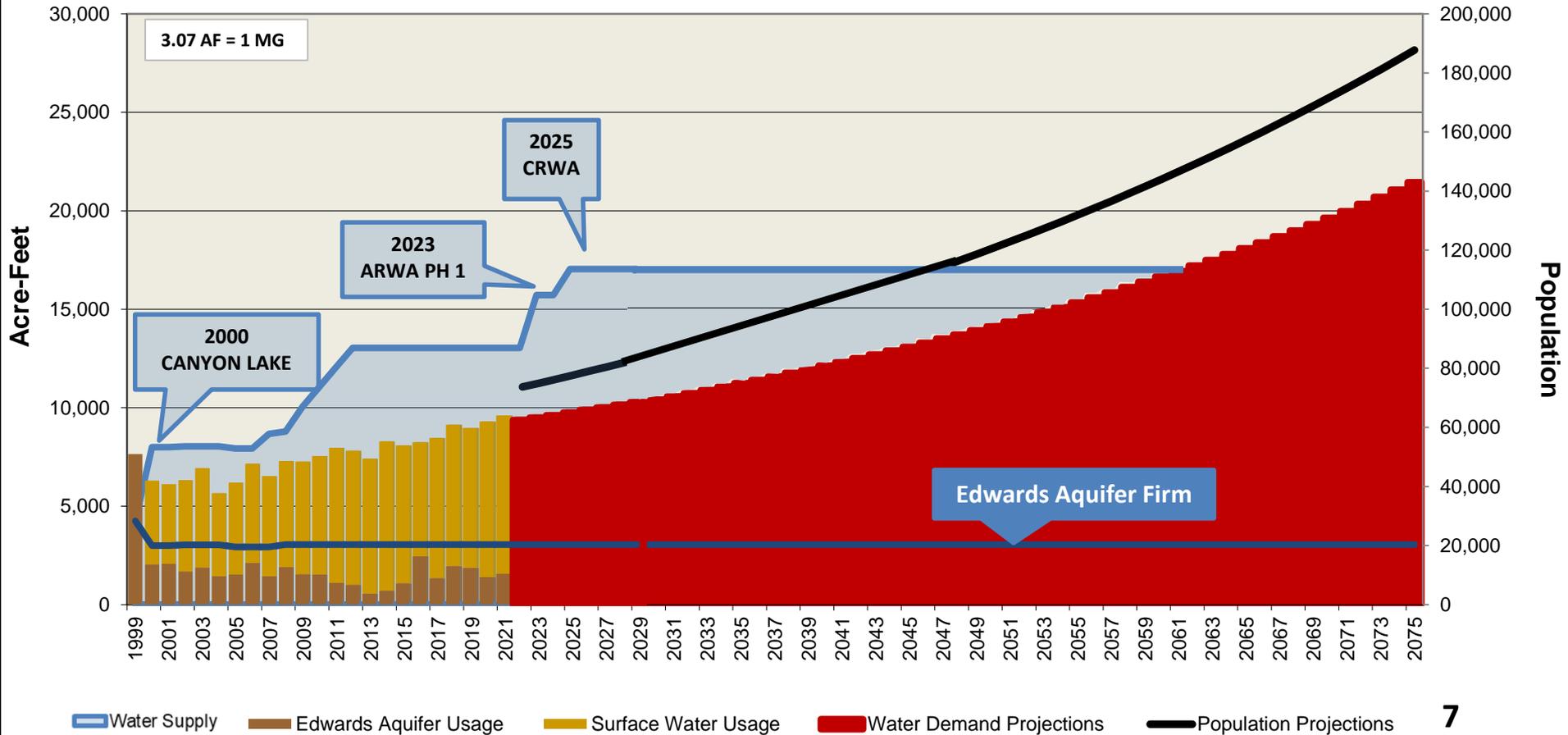
# City of San Marcos Water Supply vs Demand



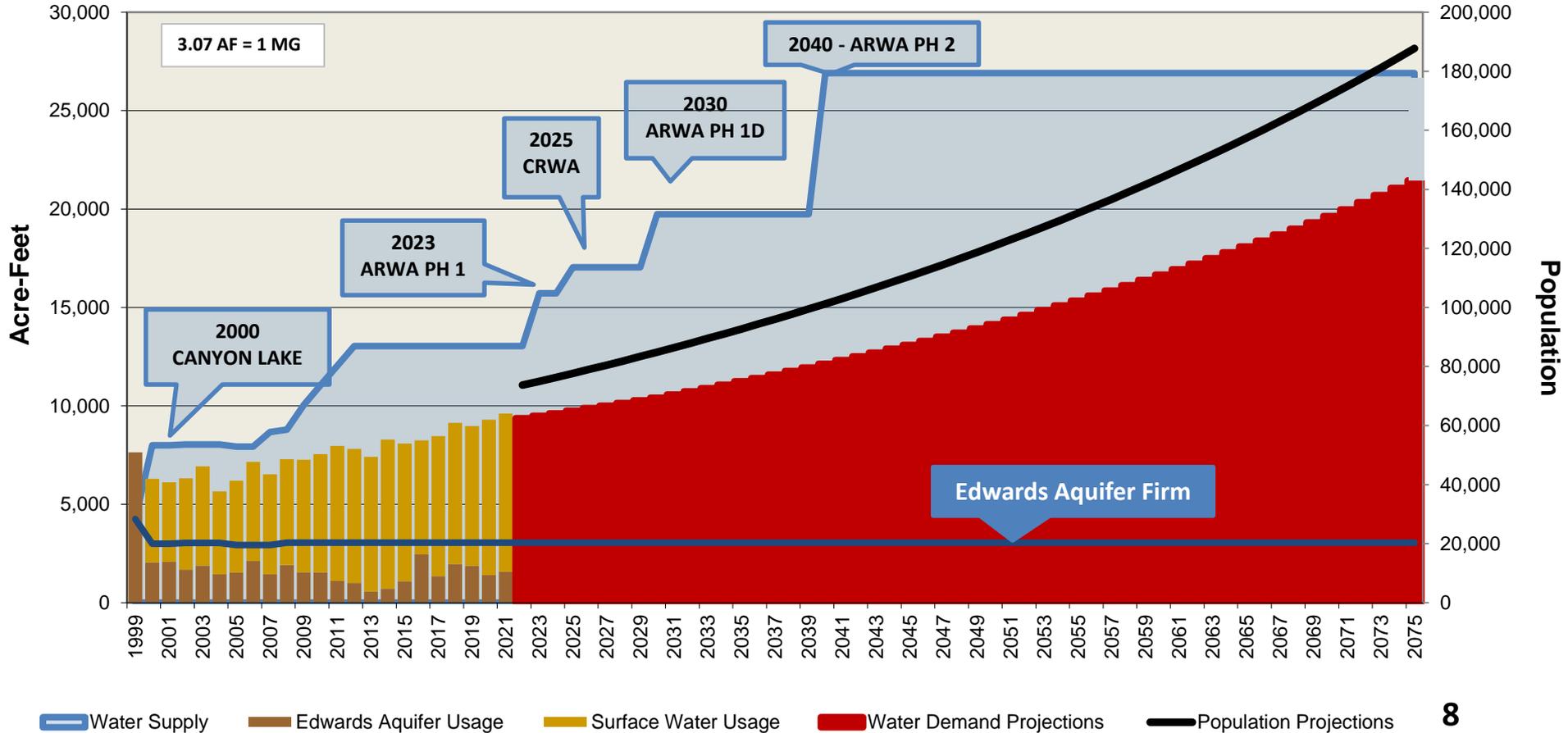
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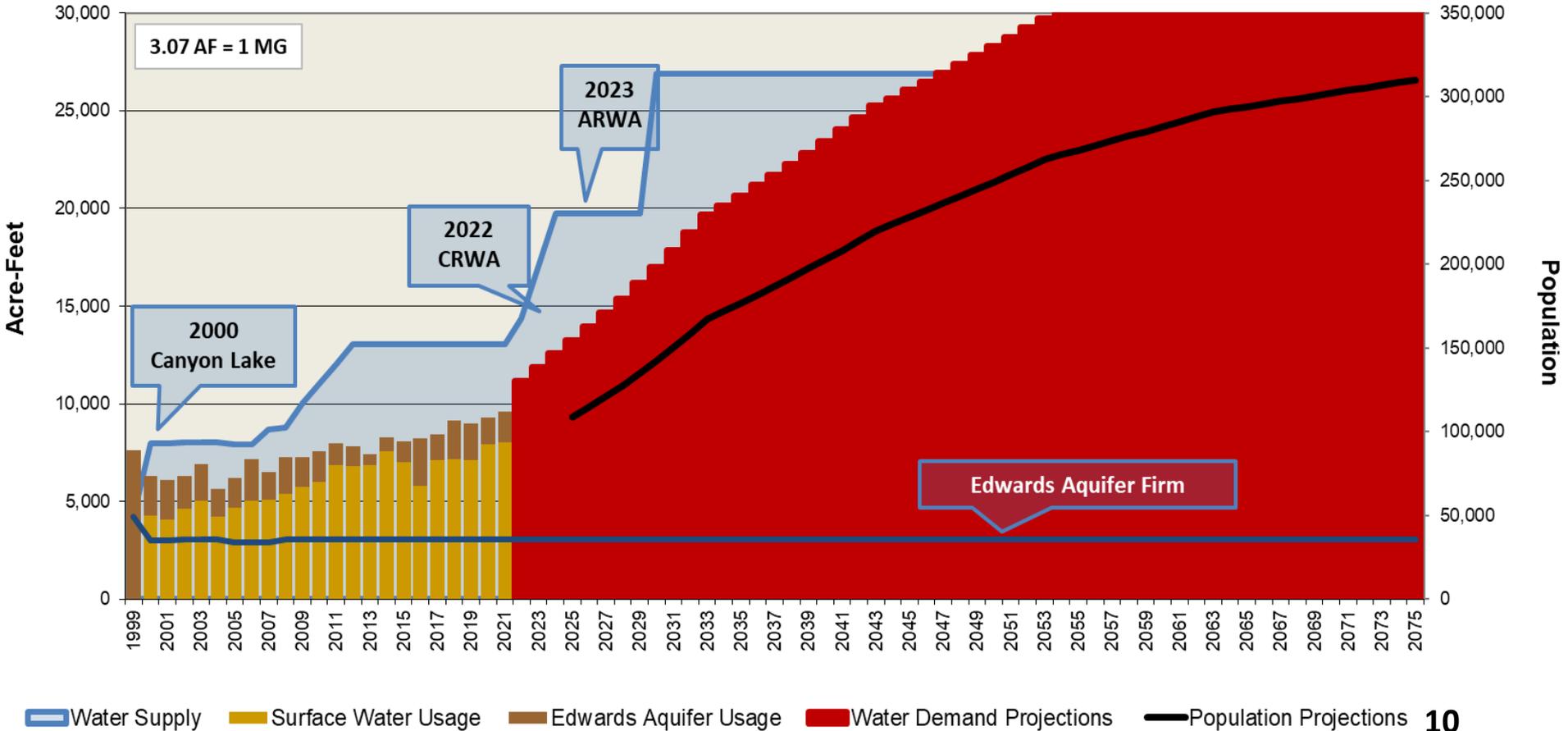


# 2017 vs 2024 Projections, Capacity and Population for 2070



- 2017 State Planning Model
  - 188,000 population
  - 18.7 MGD
- 2024 State Planning Model
  - 303,000 population
  - 33.5 MGD

# City of San Marcos Water Supply vs Demand



# 2017 vs 2024 Projections, Intersection of Capacity and Demand



- **2050 Population Projection: 250,000**
- **2050 Anticipated Capacity: 26.1 MGD**
- **2050 Anticipated Demand: 28.3 MGD**

# Mitigation Strategies – New Water Sources



## New Sources:

- ARWA – Phase 3 or another similar project @ 10,000 AF
  - Selection of consulting/engineering firm to explore Phase 3 or another version of ARWA altogether
- GBRA's Water Secure

# Mitigation Strategies – Reduced GPCD

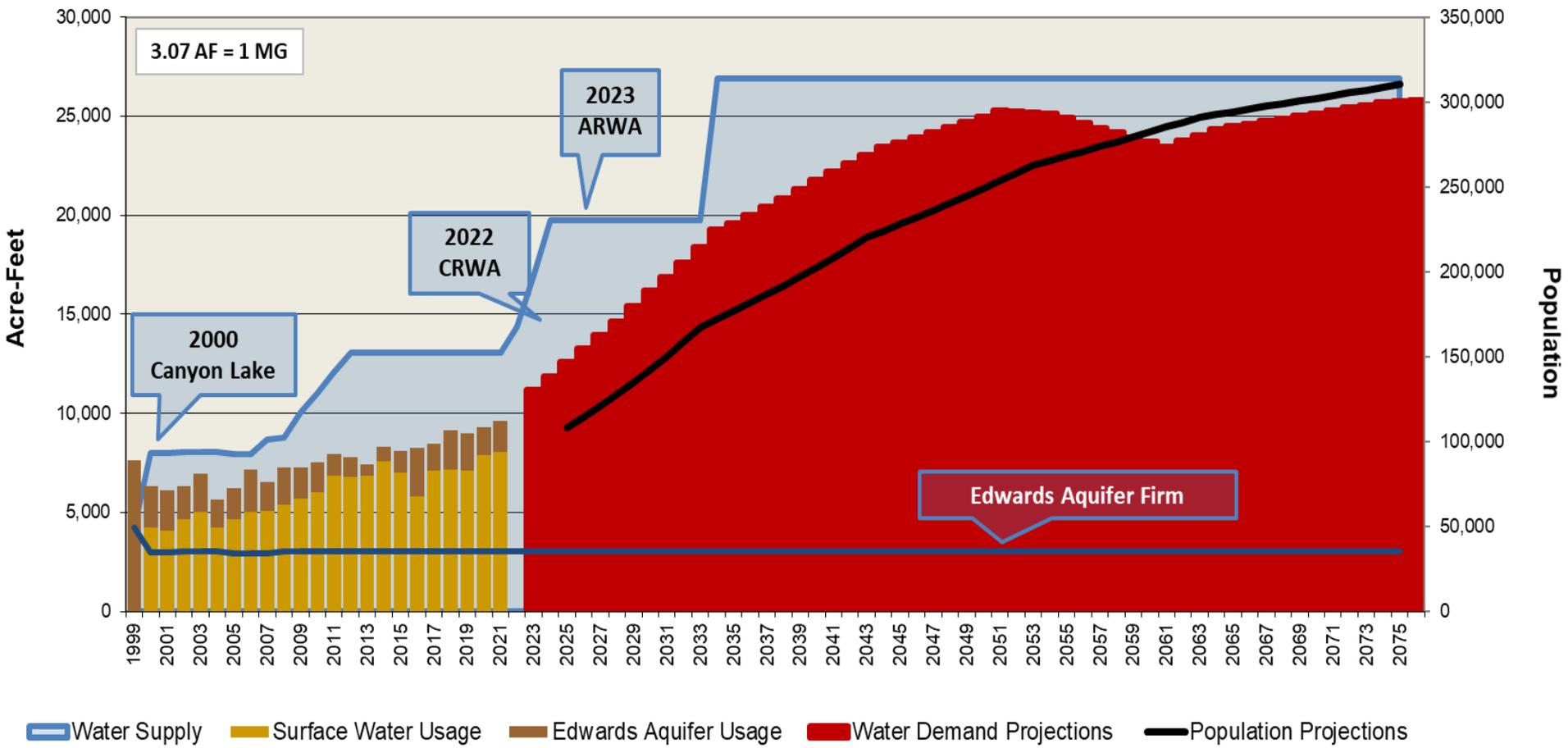


Reduced Gallons per Capita per Day (GPCD; an average daily use on a per person basis):

- Advancing Water Conservation; Ordinance 2021-05 !!
- Increased use of Recycled Water (Non-Potable)
- Introduction of Recycled Water (Potable)

**\*\*Note: these mitigation strategies were submitted to the state, and accepted, as part of 2024 Region L plan**

# City of San Marcos Water Supply vs Demand





# Moving Forward

- Continuation of Alliance Regional Phases 1C/1D and Phase 2
- Continued emphasis on, and expansion of, conservation
- Expanded recycled uses; both potable and non-potable
- Pursuit of new supplies when appropriate
- Ongoing monitoring of GPCD trends, accuracy of current and future 50-year plans, and accuracy of models



SMTX

**QUESTIONS?**

UTILITIES