

Kennedy/Jenks Consultants

2015 Urban Water Management Plan Update

12 May 2016



SCOTTS VALLEY
WATER DISTRICT

Agenda

- Overview of UWMP Requirements
- Main UWMP Components
 - Population Projection
 - Demand Projection
 - SBx7-7 Targets and Compliance
 - Potable and Recycled Water Supplies
 - Water Shortage Contingency Planning
 - Demand Management Measures
- Next Steps



Overview of UWMP Requirements

- UWMP Act applies to all CA water suppliers with 3,000 or more service connections or selling at least 3,000 AFY (retail or wholesale)
- Main focus: to identify gaps between supply and demand through time
 - 20-year analysis required
 - 25 years recommended
- UWMP must describe how demand will be met through time, in all hydrologic year types (normal, multiple dry, critical dry)

Main UWMP Components

Service Area Description

- Climate
- Population in 5-year projections
- Other demographics
- System description

Water Use by Sector

- Planned Developments w/ Residential and Commercial/Industrial
- Landscape (RW)
- 5-year projections for average and dry periods

SBx7-7 Baseline

- 2015 and 2020 Targets
- Based on 2010 Census
- Evaluation of 2015 Compliance



Main UWMP Components

Water Supply Sources and Reliability

- Existing and planned Groundwater and Recycled Water
- Other: Exchanges, Desalination,
- 5-year projections average and dry periods

Water Shortage Contingency Planning

- Ordinances/ Regulations
- Precipitation – based Triggers
- Groundwater Level based - Triggers

Water Conservation

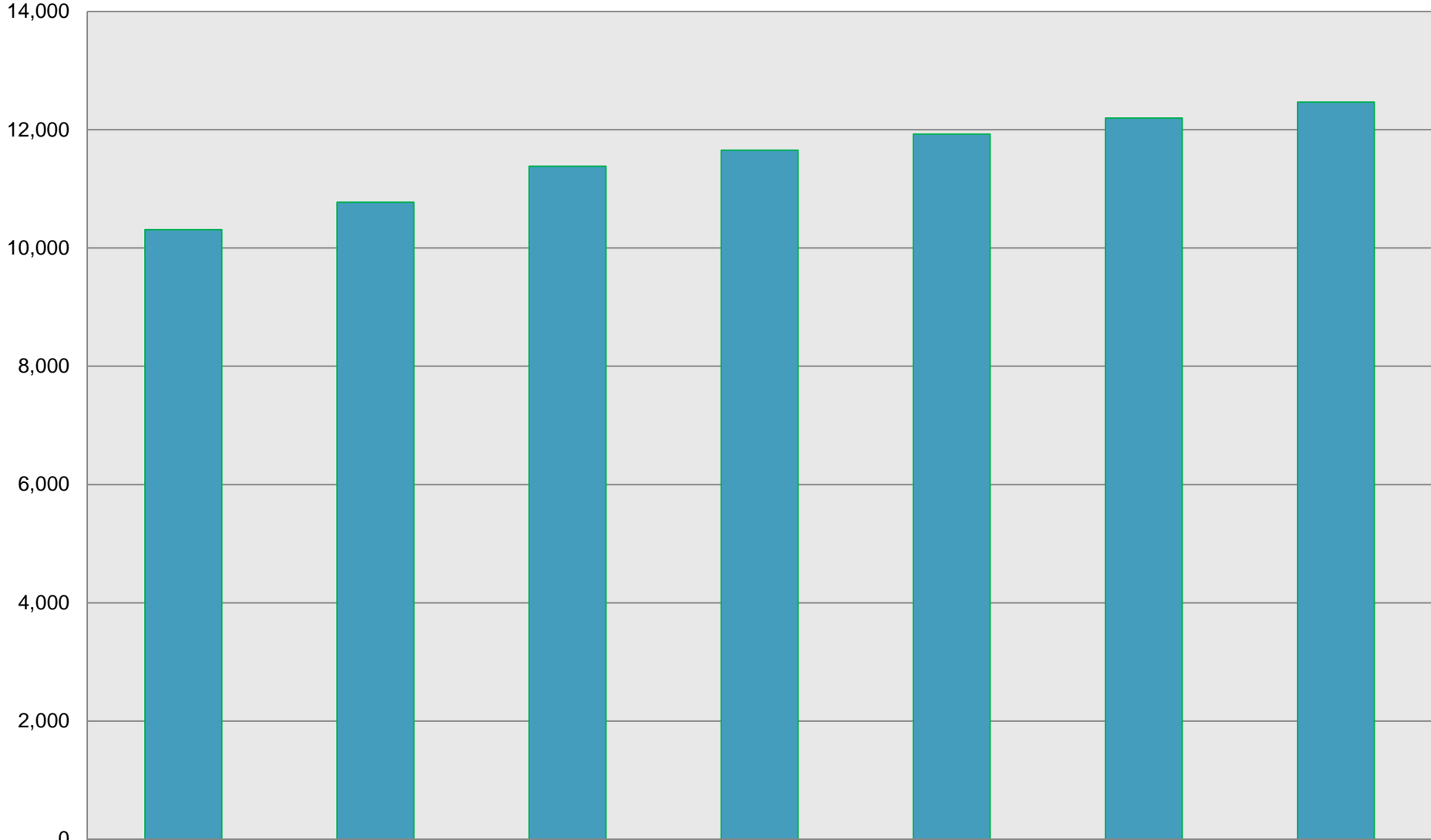
- Utility Operations
- Education
- Residential/ Commercial Assistance



Service Area Description – Population Projection

2010, 2015 & Projected Population

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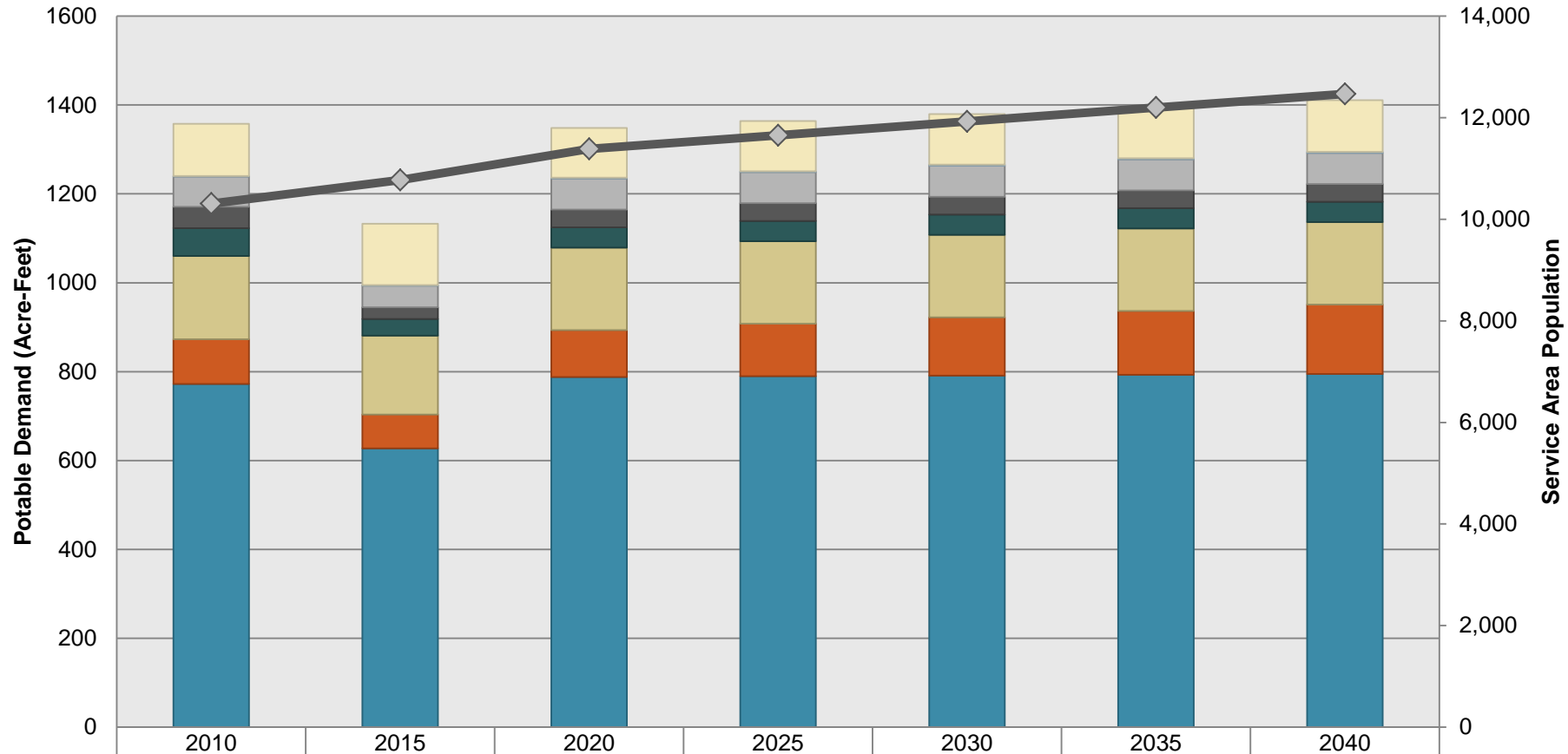
■ Service Area Population

2010	2015	2020	2025	2030	2035	2040
10,309	10,774	11,383	11,655	11,927	12,198	12,470

TS VALLEY
R DISTRICT

2010, 2015 & Projected Potable Demand & Population (Projected with "Rebound" to Average Demand of 2010-2015)

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	2010	2015	2020	2025	2030	2035	2040
Loss	118	138	111	113	114	115	116
Fire/Other	1	1	2	2	2	2	2
Landscape Irrigation - Potable	68	49	70	70	70	70	70
Govt/Institutional	48	26	40	40	40	40	40
Industrial	63	38	45	45	45	45	45
Business	187	178	186	186	186	186	186
Multi Family	101	76	105	118	131	143	156
Single Family	772	627	788	790	791	793	795
Service Area Population	10,309	10,774	11,383	11,655	11,927	12,198	12,470

SBx7-7 2015 and 2020 Targets and 2015 Compliance

Condition	Water Use
Base Daily Per Capita Water Use for the 10-year Baseline	179.9
2015 Target (90% of Base Daily Per Capita Water Use)	161.9
Actual 2013	119.1
Actual 2015	93.9
2020 Target (80% of Base Daily Per Capita Water Use)	143.9

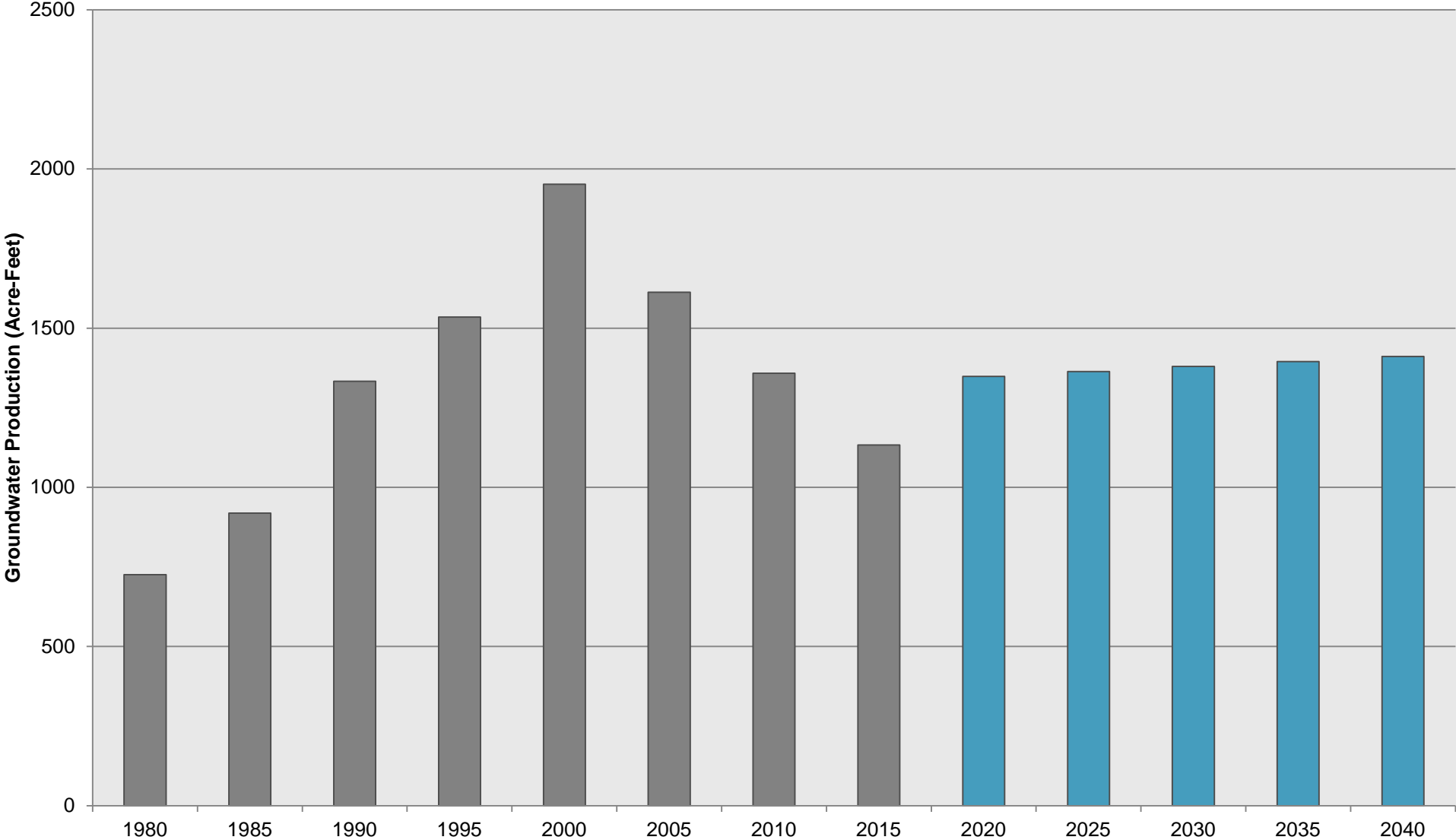
*All values are in Gallons per Capita per Day (GPCD)

Potable Water Supplies

Groundwater Production Historical and Projected

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(* 2020-2040 shown with some "rebound" in demand, assumed 9% system loss)

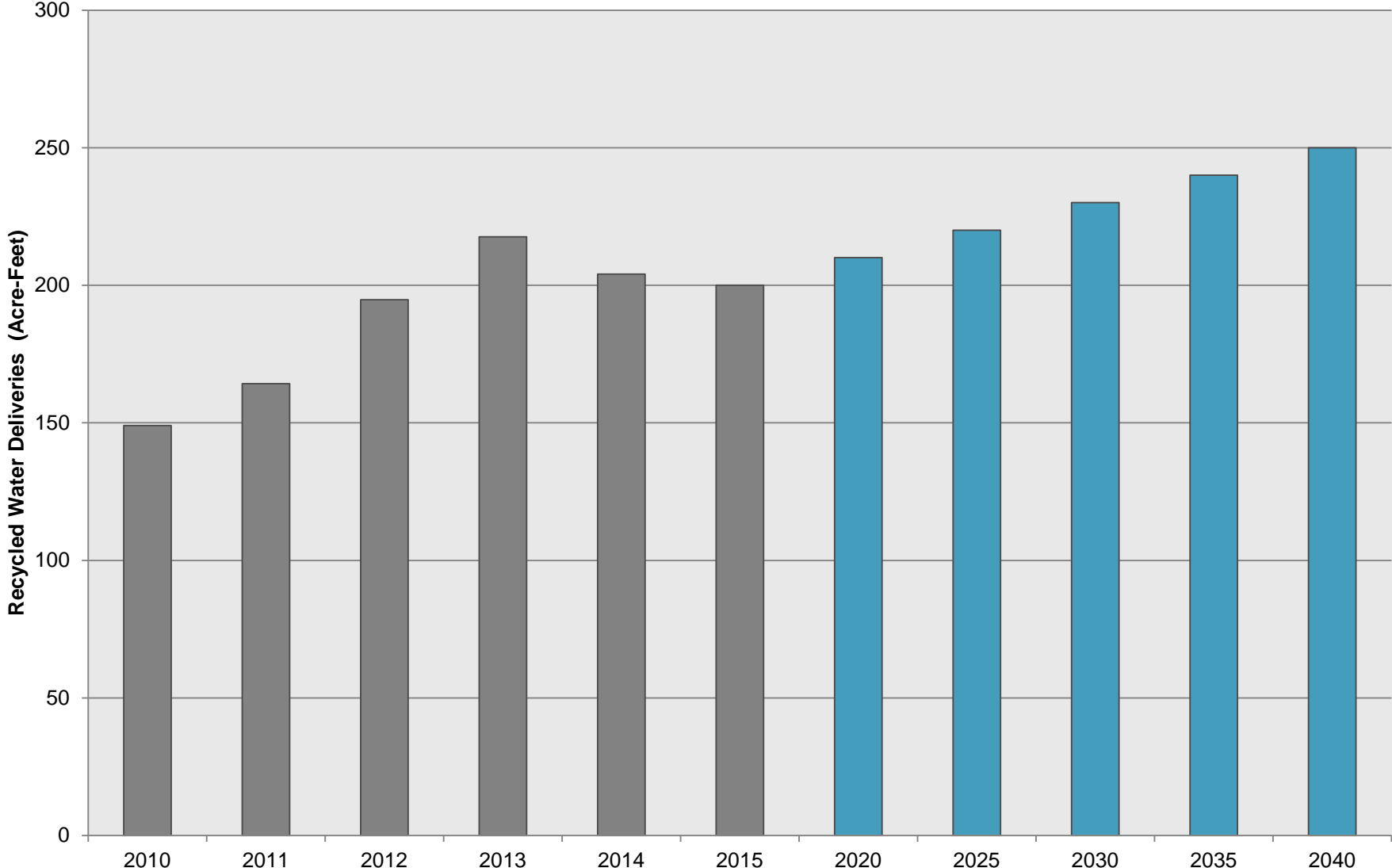


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Recycled Water Supply

Recycled Water Deliveries
Historical and Projected

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Groundwater Reliability Based on Precipitation

	Normal Water Year	Single Dry Year	Multiple-Dry Water Years				
			Year 1	Year 2	Year 3	Year 4	Year 5
Year	2002	2014	1987	1988	1989	1990	1991
Inches of Rain	42.33	19.78	23.42	23.81	30.67	20.58	26.64
Percent of Normal	100%	47%	55%	56%	72%	49%	63%
Proposed Percent Pumping	100%	85%	90%	90%	85%	85%	80%

Proposed Water Shortage Contingency Planning

Stage	Proposed Precipitation Condition	System Demand Reduction Level
1	Cumulative 2-Year Rainfall <80% of average, or Single Year rainfall <75% of average	10% demand reduction
2	Cumulative 2-Year Rainfall <70% of average, or Single Year rainfall <60% of average	15% demand reduction
3	Cumulative 3-Year Rainfall <70% of average, or Single Year rainfall <50% of average	20% demand reduction
4	Stage 3 water supply conditions based on precipitation with groundwater levels below range	25% demand reduction

- Propose Adjusting Conservation Stage based on Average Spring Groundwater Levels Relative to Historic Low for up to 5 wells
- Propose Reduction from Baseline of Average Demand of Last 5 Years with >80% of Precipitation

Water Shortage Stages Under Current and Proposed WSCP for 1947-2015

Stage	Per 2010 UWMP		Proposed for 2015 UWMP		
	Water Supply Condition (Table 8-1)	# of Occurrences from 1947-2015	Proposed Water Supply Condition		# of Occurrences from 1947-2015
			Cumulative 2-Year/3-Year Rainfall OR	Single Year Rainfall	
1	Cumulative 2 Year Rainfall <60% of average, and/or Single Year rainfall <50% of average	4 Occurrences (1976, 1988, 1991, 2014)	2-Year < 80% of Average	<75% of average	8 Occurrences (1947, 1948, 1954, 1956, 1960, 1966, 1994, 2013)
2	Cumulative Rainfall over 3 yrs <60% of average, and/or cumulative rainfall over 2 years < 50% of average and/or Catastrophic loss > 35% of well capacity	0	2-Year < 70% of Average	<60% of average	8 Occurrences (1960, 1962, 1971, 1972, 1987, 1988, 2007, 2008)
3	Cumulative Rainfall over 4 yrs <60% of average, and/or cumulative rainfall over 3 years < 50% of average and/or Catastrophic loss > 50% of well capacity	0	3-Year < 70% of Average	<50% of average	8 Occurrences (1976, 1977, 1989, 1990, 1991, 1992, 2014, 2015)
4	not applicable	not applicable	Stage 3 water supply conditions based on precipitation with groundwater levels below historic low range		not applicable

Demand Management Measures

- Utility Operations Practices
 - Water Waste Prevention and Loss Control
- Education
 - Outreach through websites, newsletters, emails, bill messages
 - Public Presentations
 - Multi-faceted Drought Response Campaign (Local and Regional)
- Rebates for
 - Toilets
 - Washers
 - Lawn
 - LoVolume Irrigation
 - Controllers
- Residential Programs
 - Assistance/Water Surveys
- Conversion to Recycled Water

Next Steps

- Issue Public Review Draft – Week of May 16th
- Respond to Public Comments
- Approval and Hearing at June 9th Board Meeting