

# 2020 Urban Water Management Plan and 2020 Water Shortage Contingency Plan

May 20, 2021

**Board of Public Utilities**

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OUR FUTURE IN EVERY DROP

**water**  
**smart**

# Presentation Overview

Background

Key Components

Urban Water Management Plan

Demand and Supply Projections

Water Shortage Contingency Plan

Recommendation

# California Urban Water Management Planning Act

**Who:** Urban water retailers  
(at least 3,000 connections or 3,000 acre-feet/year)

**What:** Assess long-term water supply adequacy and reliability (at least 20-year horizon)

**Why:** Ensure water supply reliability.  
Comply with State law.  
Maintain eligibility for grants & drought assistance.

**When:** Every 5 years (July 1, 2021)



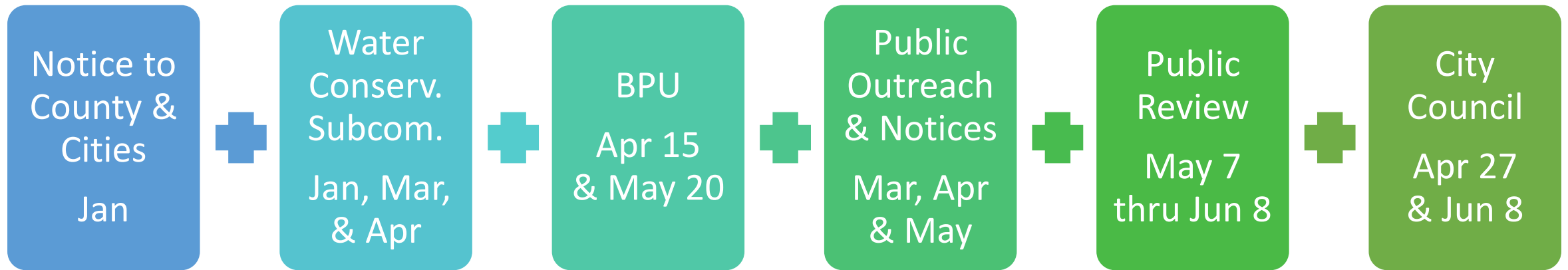
# California Urban Water Management Planning Act

## Key components

- Public participation
- Water service area & system description
- Existing & future water demands
- Water supply availability & reliability
- Current & future demand management efforts
- Water shortage & contingency planning



# Public Participation Opportunities



[srcity.org/UWMP](http://srcity.org/UWMP)

# UWMP Chapters

Executive Summary

Chapter 1 – Introduction/Overview

Chapter 2 – Plan Preparation

Chapter 3 – System Description

Chapter 4 – Water Use Characterization

Chapter 5 – Compliance with Conservation Target



# UWMP Chapters

Chapter 6 – Water Supply Characterization

Chapter 7 – Water Service Reliability

Chapter 8 – Water Shortage & Contingency Planning

Chapter 9 – Demand Management Measures

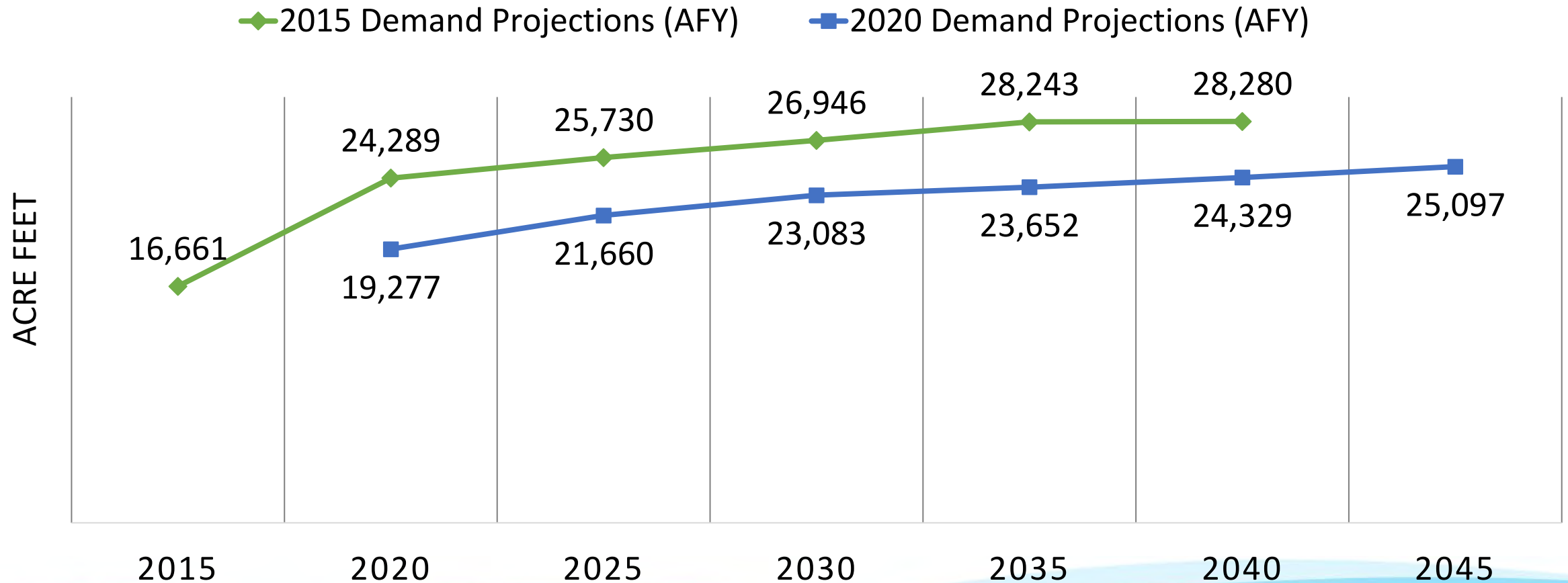
Chapter 10 – Plan Adoption, Submittal and Implementation

Appendices A – O (including WSCP in Appendix J)



# Water Use

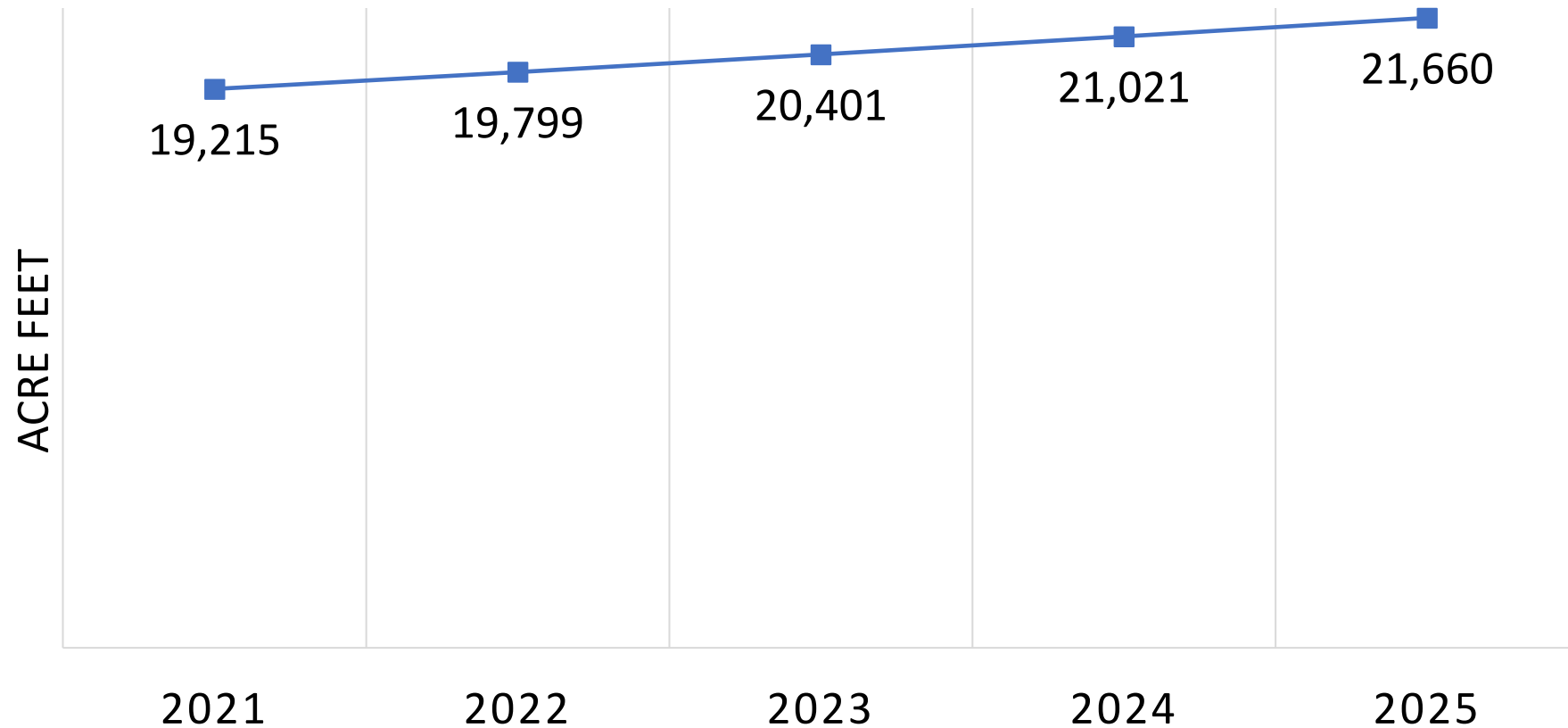
Demand Projections: 2015 projections vs. 2020 projections





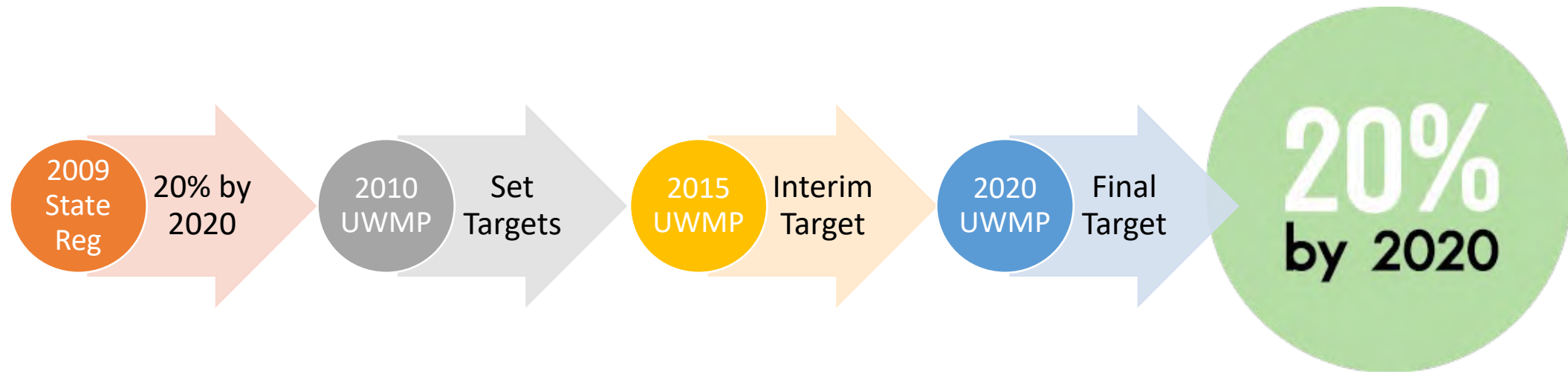
# Water Use

## 2021-2025 Estimated Demand (for Drought Risk Assessment)

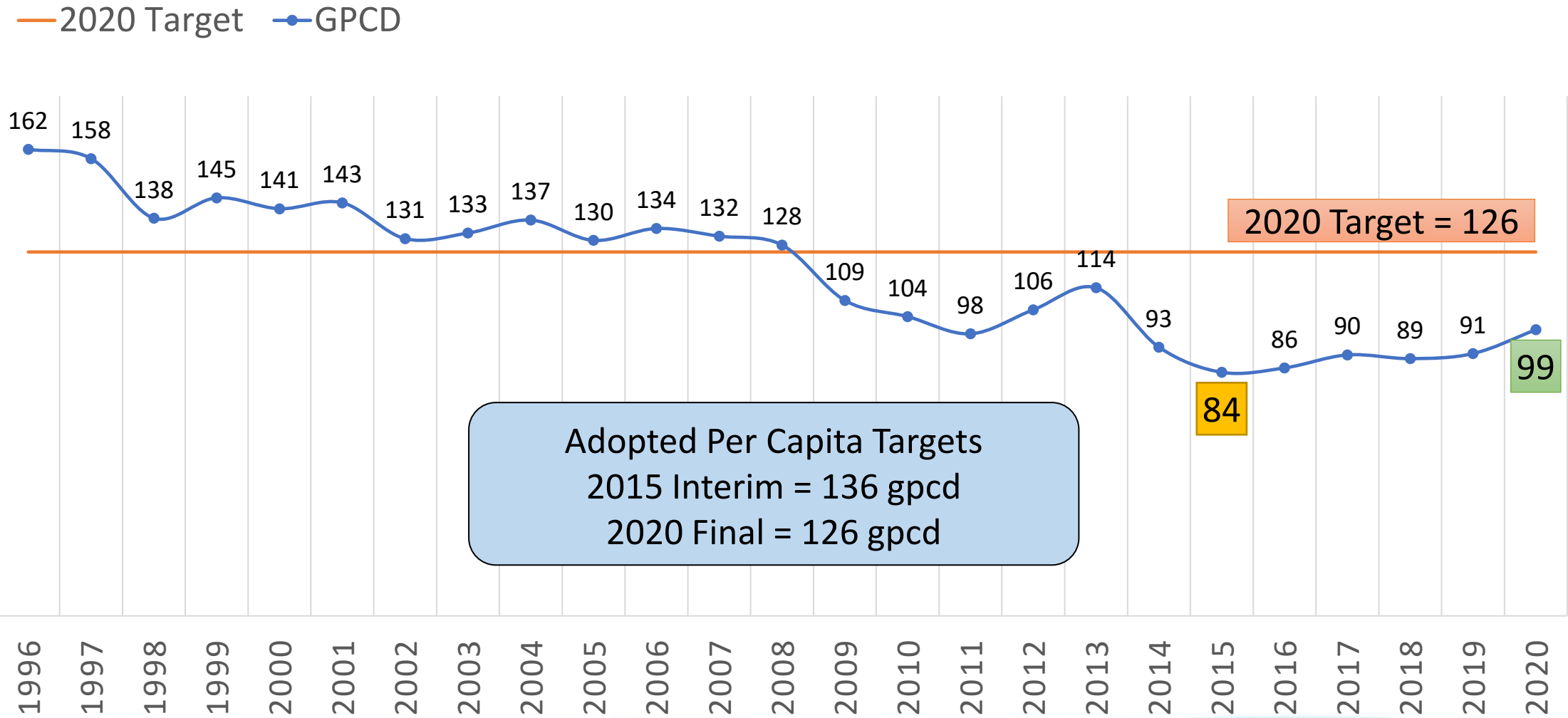


# Compliance with SB X7-7

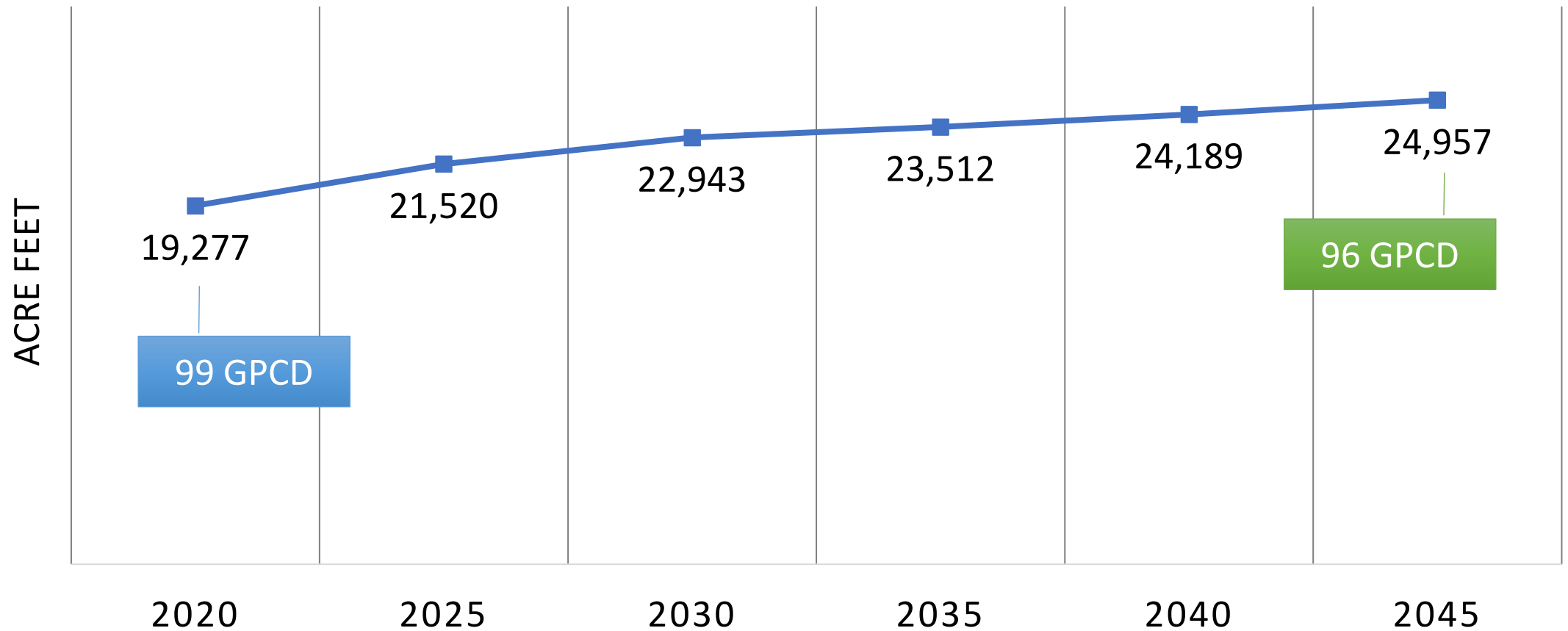
## 2009 Water Conservation Act



# Per Capita Water Use




# 2045 GPCD projection<sup>(a)</sup>



*(a) SB X7-7 does not include recycled water in the GPCD calculation*





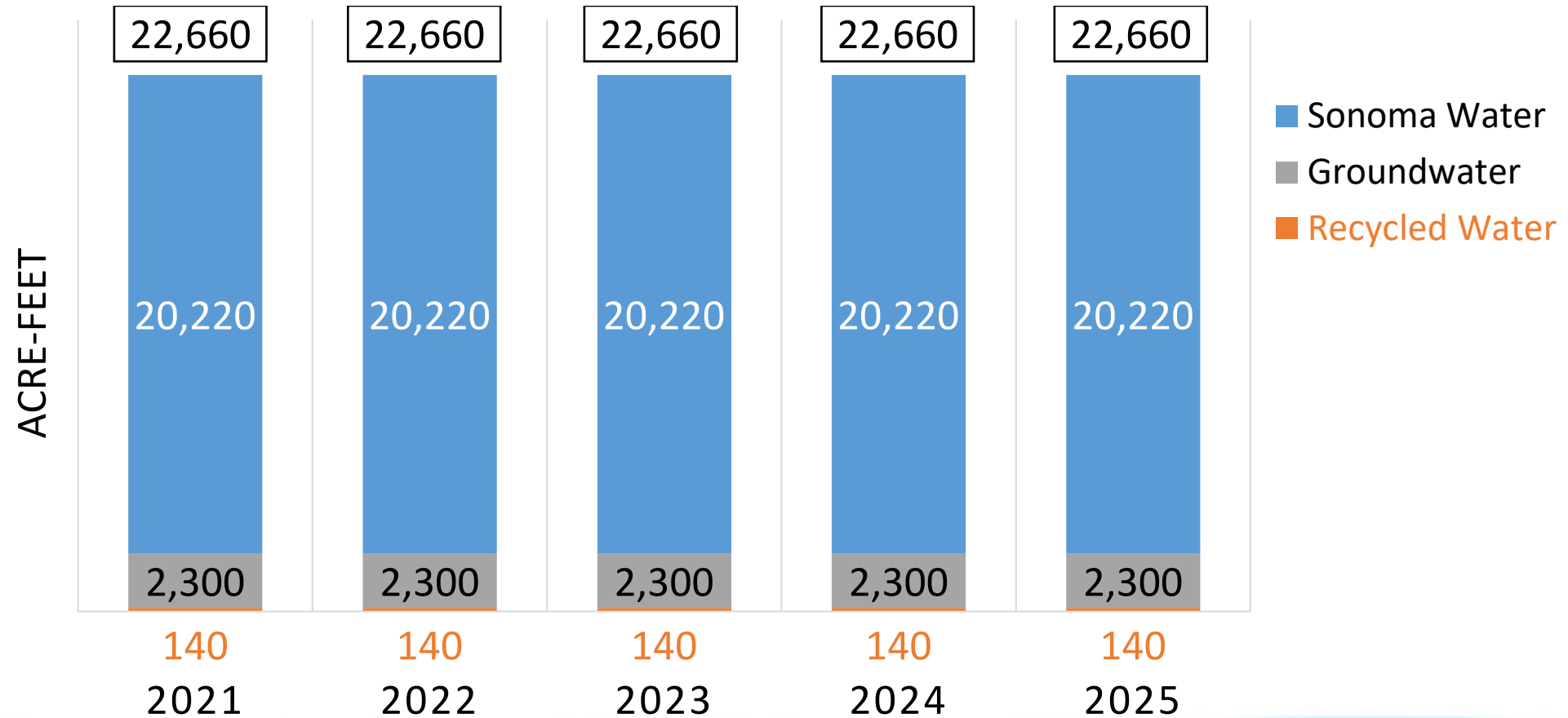
# Water Supplies 2025-2045

29,100 AFY	Sonoma Water
2,300 AFY	City Wells (Farmers Ln)
140 AFY	Regional Recycled Water
<hr/>	
31,540 AFY	Total

AFY = acre-feet per year

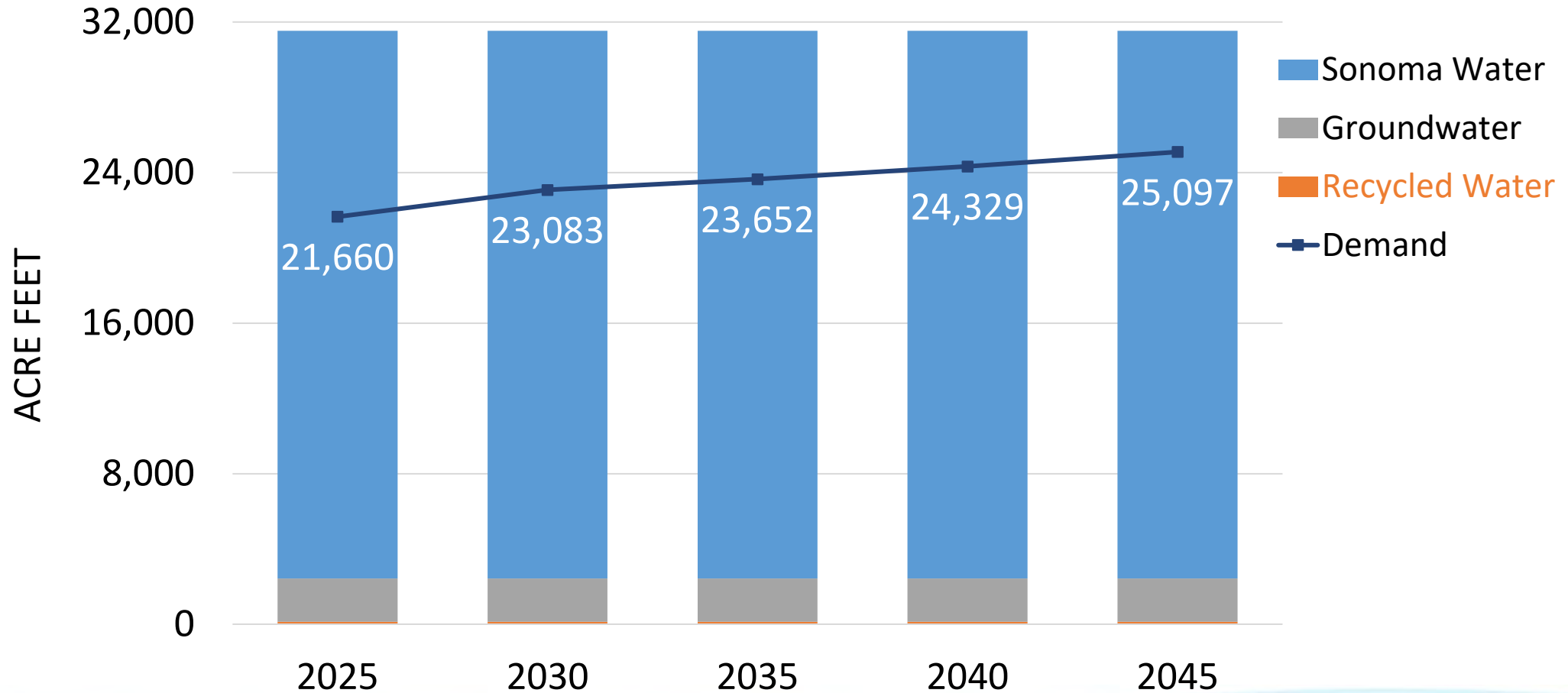
# Water Supplies 2021-2025

If hydrology is equivalent to driest 5-year period on record



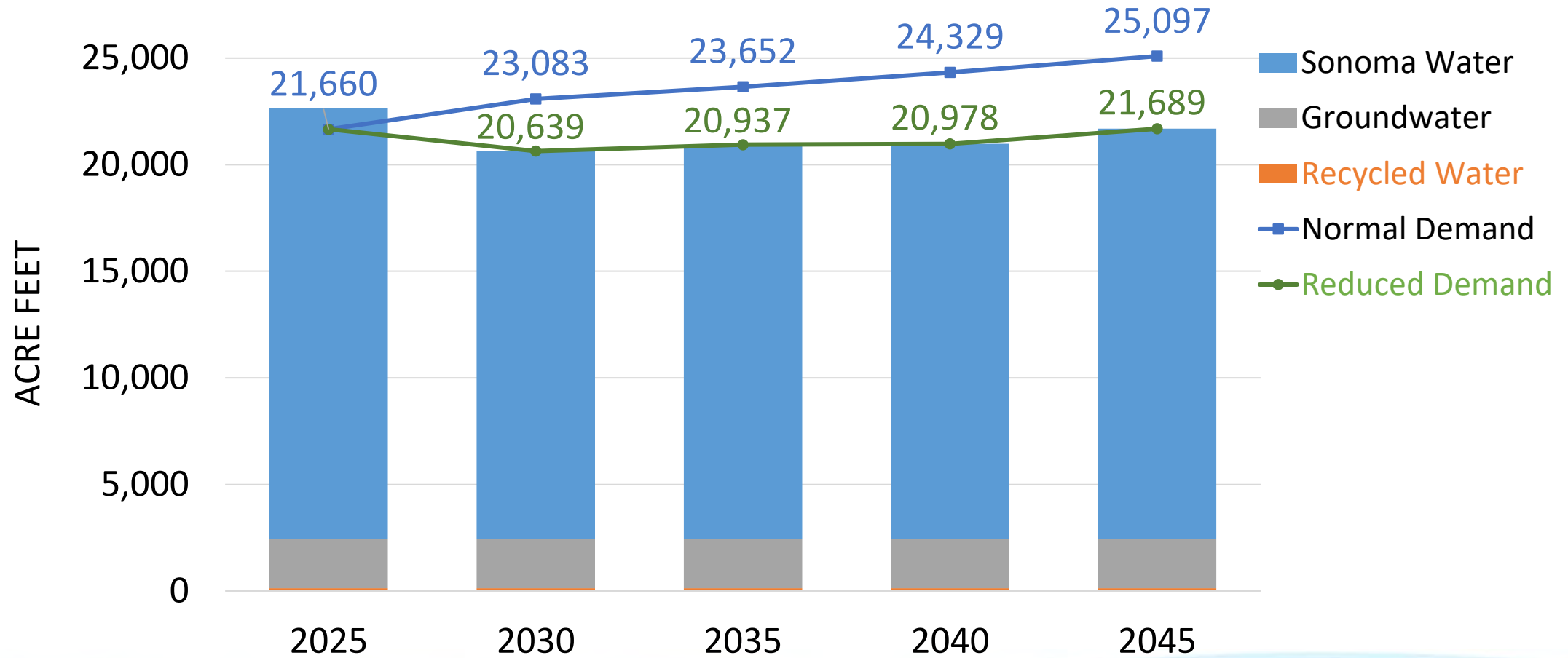
# 2025-2045 Supply and Demand

## - Normal Year Conditions



# 2025-2045 Supply and Demand

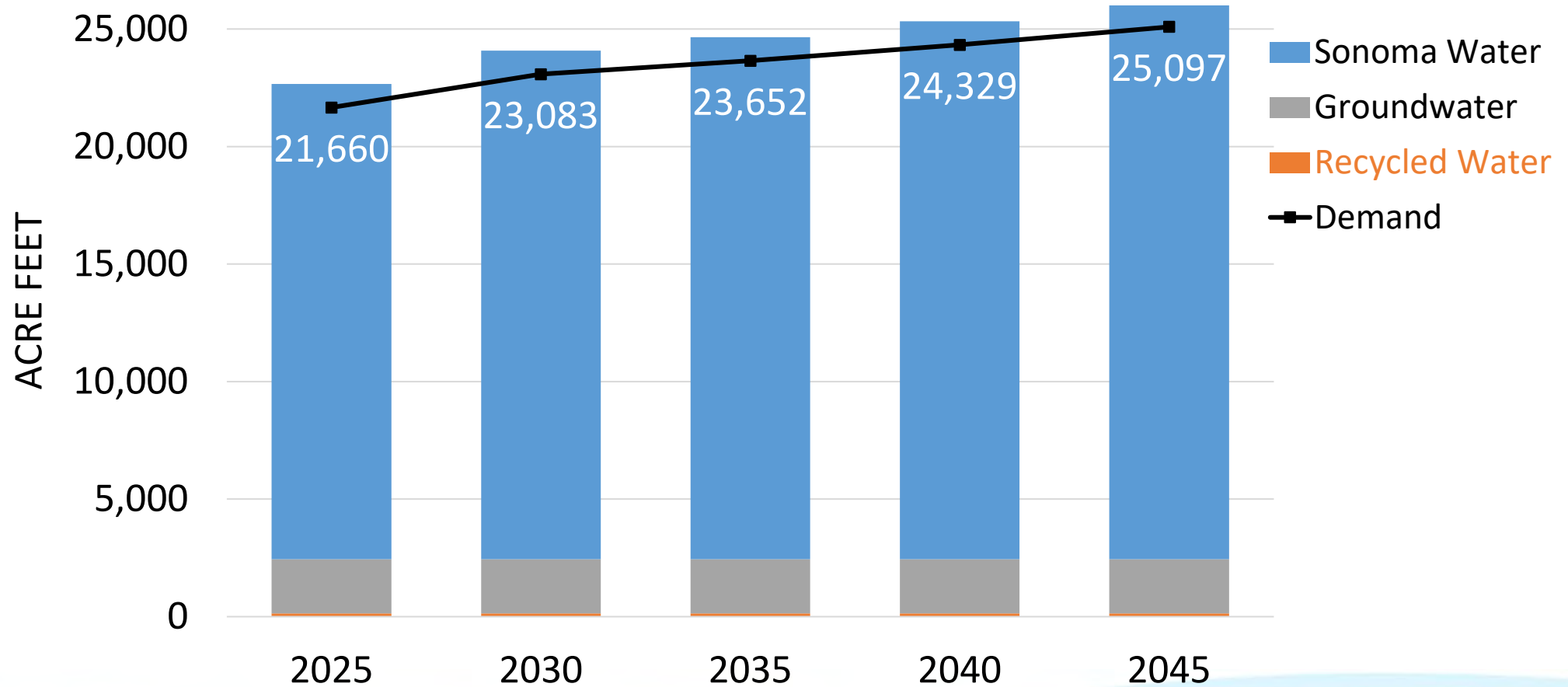
## - Single-Dry Year Conditions





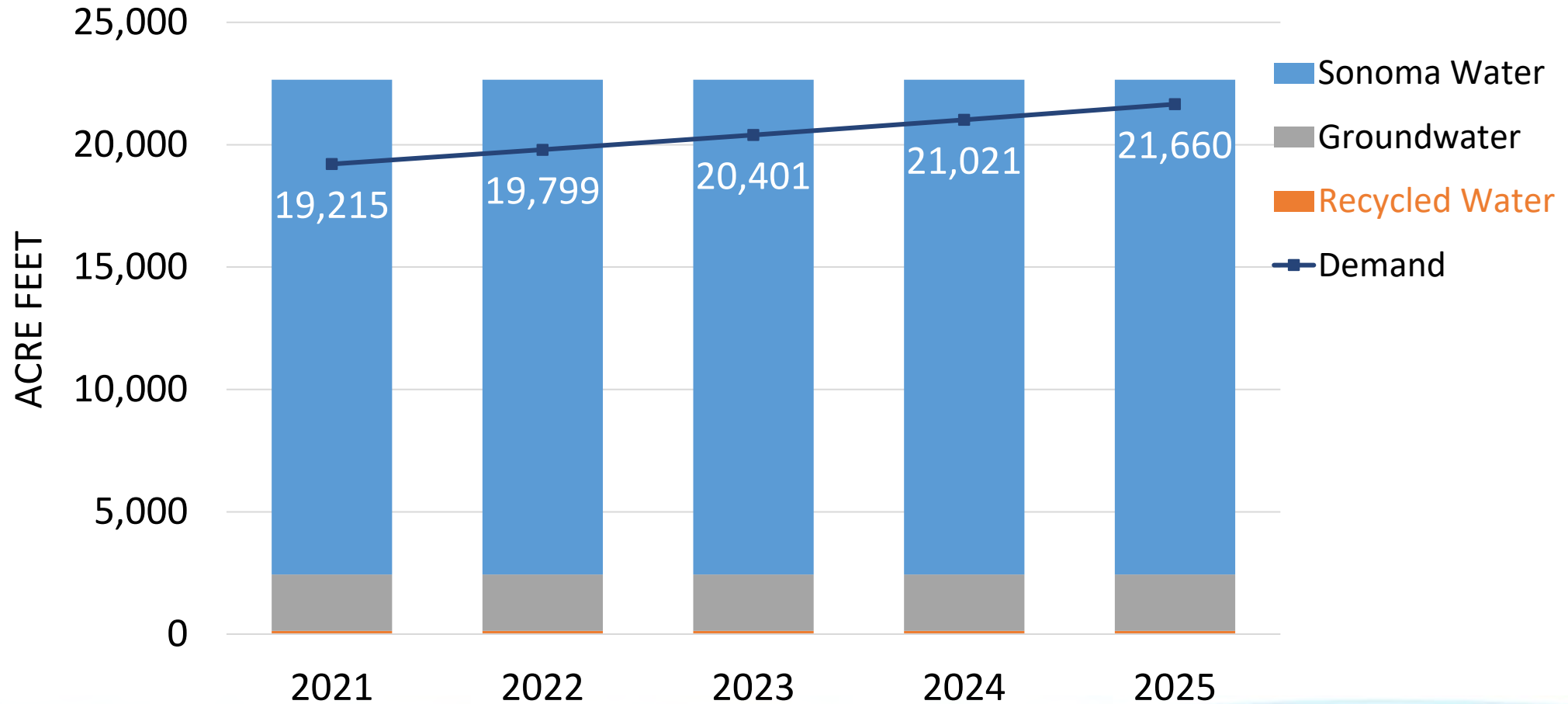
# 2025-2045 Supply and Demand

## - Dry Five-Year Period Conditions



# 2021-2025 Supply and Demand

## - Drought Risk Assessment



# 2020 Water Shortage Contingency Plan

FINAL REPORT | JUNE 2021

## City of Santa Rosa 2020 Water Shortage Contingency Plan



JOINTLY PREPARED BY



# What is a Water Shortage Contingency Plan?

## Preparation for water shortages (required by law)

- Must be a “stand alone” document
- Defines shortage levels and corresponding actions
- Updated every 5 years
- Many new requirements for 2020

## Planned response actions to reduce demand

- Outreach & education
- Customer service & assistance
- Prohibitions & restrictions
- Compliance & enforcement
- Monitoring and reporting

# Changes & Additions

Added Stage 8 (over 50%)

Updated Water Shortage Charge

Updated Water Allocations

Updated Excess Use Penalty

Complied with new requirements

- Procedures: Annual assessment; Communication plan; Compliance & enforcement; Monitoring & reporting; Adopting, submitting, implementing, revising.

# Water Shortage Stages and Reduction Targets

Supply Shortage	Shortage Stage	Reduction Target	Program Type
Up to 10%	Stage 1	10%	Voluntary
11 – 15%	Stage 2	15%	Mandatory
16 – 20%	Stage 3	20%	Mandatory
21 – 25%	Stage 4	25%	Mandatory
26 – 30%	Stage 5	30%	Mandatory
31 – 40%	Stage 6	40%	Mandatory
41 – 50%	Stage 7	50%	Mandatory
Over 50%	Stage 8	Over 50%	Mandatory

# City and State Shortage Stages

Supply Shortage	CITY	STATE	Supply Shortage
up to 10%	Stage 1*	Stage 1*	up to 10%
11-15%	Stage 2	Stage 2	up to 20%
16-20%	Stage 3		
21-25%	Stage 4	Stage 3	up to 30%
26-30%	Stage 5		
31-40%	Stage 6	Stage 4	up to 40%
41-50%	Stage 7	Stage 5	up to 50%
Over 50%	Stage 8	Stage 6	over 50%

*\* Stage 1 is voluntary*

# Water Shortage Charge (WSC)

## Increased commodity rate

- Structured to encourage conservation
- Protects financial condition of Utility

## Additional strategies

- Using reserves
- Delaying capital projects



# Water Shortage Charge (WSC)

Stage	Reduction Target	Water Shortage Charge
1	10%	no WSC
2	15%	5% of customer use rate
3	20%	7.5% of customer use rate
4	25%	10% of customer use rate
5	30%	15% of customer use rate
6	40%	25% of customer use rate
7	50%	35% of customer use rate
8	>50%	45% of customer use rate

# Water Allocations (Stages 5-8)

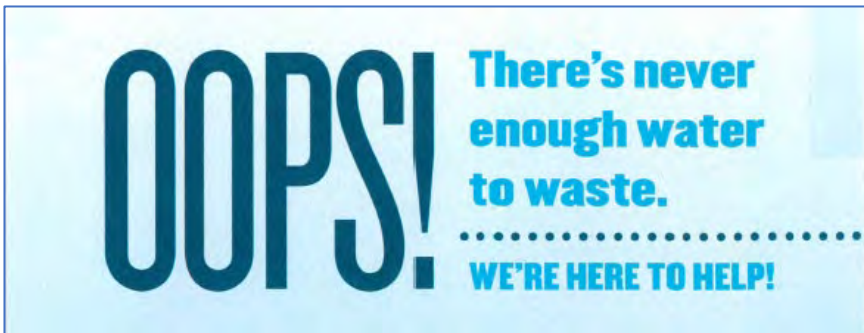
Sector	Stage 5	Stage 6	Stage 7	Stage 8
Single Family	40 gpcd + 2,000 gal/mo May-Oct	36 gpcd + 1,000 gal/mo May-Oct	32 gpcd	28 gpcd
Multi-family	40 gpcd + mod landscape May-Oct	36 gpcd + min landscape May-Oct	32 gpcd	28 gpcd
Commercial, Industrial, & Institutional	85% of previous 12 months use	80% of previous 12 months use	75% of previous 12 months use	70% of previous 12 months use
Irrigation	40% of $ET_o$	20% of $ET_o$	10% of $ET_o$	No allocation
Health & Safety	95% of previous 12 months use	90% of previous 12 months use	85% of previous 12 months use	80% of previous 12 months use
GPCD = Gallons per capita per day $ET_o$ = Net Evapotranspiration				

# Excess Use Penalty

To enforce Water Allocations in Stages 5 – 8  
Entirely avoidable by all customers

Water use over 100% and up to 150% of allocation	Stage 5 – Water usage rate with WSC plus 10% Stage 6 – Water usage rate with WSC plus 25% Stage 7 – Water usage rate with WSC plus 40% Stage 8 – Water usage rate with WSC plus 50%
Water use over 150% of allocation	Stage 5 – Water usage rate with WSC plus 20% Stage 6 – Water usage rate with WSC plus 50% Stage 7 – Water usage rate with WSC plus 80% Stage 8 – Water usage rate with WSC plus 100%

# Compliance & Enforcement



Progressive approach

- Alert customer to violation
- Offer technical assistance
- If needed, issue warning(s)
- If needed, apply penalty

# Recommendation

Recommended by the Water Department that the Board of Public Utilities, by Resolution:

- Recommend that City Council adopt the 2020 Urban Water Management Plan and the 2020 Water Shortage Contingency Plan

## Next steps:

- June 8 public hearing and consideration by City Council
- By July 1 - Submit Final 2020 UWMP and 2020 WSCP to DWR
- Within 30 days
  - ✓ Submit copies to CA State Library and Sonoma County
  - ✓ Provide e-copies online @ [srcity.org/UWMP](http://srcity.org/UWMP)
  - ✓ Provide hardcopies for public at City Hall & Municipal Service South Building



QUESTIONS?