

2020 Urban Water Management Plan and 2020 Water Shortage Contingency Plan

April 27, 2021

City Council

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Sr Water Resources Planner



OUR FUTURE IN EVERY DRÖP

water
smart

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

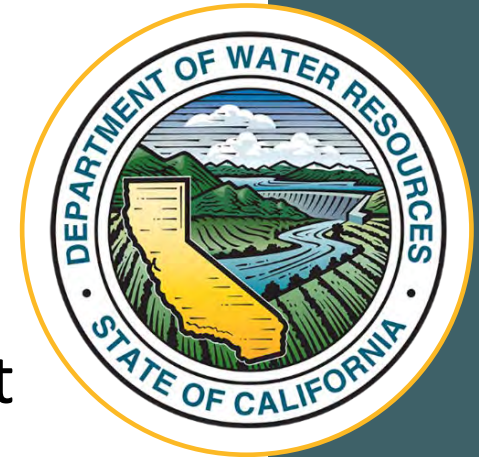
Key components

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



2020 UWMP – new DWR requirements

- ✓ Lay description
- ✓ Coordination with land use authority
- ✓ 2021-2025 Drought Risk Assessment
- ✓ Distribution system water loss reports & State target
- ✓ Coordination w/ Groundwater Sustainability Agency
- ✓ Stand alone Water Shortage Contingency Plan



2020 Urban Water Management Plan

FINAL REPORT | JUNE 2021

City of Santa Rosa 2020 Urban Water Management Plan



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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

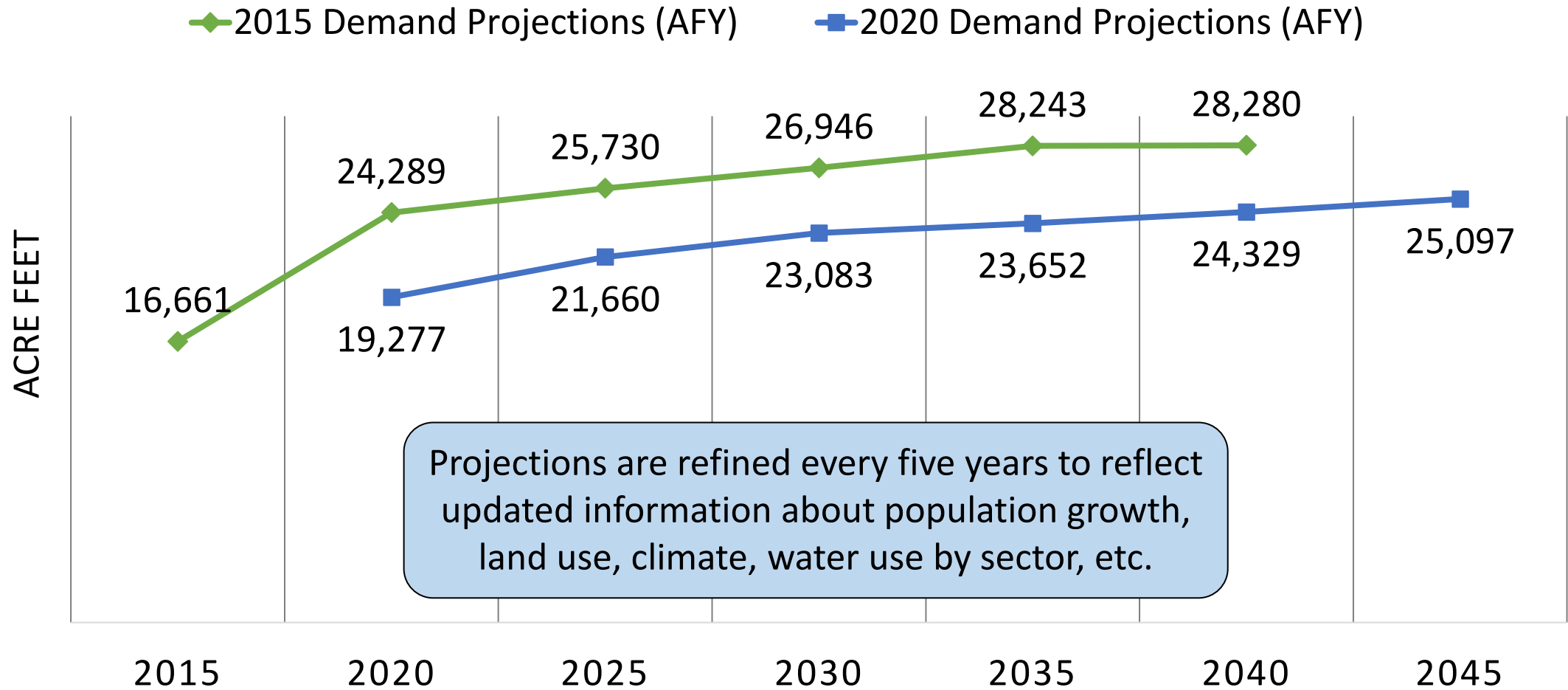
Chapter 10 – Plan Adoption, Submittal and Implementation

Appendices A – N (including WSCP in Appendix J)



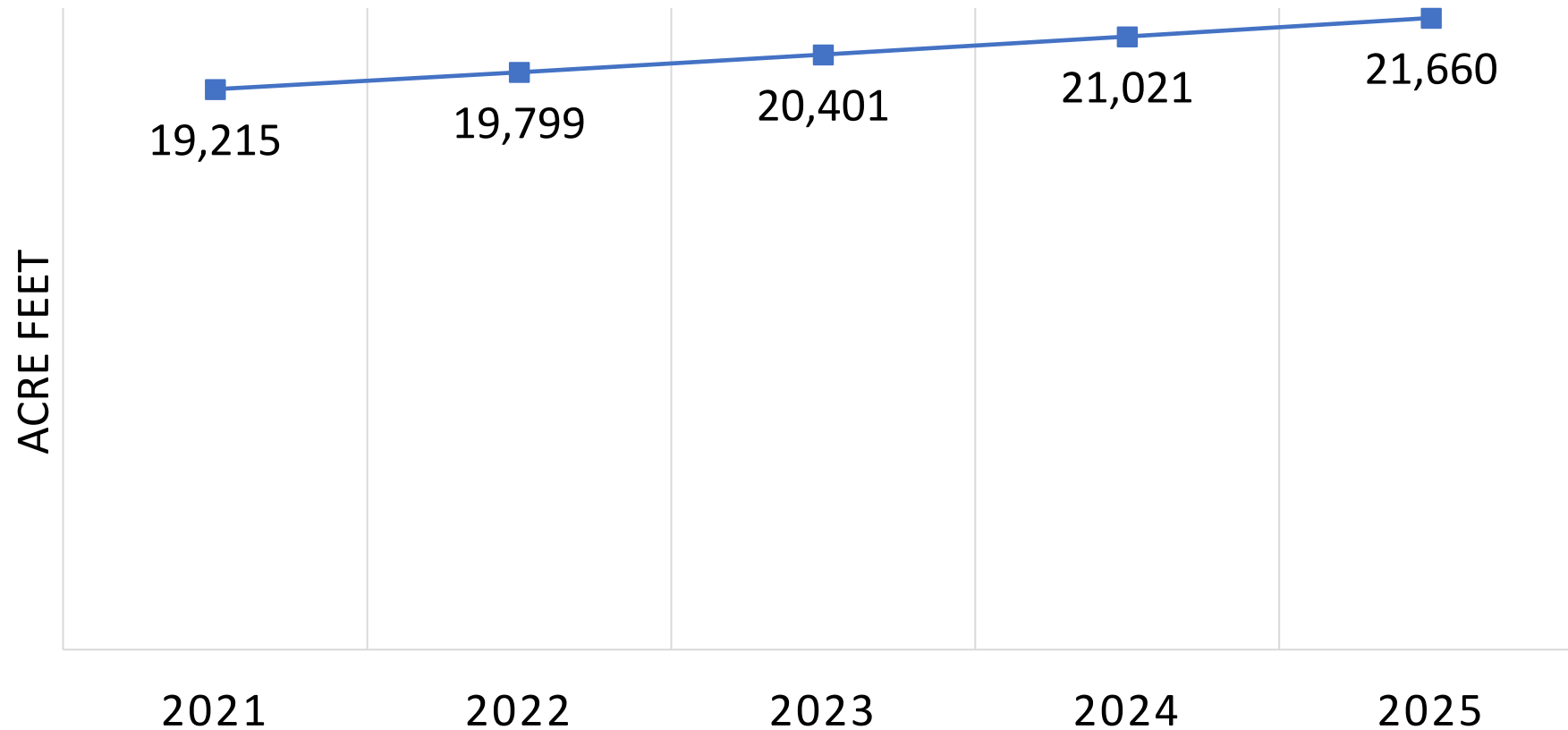
Ch 4 Water Use

Demand Projections: 2015 vs. 2020



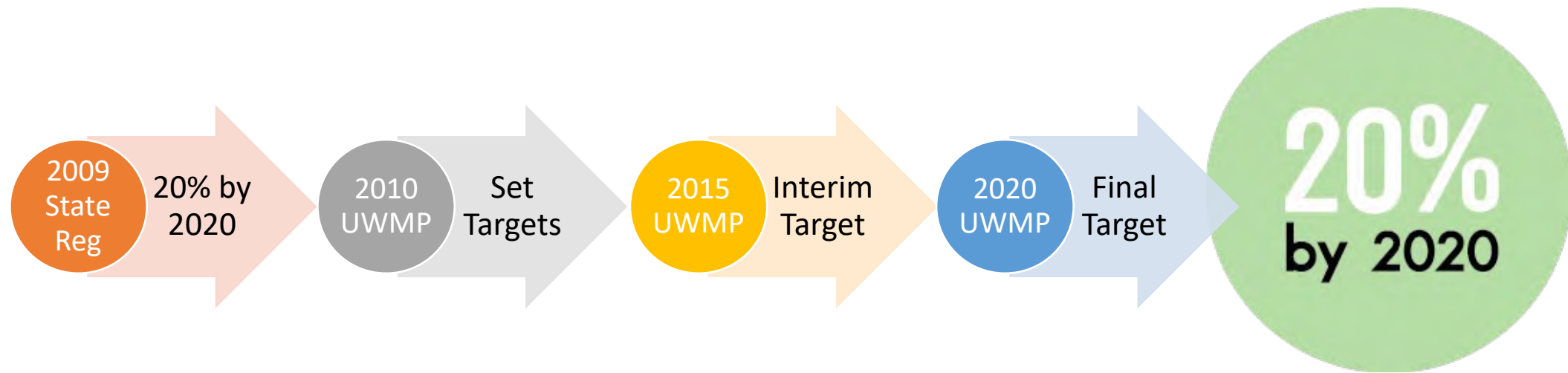
Ch 4 Water Use

2021-2025 Estimated Demand (Drought Risk Assessment)

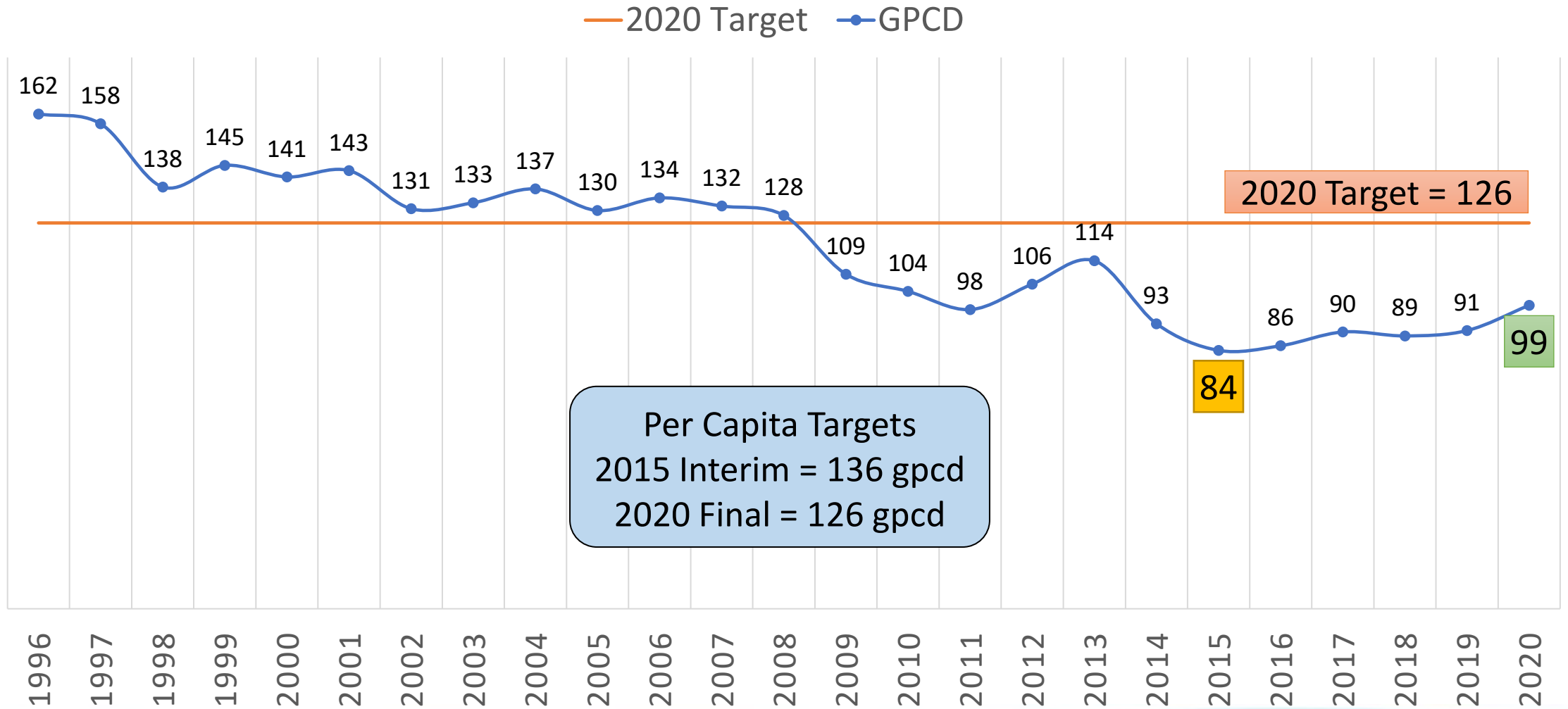


Ch 5 Compliance with Targets

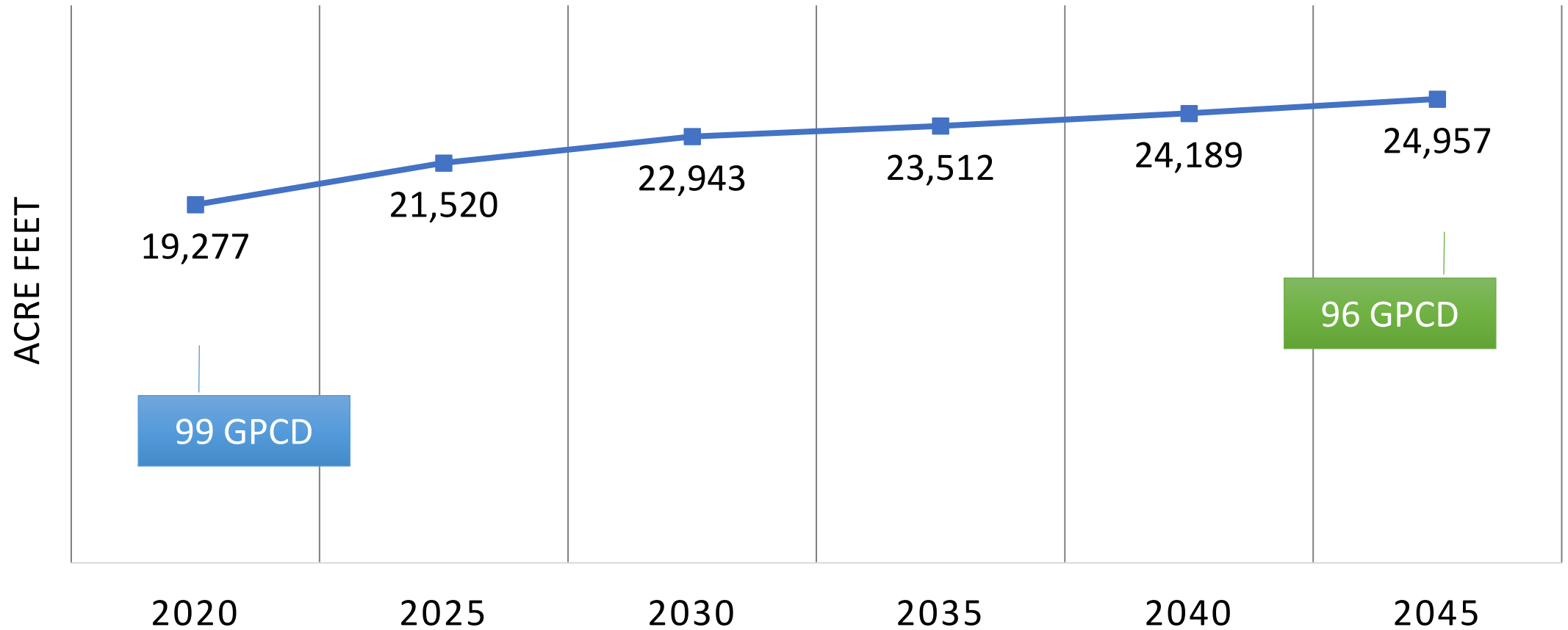
2009 Water Conservation Act (SB X7-7)




Ch 5 Compliance with SB X7-7 Targets



2045 GPCD projection^(a)



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



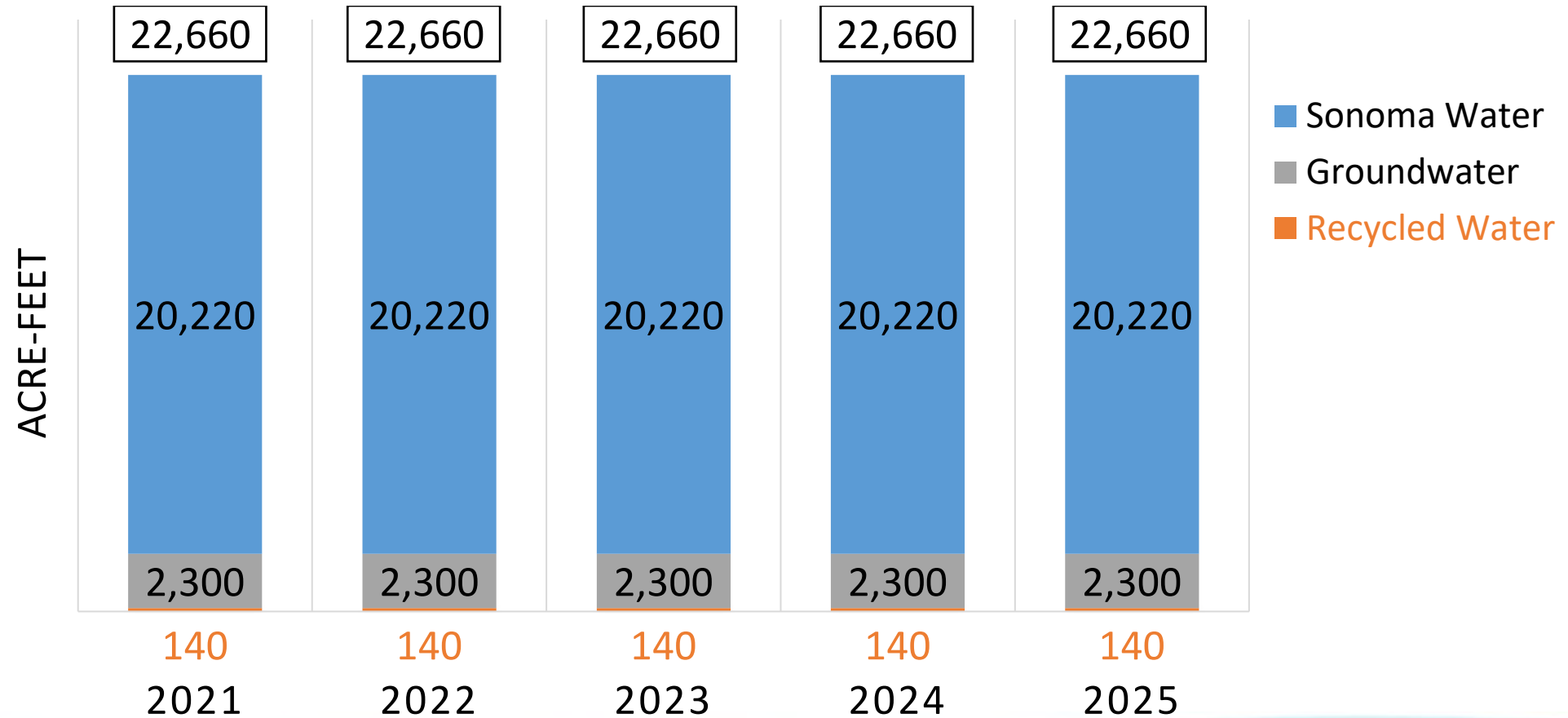
Ch 6 Water Supplies 2025-2045

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

Ch 6 Water Supplies

2021-2025 Dry Conditions (Drought Risk Assessment)



Ch 7 Water Service Reliability & Drought Risk Assessment

Water Service Reliability out to 2045

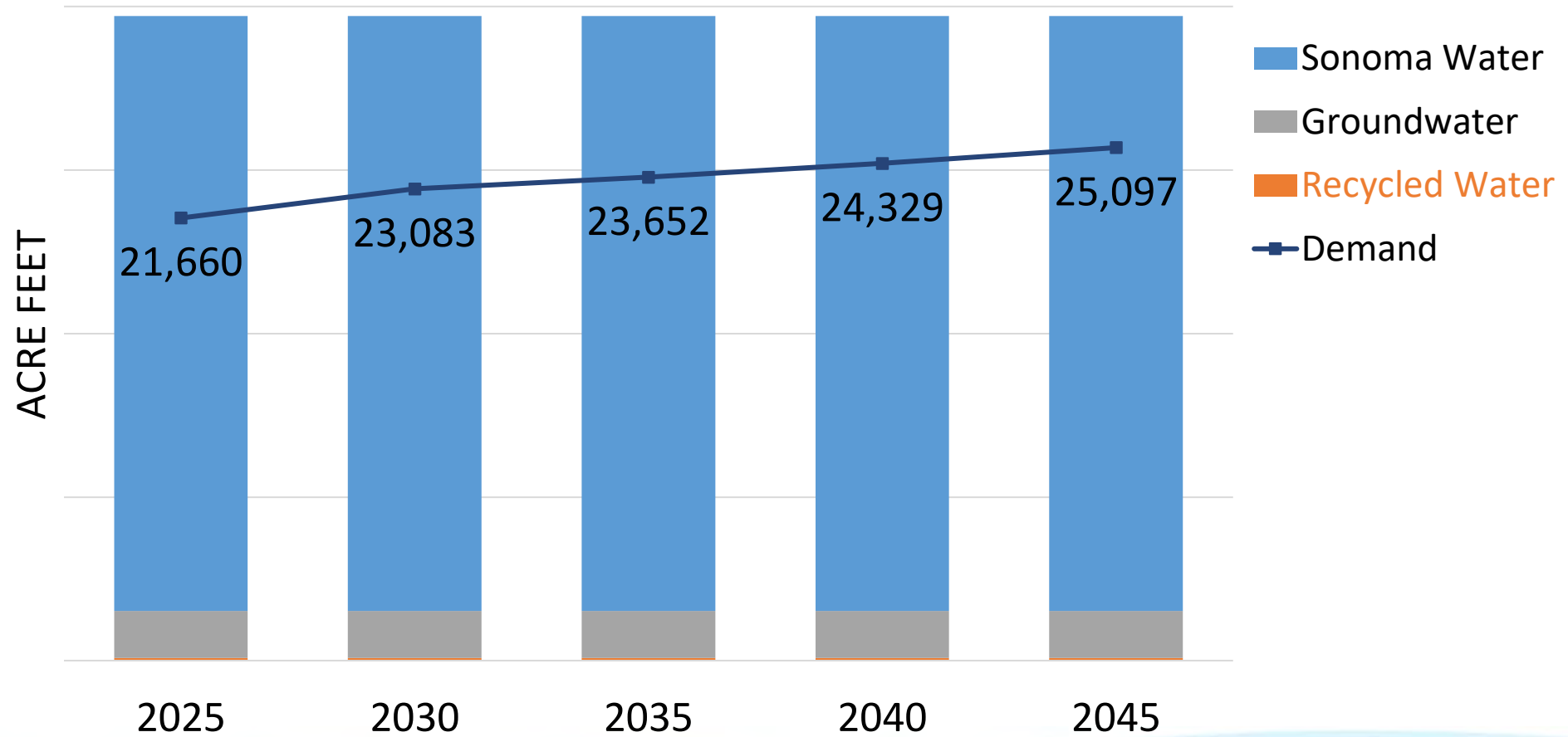
- Normal water years
- Single-dry year
- Dry five-year periods

Drought Risk Assessment for 2021-2025

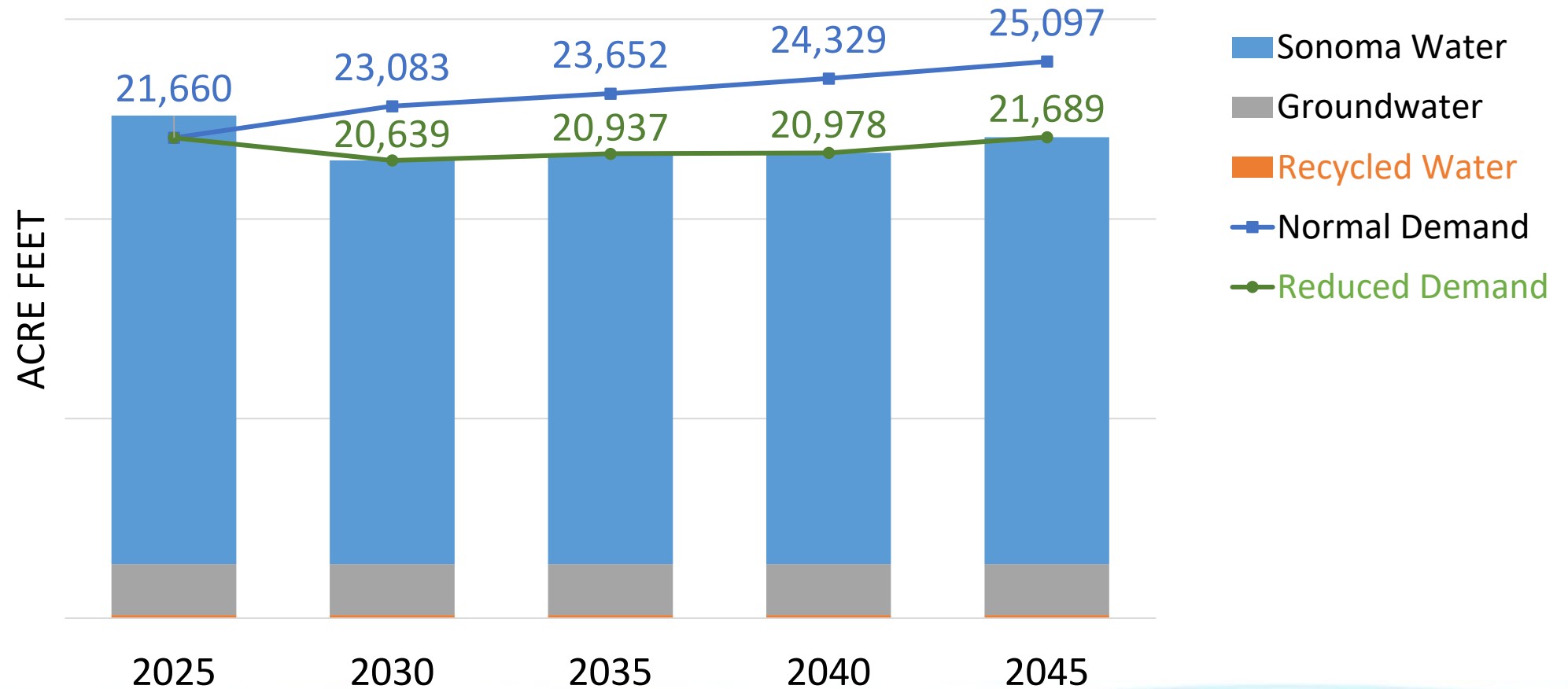
- Assume normal demand
- Hydrology like driest 5-yr period



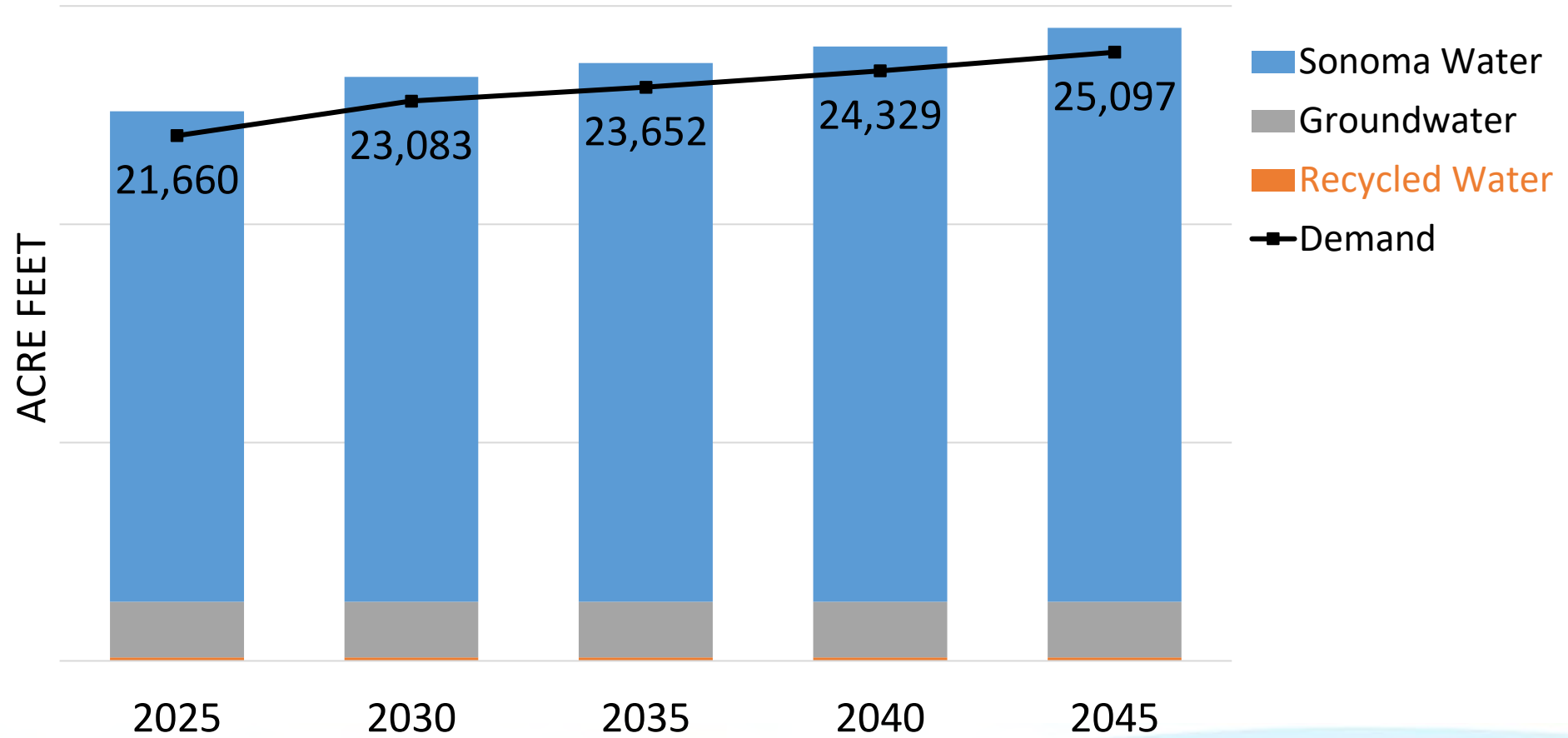
Ch 7 Water Service Reliability 2025-2045 Normal Year



Ch 7 Water Service Reliability 2025-2045 Single-Dry Year

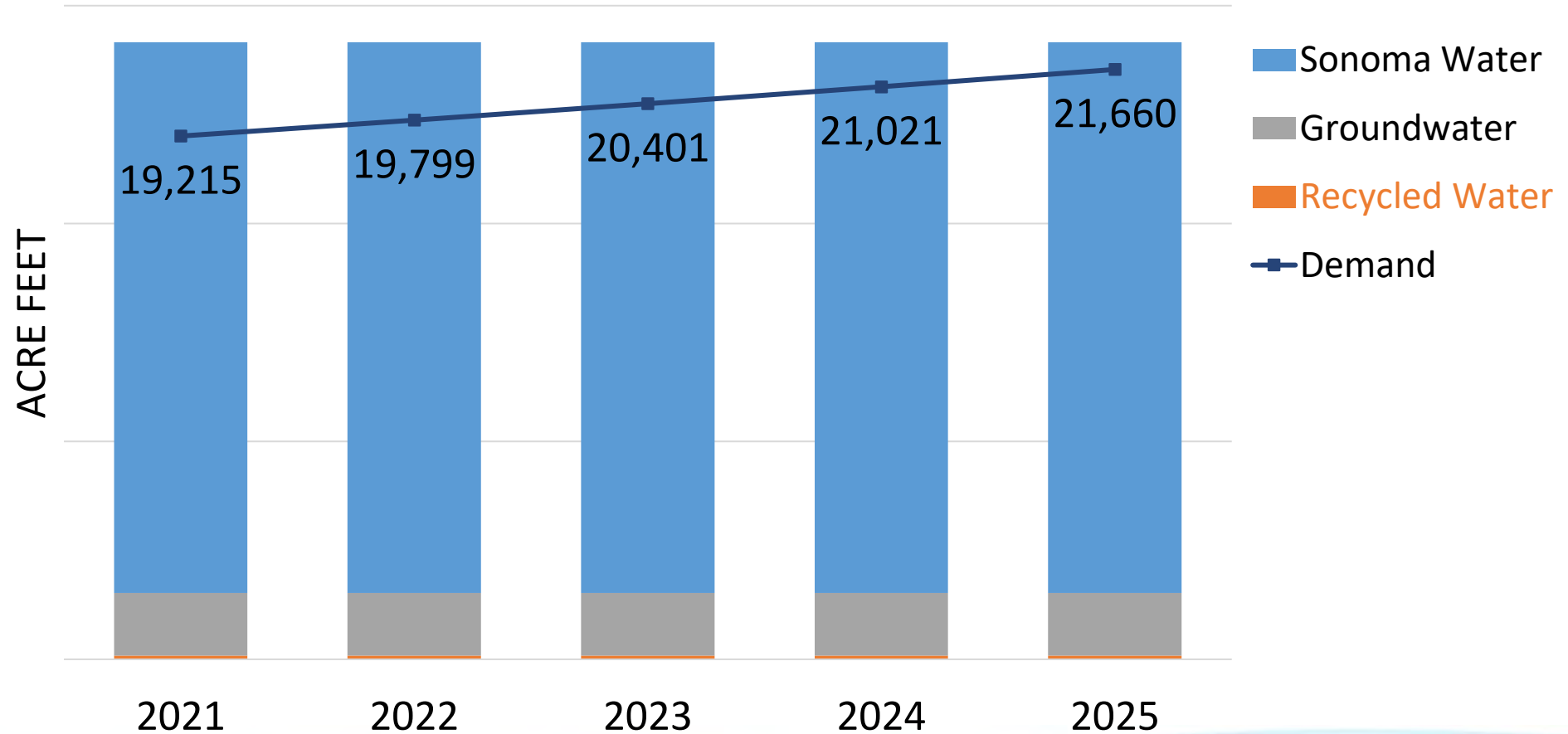


Ch 7 Water Service Reliability 2025-2045 Dry Five-Year Period



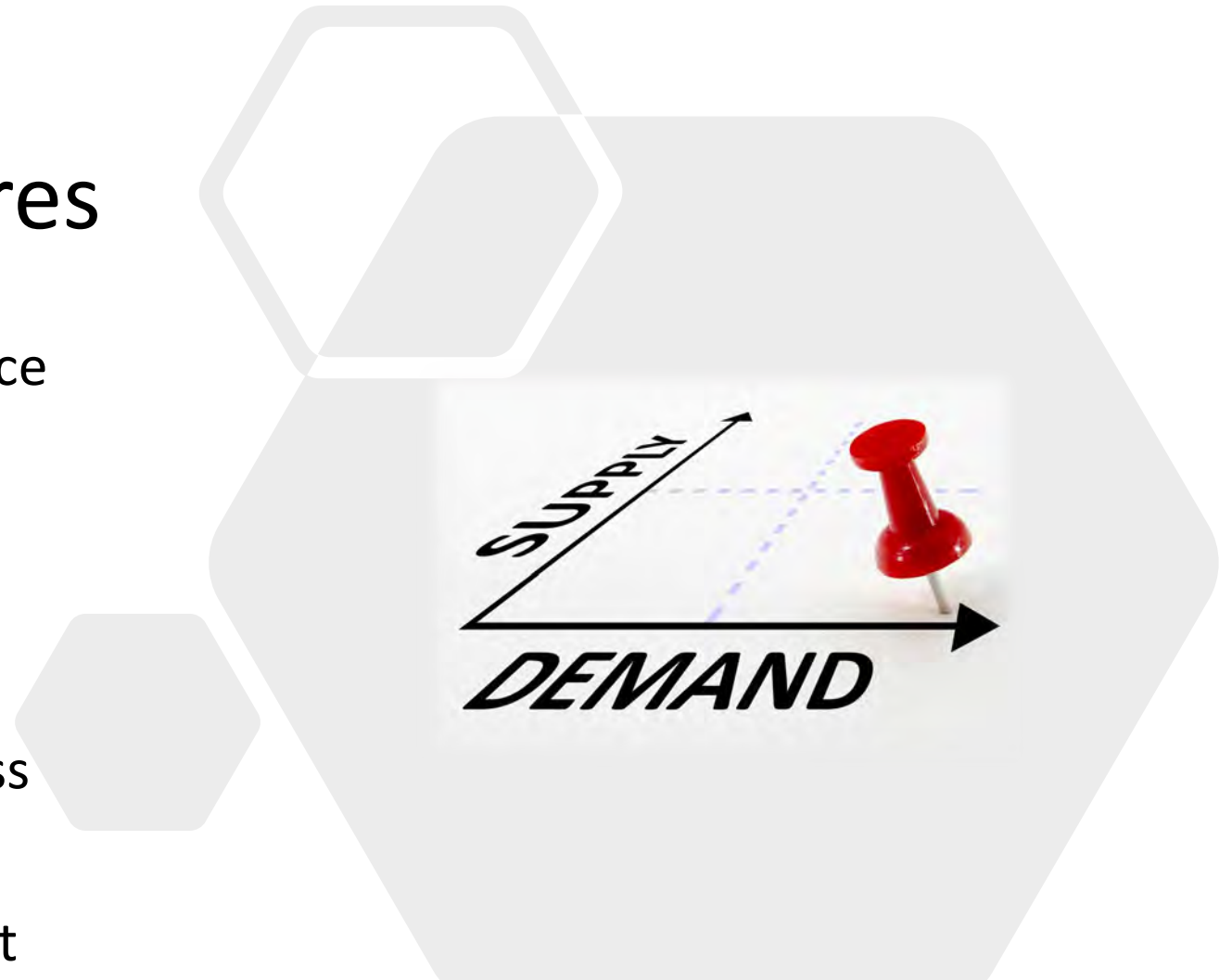
Ch 7 Water Service Reliability

2021-2025 Drought Risk Assessment

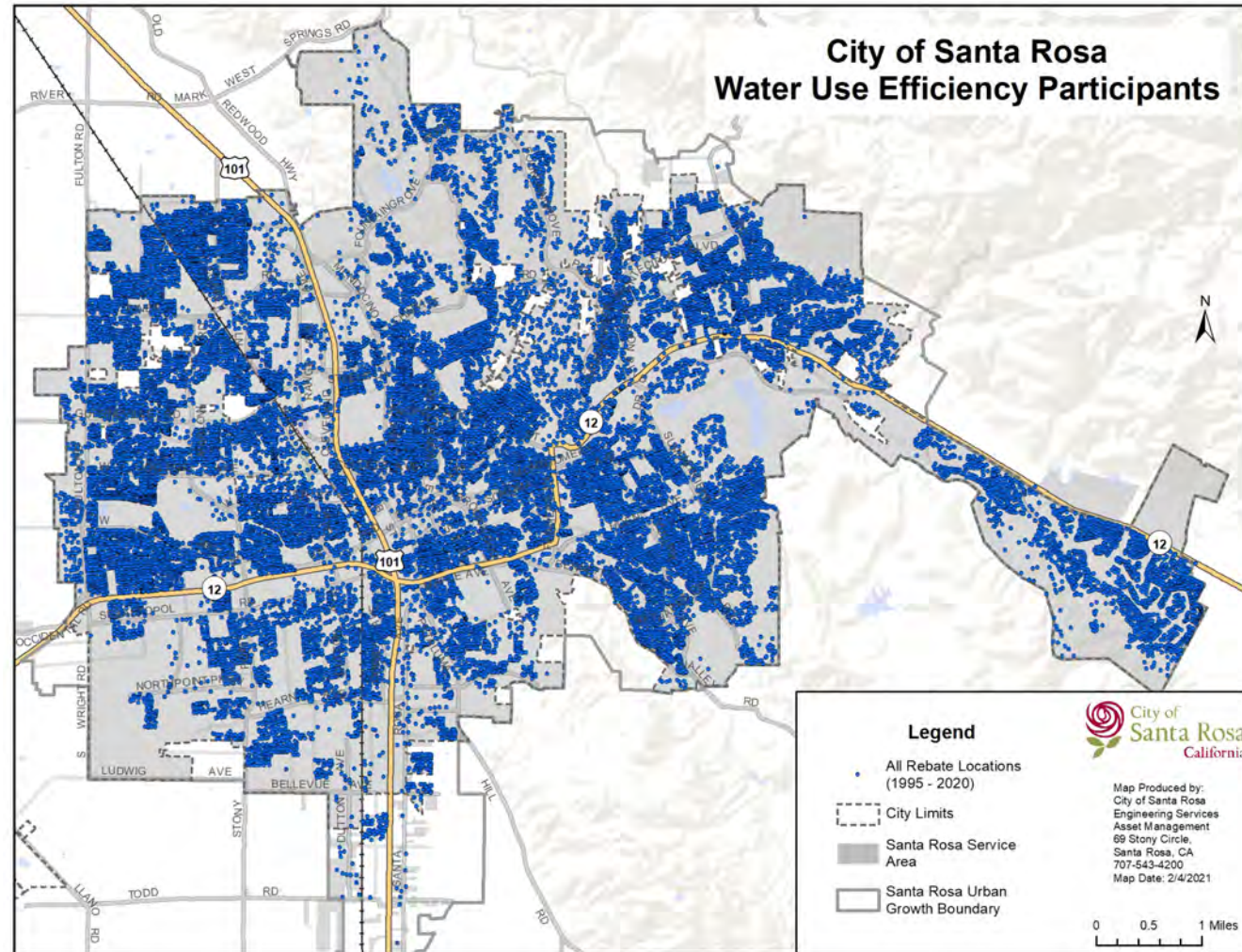


Ch 9 Demand Management Measures

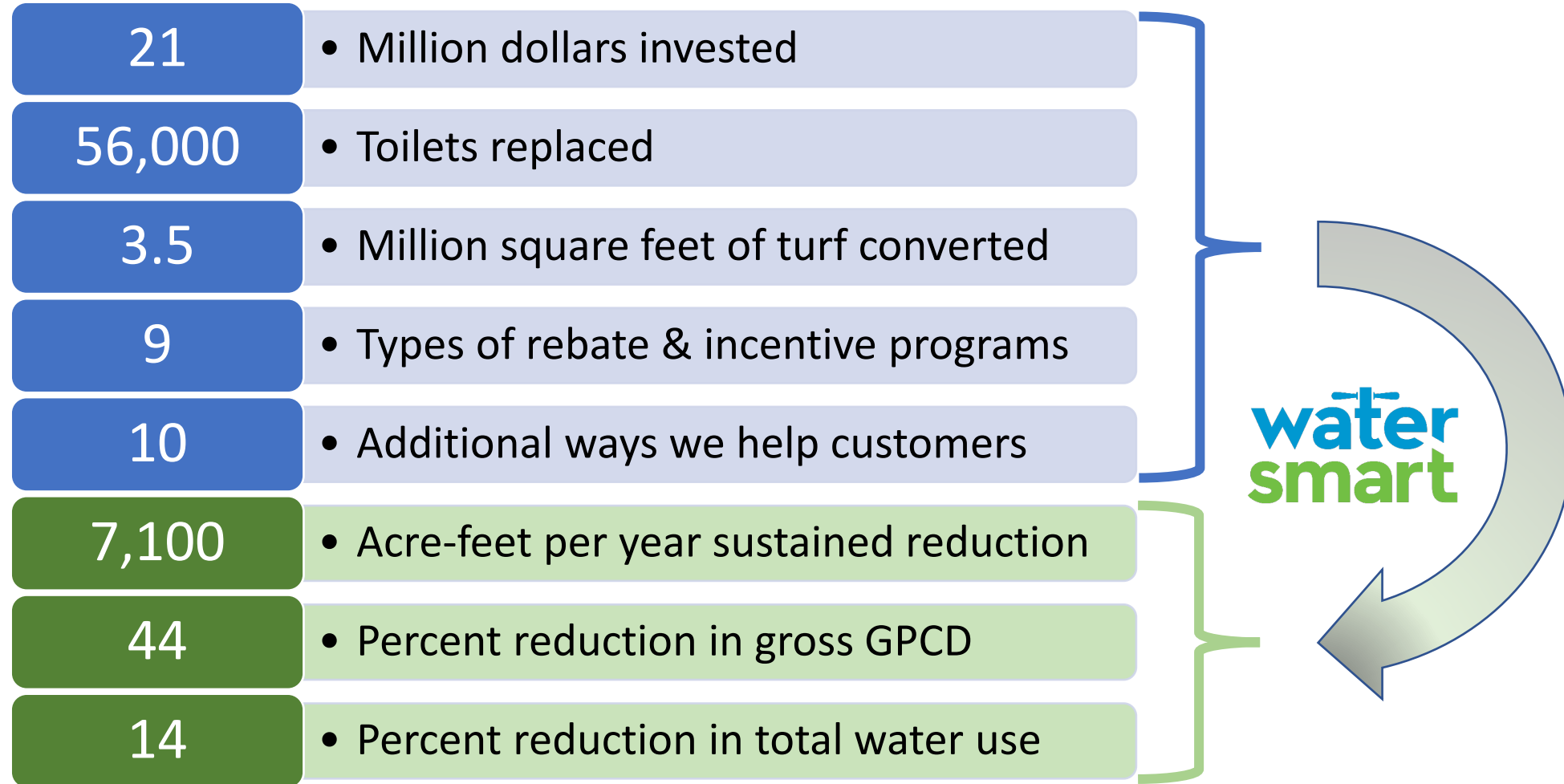
- ✓ Water waste prevention ordinance
- ✓ Metering
- ✓ Conservation pricing
- ✓ Public outreach & education
- ✓ Assessing & minimizing water loss
- ✓ Water conservation program coordination and staffing support



Ch 9 Demand Management Measures



30 years of conservation staff and programs



2020 Water Shortage Contingency Plan

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City of Santa Rosa 2020 Water Shortage Contingency Plan



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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
- Many new requirements for 2020
- Updated every five years

Response actions
to reduce demand
during shortages

- Outreach & education
- Customer service & assistance
- Prohibitions & restrictions
- Compliance & enforcement

City 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

Response Actions

Outreach & Education

- Keeping everyone informed

Customer Service & Assistance

- Helping customers save water

Operational Changes

- Adjusting internally to shortages

Restrictions & Prohibitions

- Eliminating waste & minimizing non-essential uses



Restrictions & Prohibitions

Water Waste Ordinance

- No runoff
- Leaks, breaks must be repaired

Stage 1

- Require shut-off nozzles for garden and utility hoses
- No washing hard surfaces with hose (unless required for public health)

Stage 2 – All previous and:

- No use of potable water for street cleaning
- Restaurants only serve water upon request

Restrictions & Prohibitions

Stage 3 – All previous and:

- Limit irrigation to 8:00 pm to 6:00 am
- No pressure washing with potable water unless a variance is obtained

Stage 4 – All previous and:

- No operating ornamental fountains and decorative water features

Stage 5 – All previous and:

- New construction must offset demand 1:1
- No filling new swimming pools and spas
- Require recycled water for construction dust control (if available and if filling station located within one-mile radius of site)

Restrictions & Prohibitions

Stage 6 – All previous and:

- New construction must offset new demand 2:1
- No installing water using landscape in new construction
- No filling or topping-off existing swimming pools and spas

Stage 7 – All previous and:

- New construction must offset new demand 3:1
- No installing, replanting water using landscape

Stage 8 – All previous and:

- New construction must offset new demand 4:1
- No landscape irrigation

Response Actions

Water Shortage Charge

- Stages 2-8
- Structured to encourage conservation
- Partially bridges gap in revenue during water shortage emergencies
- Requires Council action to implement



Proposed 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

Response Actions

Water Allocations

- Stages 5 - 8
- Every water service
- Requires conservation
- Council action needed

Excess Use Penalty

- To enforce Water Allocations
- Council action needed



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 Eto = Net Evapotranspiration				

Proposed Excess Use Penalty

To enforce Water Allocations in Stages 5 - 8

Entirely avoidable by all customers

Penalties to be used to

- offset costs due to water shortage emergency,
- rebuild reserves, and/or
- establish a rate stabilization fund.



Proposed Excess Use Penalty

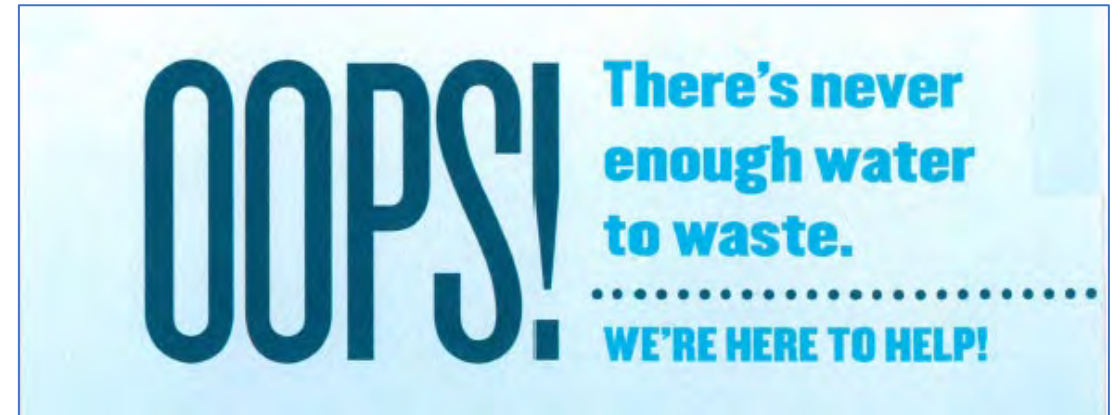
- Entirely avoidable by all customers

Stage	Shortage	101-150% use over Allocation	Over 150%
5	30%	10% of water rate with WSC	20%
6	40%	25% of water rate with WSC	50%
7	50%	40% of water rate with WSC	80%
8	>50%	50% of water rate with WSC	100%

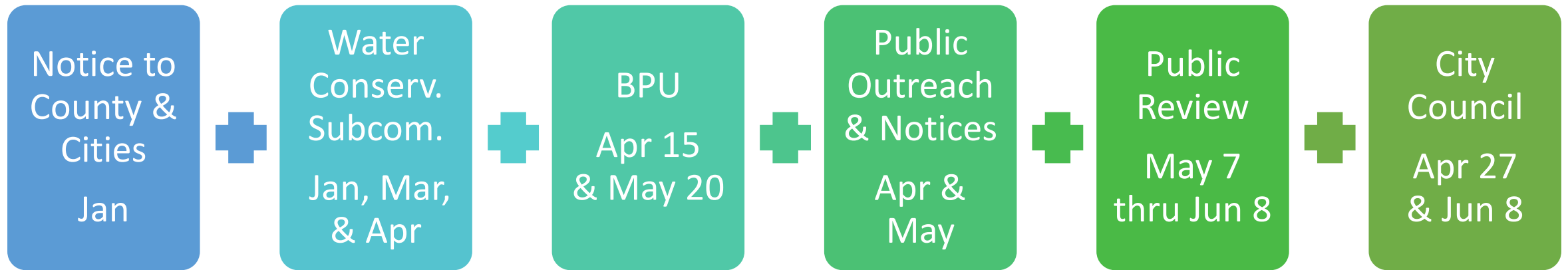
Response Actions

Compliance and Enforcement

- Progressive approach
 - Alert customer to violation
 - Offer technical assistance
 - If needed, issue warning(s)
 - If needed, enforce with penalty



UWMP and WSCP Public Participation



srcity.org/UWMP

Next Steps

- May 7 Publish draft UWMP & WSCP for public review & comment
- May 20 BPU: Consideration of UWMP & WSCP
- May 25 City Council: Public Hearing & Consideration of water rates (incl. Water Shortage Charge)
- Jun 8 City Council: Public Hearing & Consideration of UWMP & WSCP
- Jul 1 State submittal deadline



QUESTIONS?