

2020 Urban Water Management Plan and 2020 Water Shortage Contingency Plan

April 15, 2021

Board of Public Utilities

Presented by Colin Close
Sr Water Resources Planner



OUR FUTURE IN EVERY DRÖP



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
- Water shortage & contingency planning
- Current & future demand management efforts



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

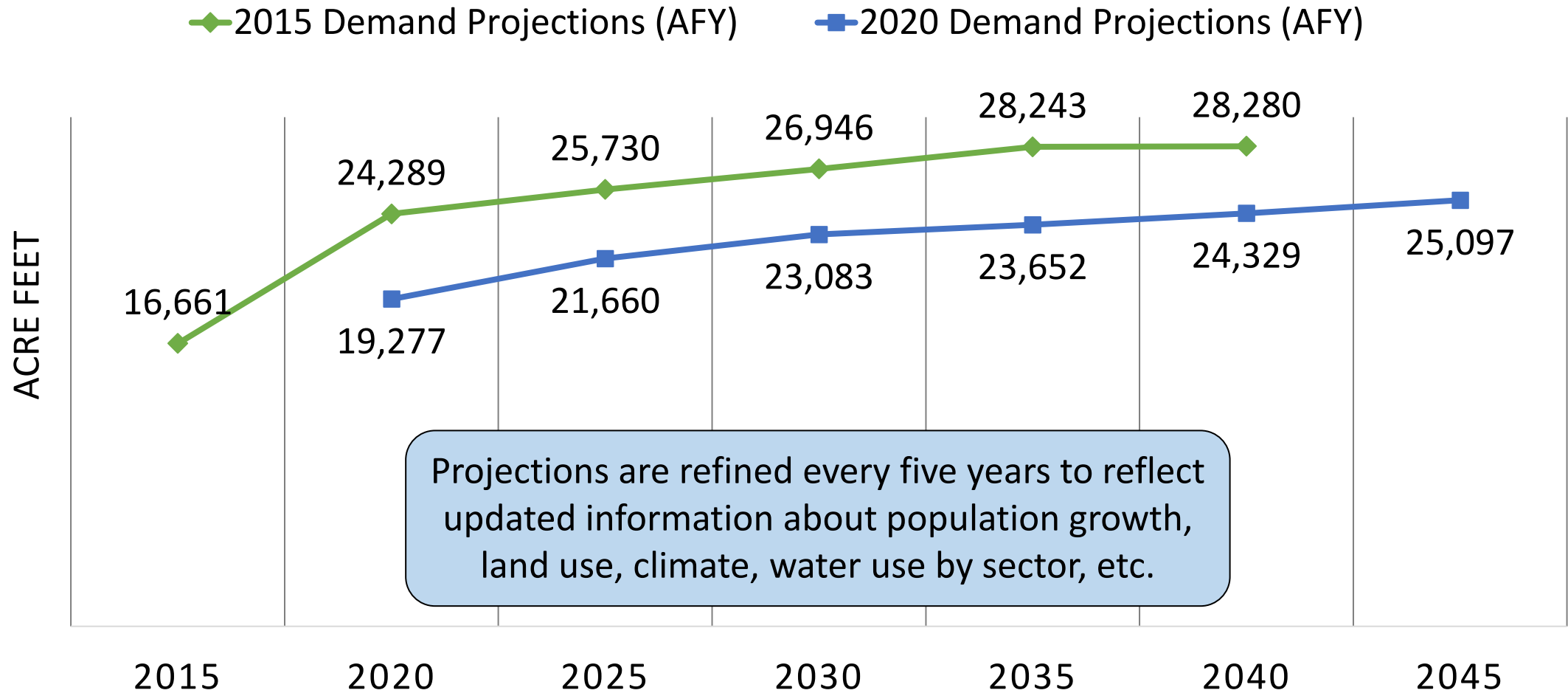
Chapter 10 – Plan Adoption, Submittal and Availability

Appendices A – N (including WSCP in Appendix J)



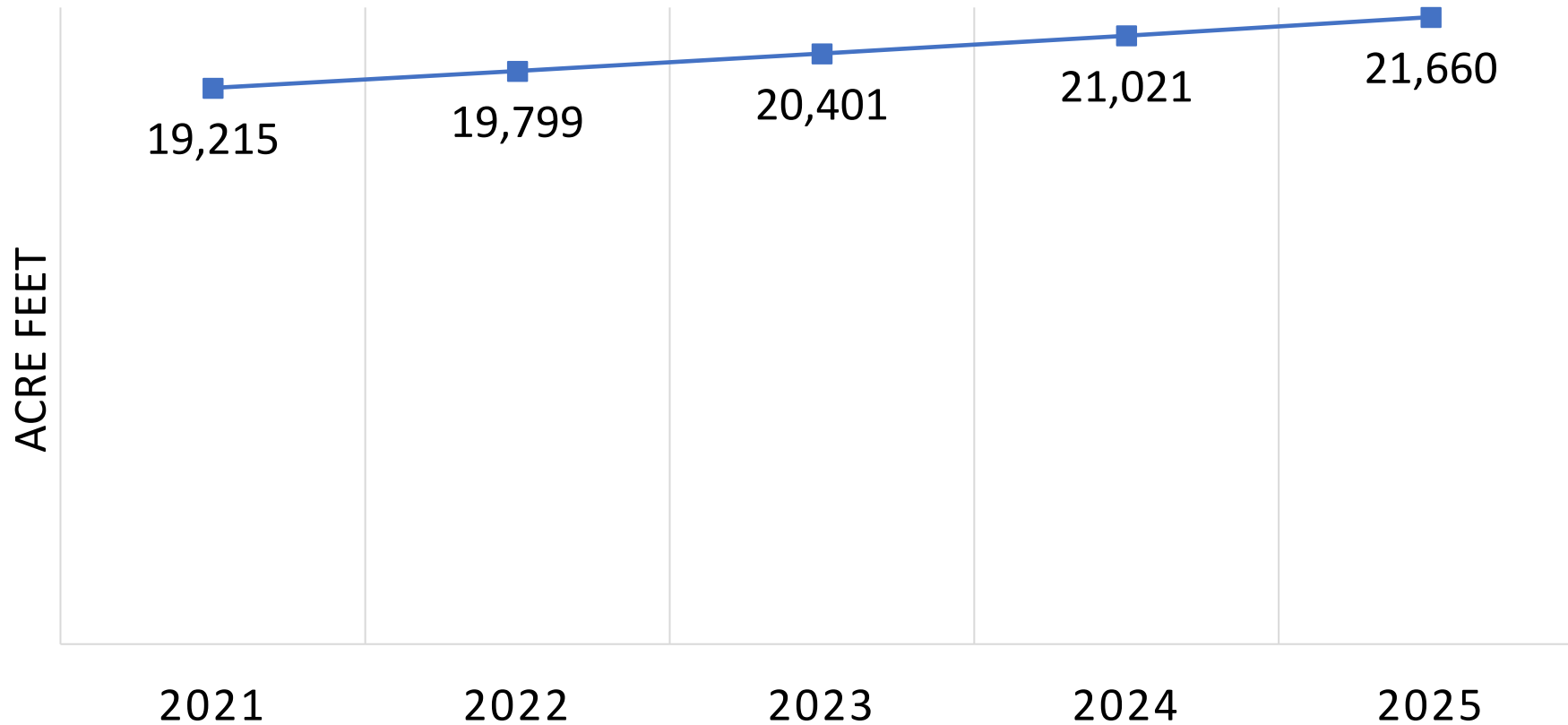
Ch 4 Water Use

Demand Projections: 2015 vs. 2020



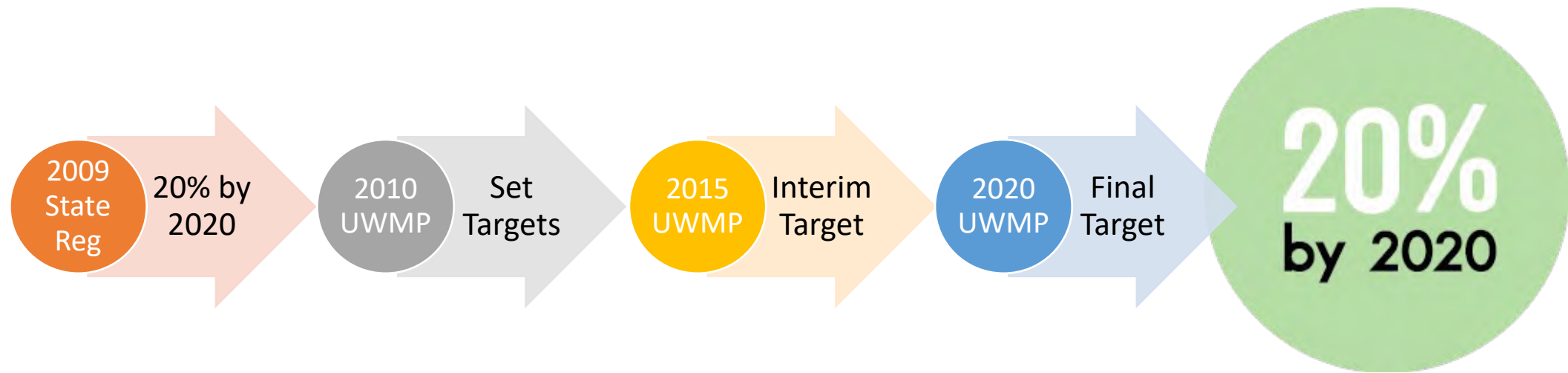
Ch 4 Water Use

2021-2025 Estimated Demand (Drought Risk Assessment)

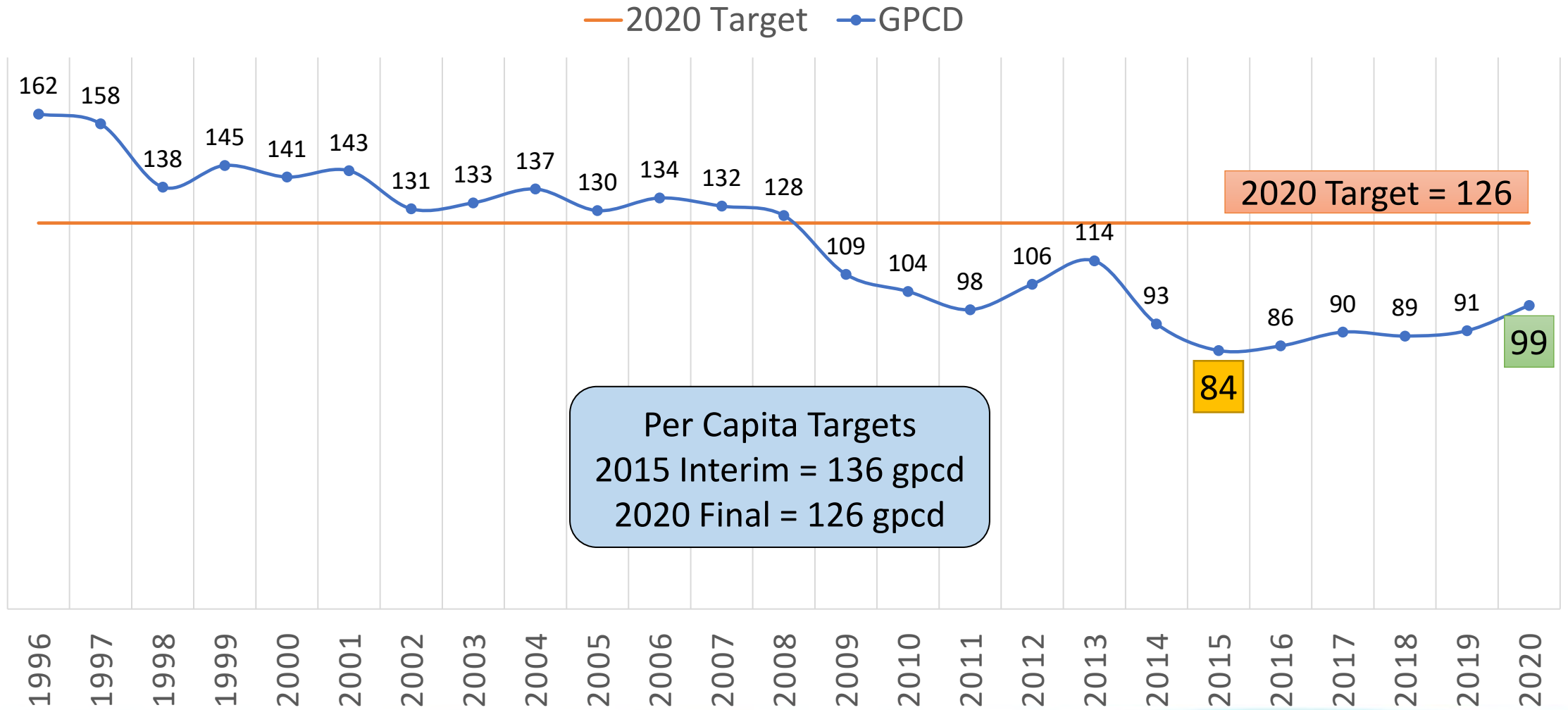


Ch 5 Compliance with Targets

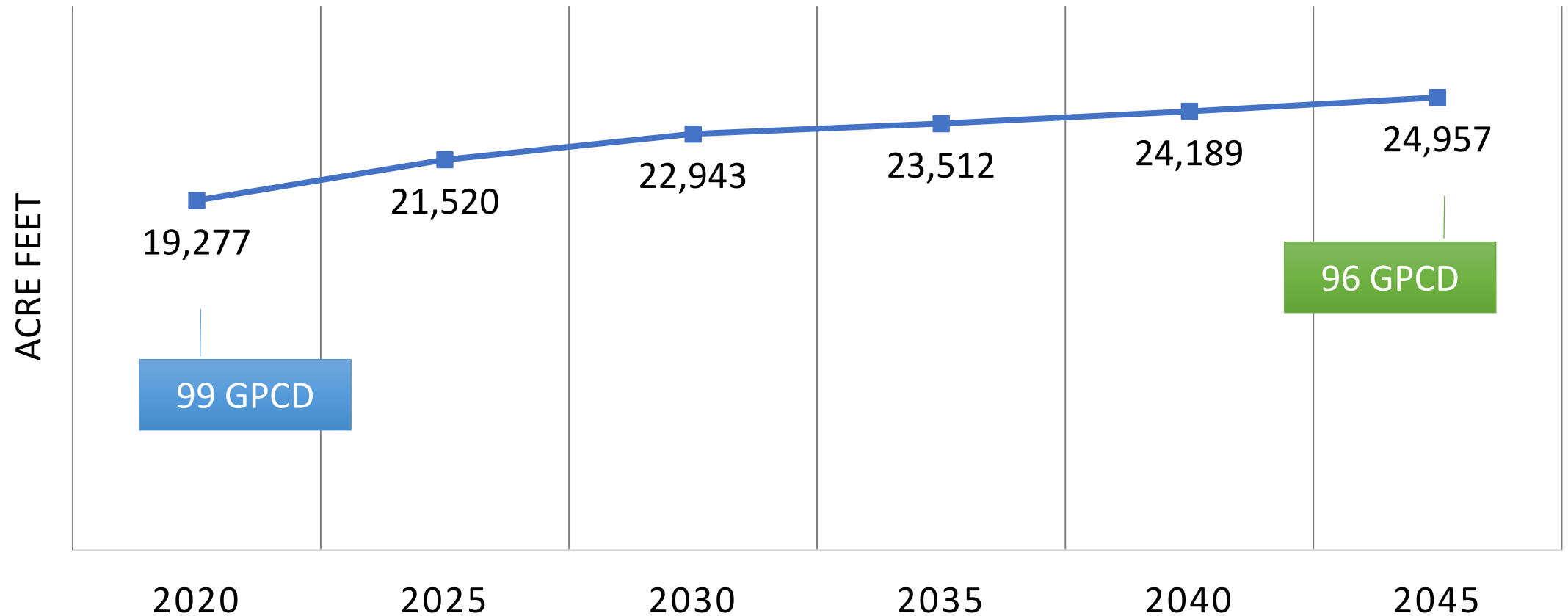
2009 Water Conservation Act (SB X7-7)




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



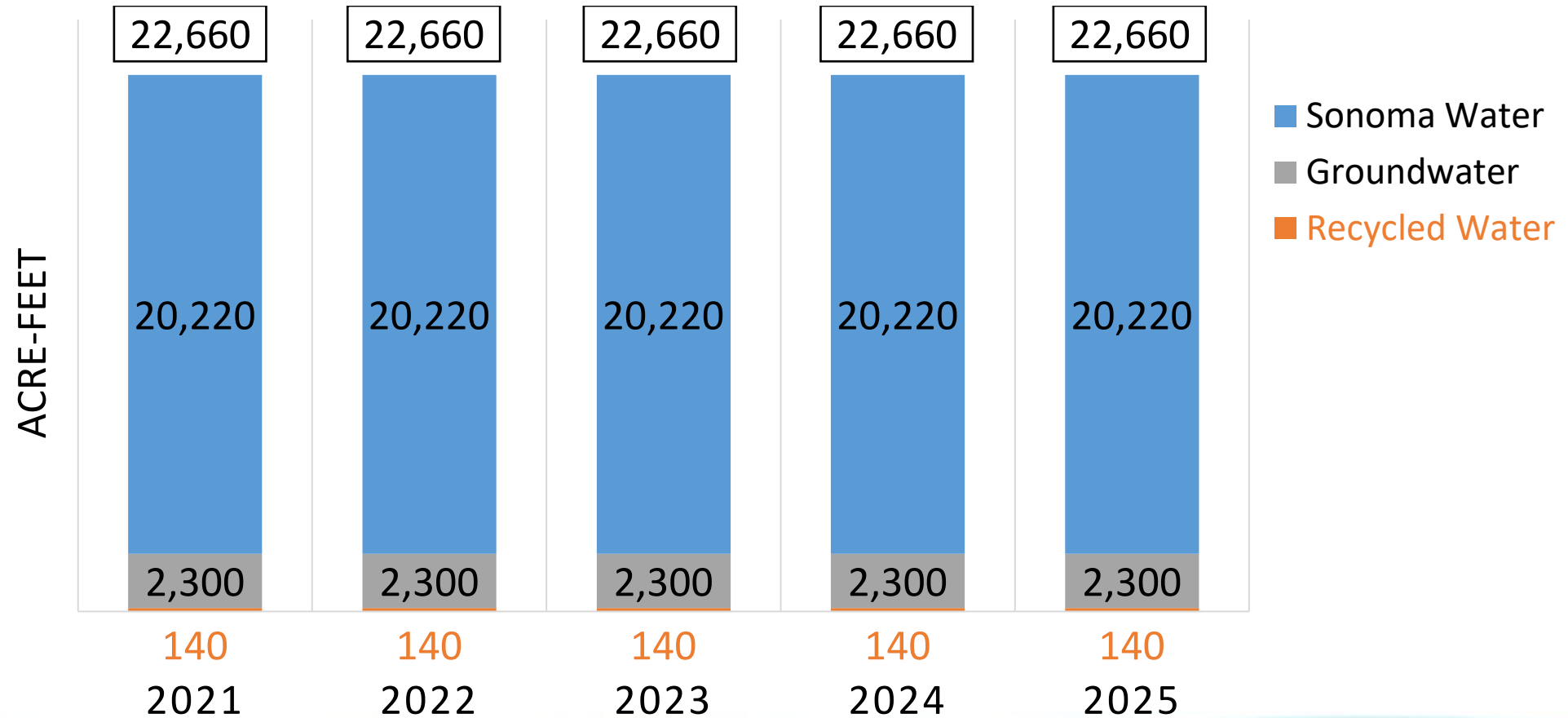
Ch 6 Water Supplies 2025-2045

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

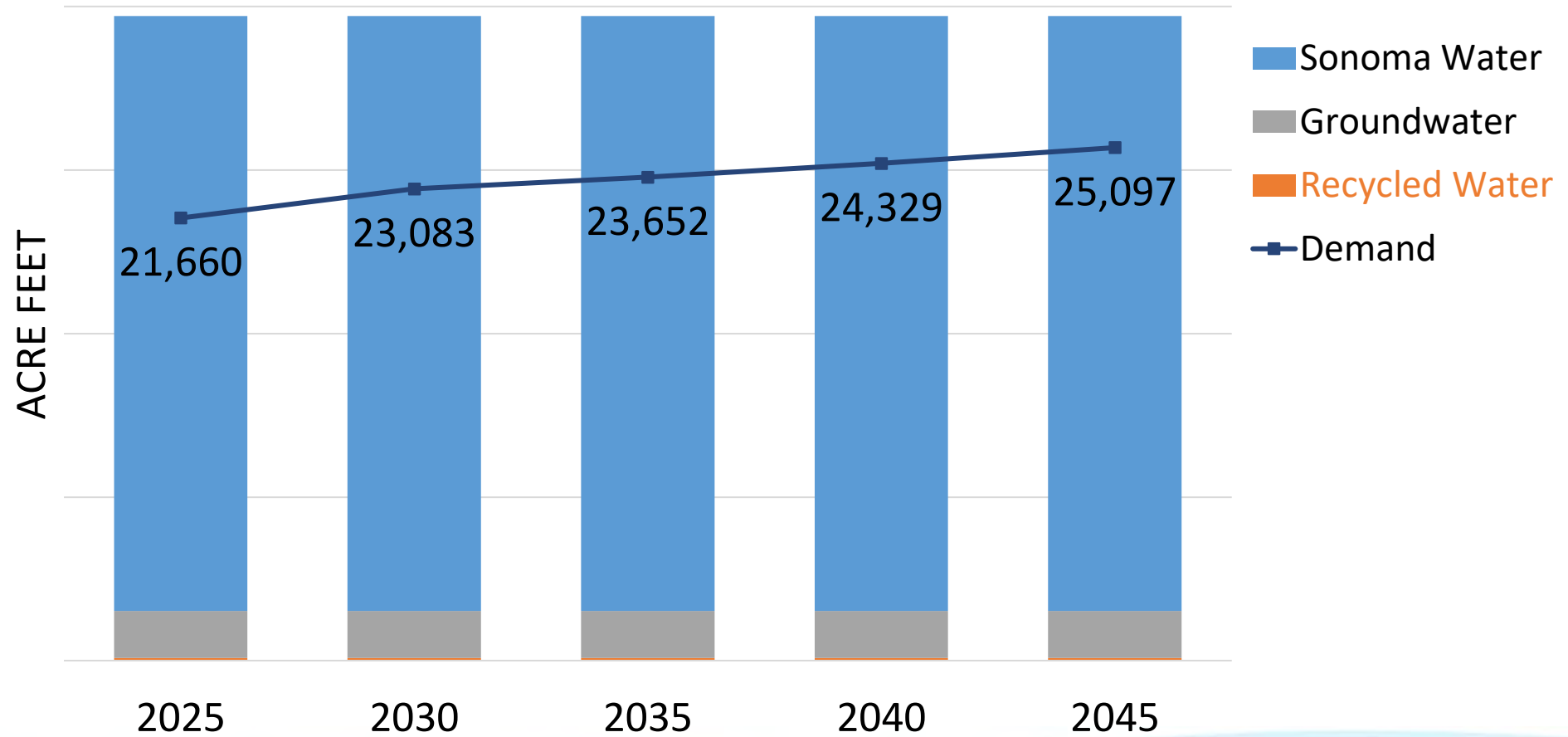
- Normal water years
- Single-dry year
- Dry five-year periods

Drought Risk Assessment for 2021-2025

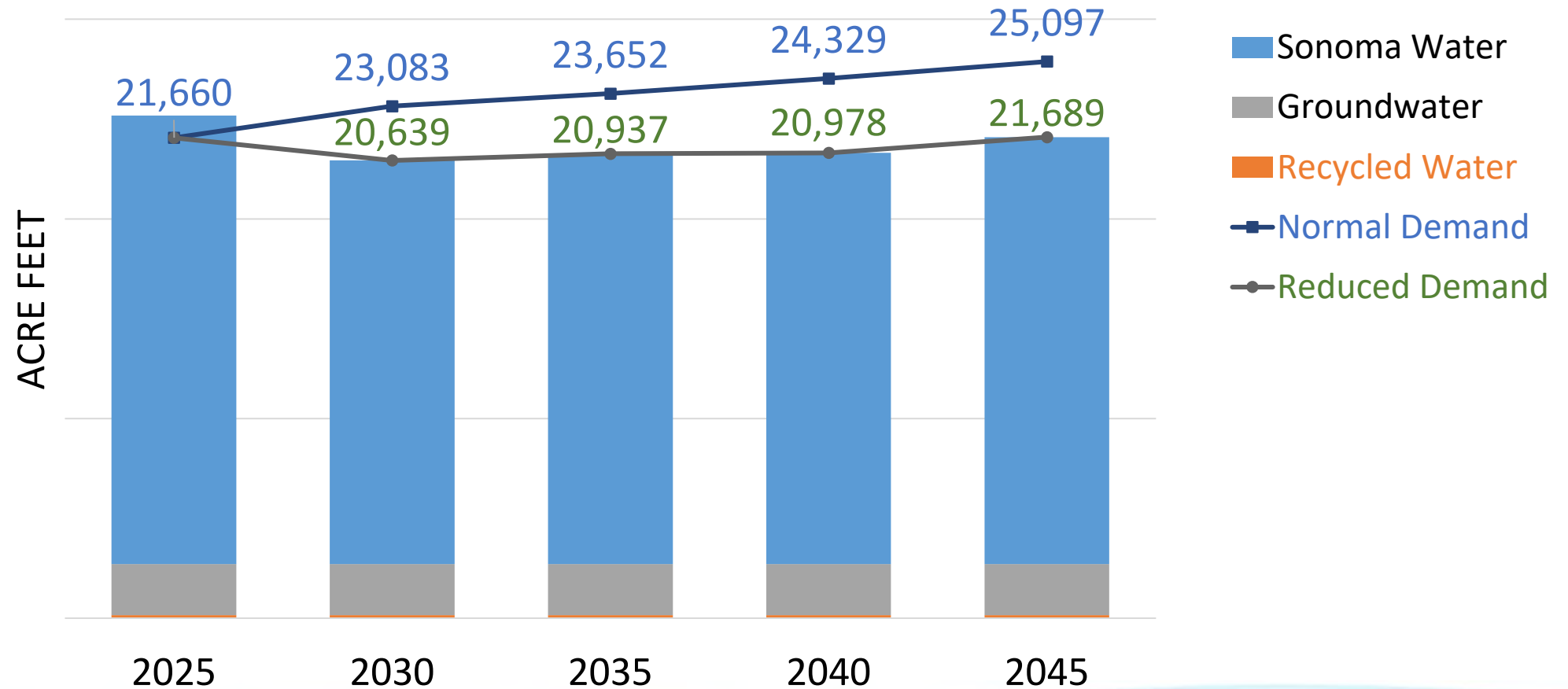
- Assume normal demand
- Hydrology like driest 5-yr period



Ch 7 Water Service Reliability 2025-2045 Normal Year

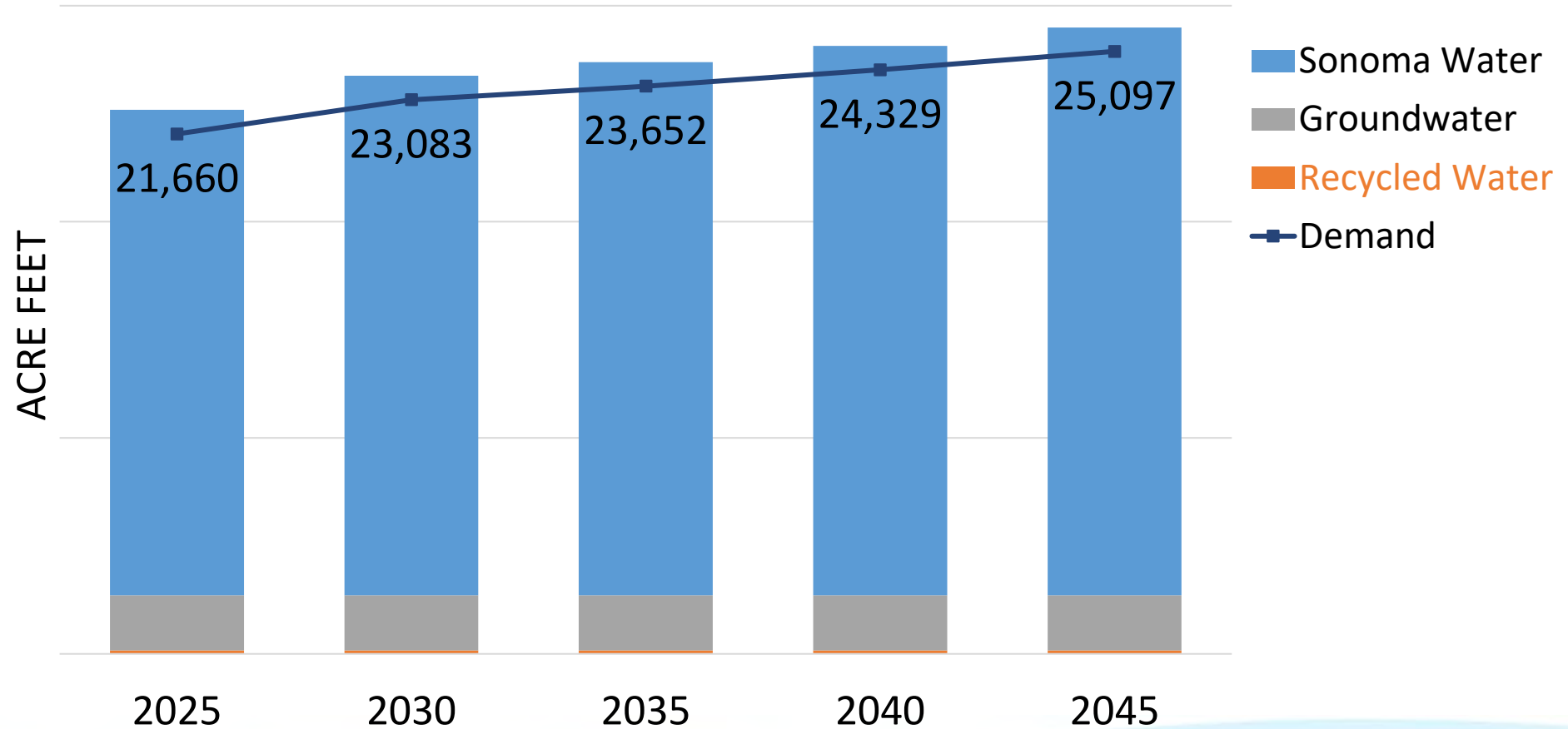


Ch 7 Water Service Reliability 2025-2045 Single-Dry Year



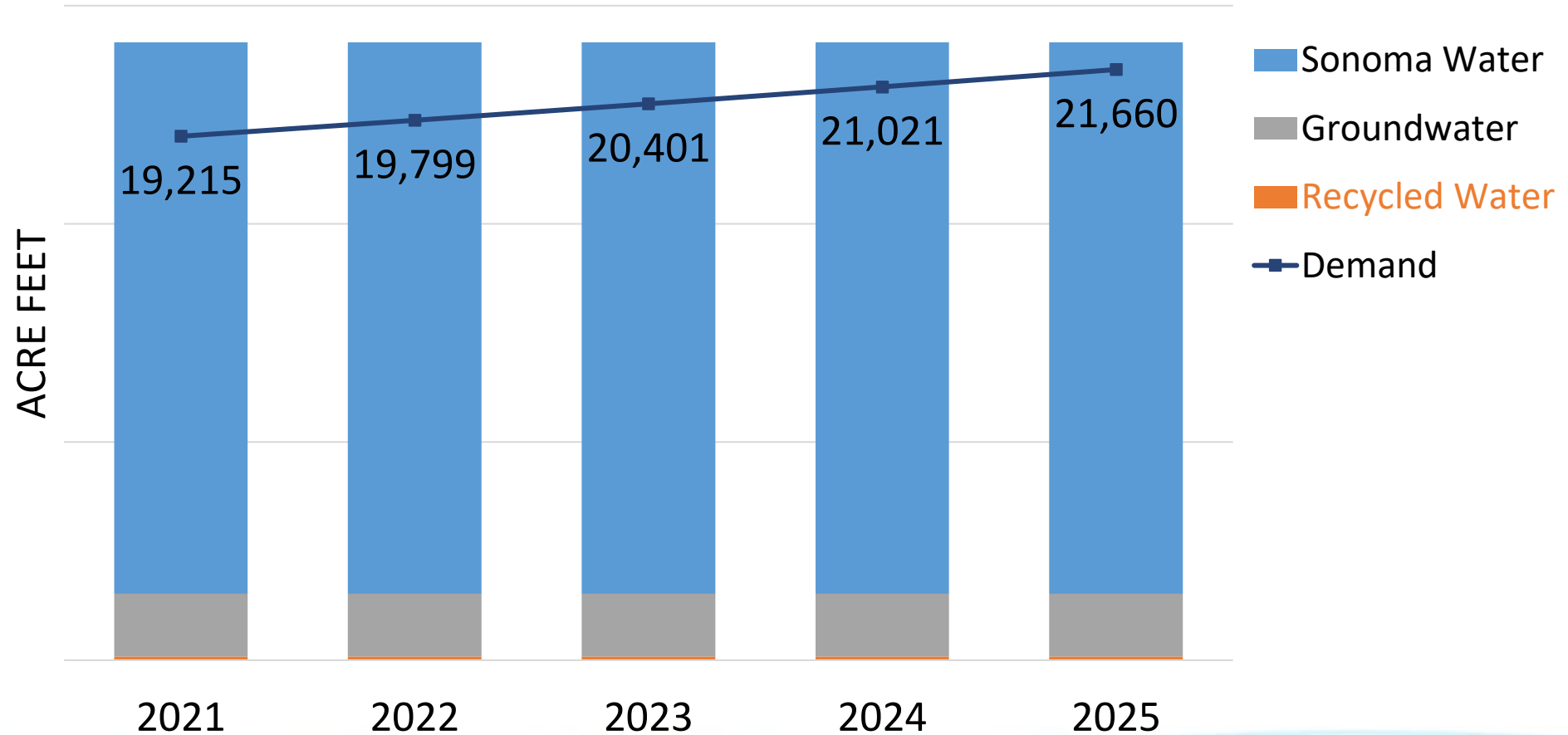
Ch 7 Water Service Reliability

2025-2045 Dry Five-Year Period



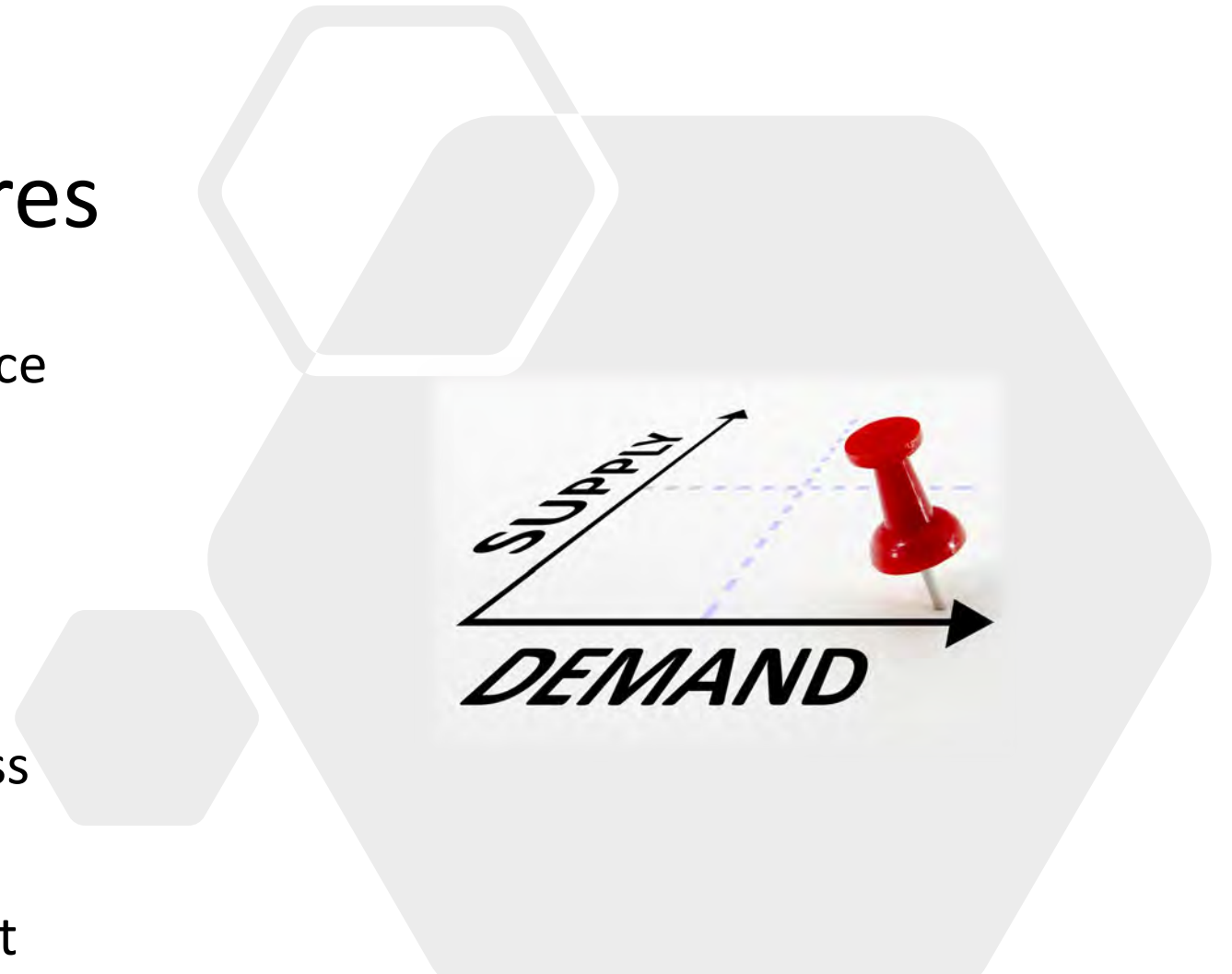
Ch 7 Water Service Reliability

2021-2025 Drought Risk Assessment

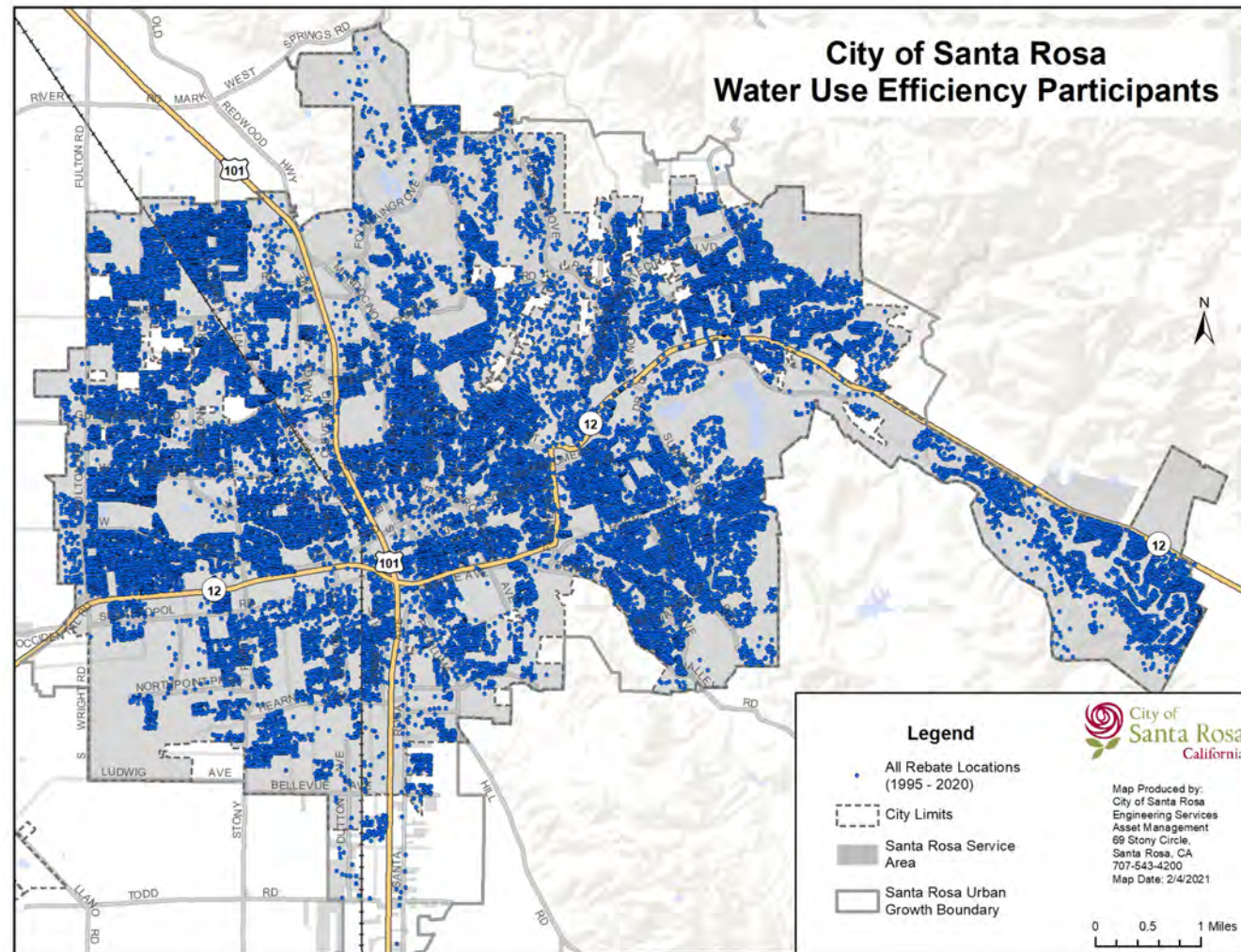


Ch 9 Demand Management Measures

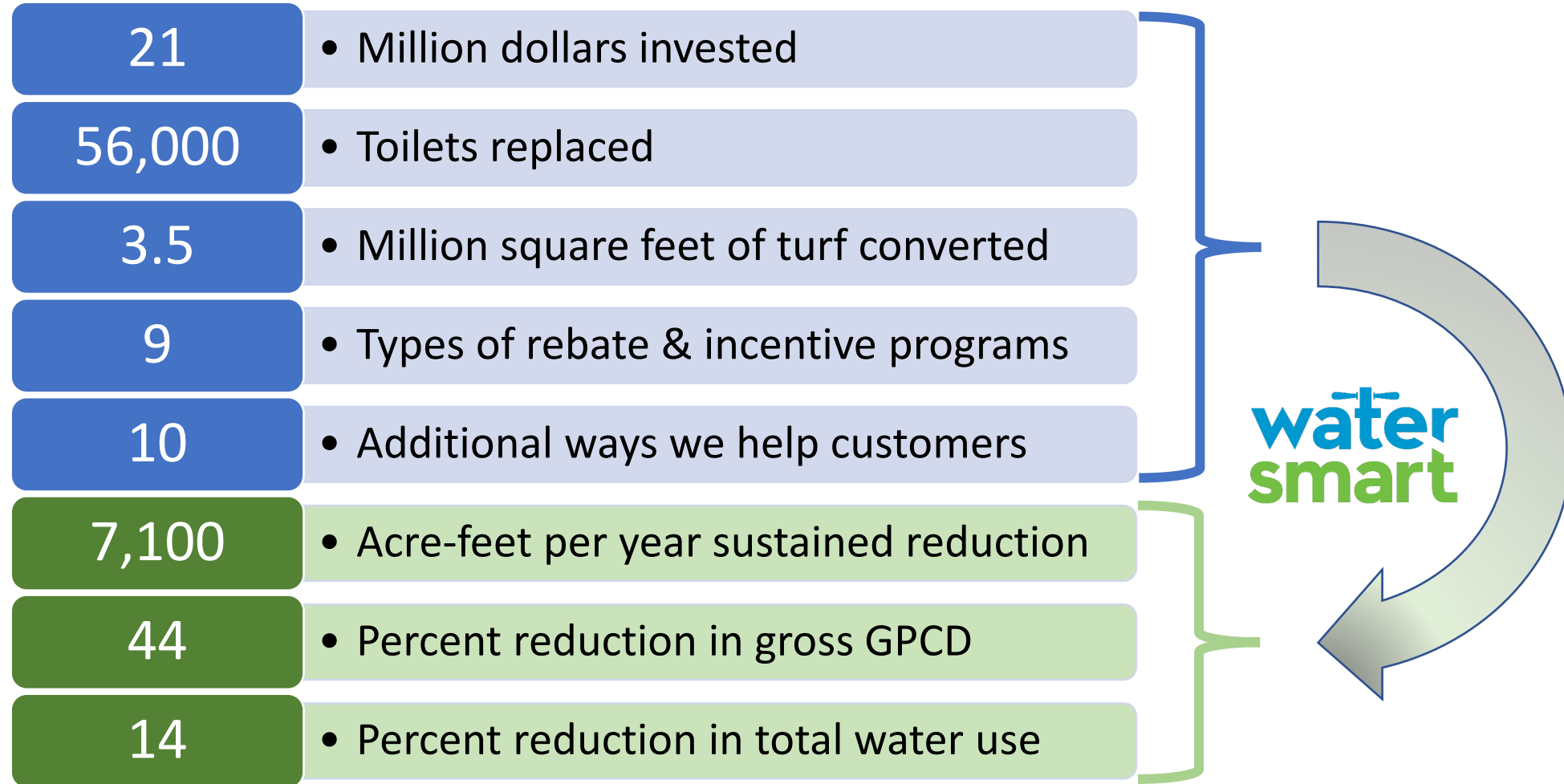
- ✓ Water waste prevention ordinance
- ✓ Metering
- ✓ Conservation pricing
- ✓ Public outreach & education
- ✓ Assessing & minimizing water loss
- ✓ Water conservation program coordination and staffing support



Ch 9 Demand Management Measures



30 years of conservation staff and programs



2020 Water Shortage Contingency Plan

FINAL REPORT | JUNE 2021

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_0	20% of ET_0	10% of ET_0	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

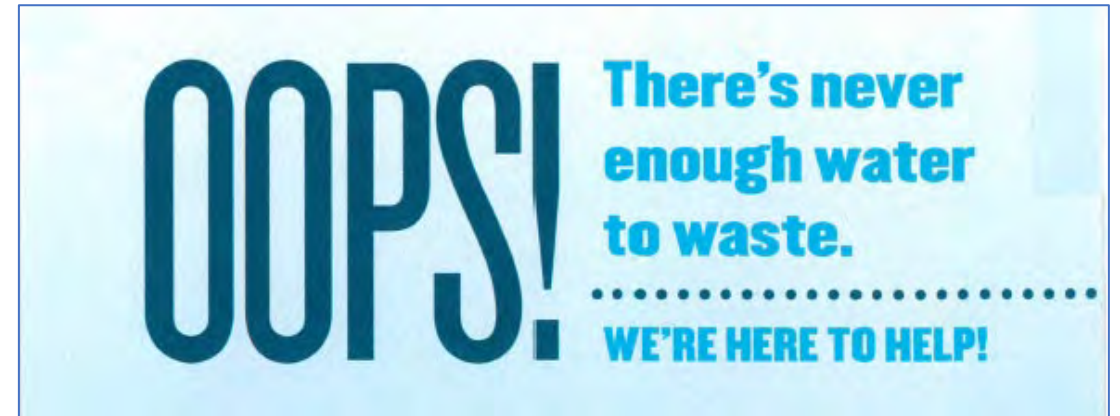
- Entirely avoidable by all customers

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%

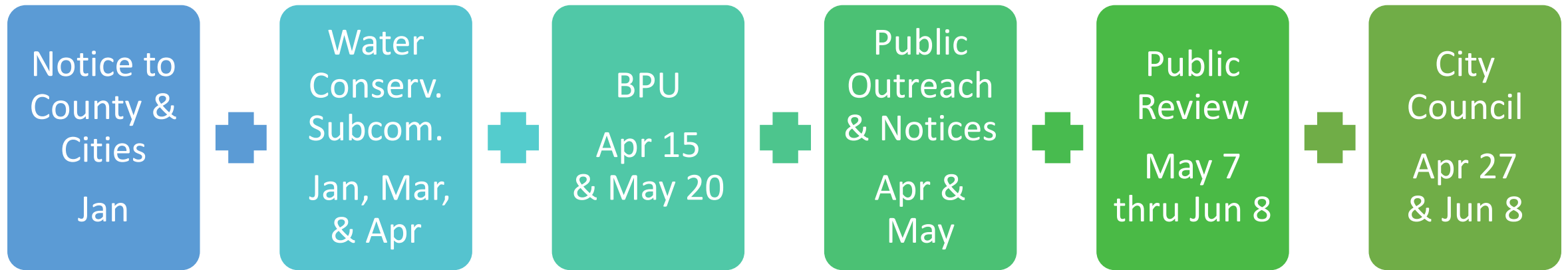
Response Actions

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

- Apr 27 City Council: Study Session on UWMP & WSCP
- May 7 Publish draft UWMP & WSCP for public review & comment (30 days)
- 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?