



2020 Urban Water Management Plan Demand Analysis

Board of Directors Meeting

February 2, 2021



What is included in an Urban Water Management Plan?

- UWMPs get updated every 5 years
- Description and quantification of historical and projected water demands and supplies over 20-year planning horizon
- Demonstrate District's meeting SB X7-7 "20 by 2020" targets
- Supply reliability comparison of projected demands and supplies under normal and drought year conditions, over 20-year planning horizon (include plans for new supplies)
- Discuss water conservation measures implemented and planned
- Update of the Water Shortage Contingency Plan to address shorter-term supply shortfalls

2020 Water Demand and Conservation Project

Sonoma Marin Saving Water Partnership members collaborated to develop the 2020 Water Demand and Conservation Project Report to:

- Evaluate and document recent historical water use characteristics and trends, including population and account growth
- Estimate projected water demands for the years 2025 through 2045 to support both the 2020 UWMP update and coordinate planning efforts with Sonoma Water



Population & Employment Projections

PROJECTED Population & Employment

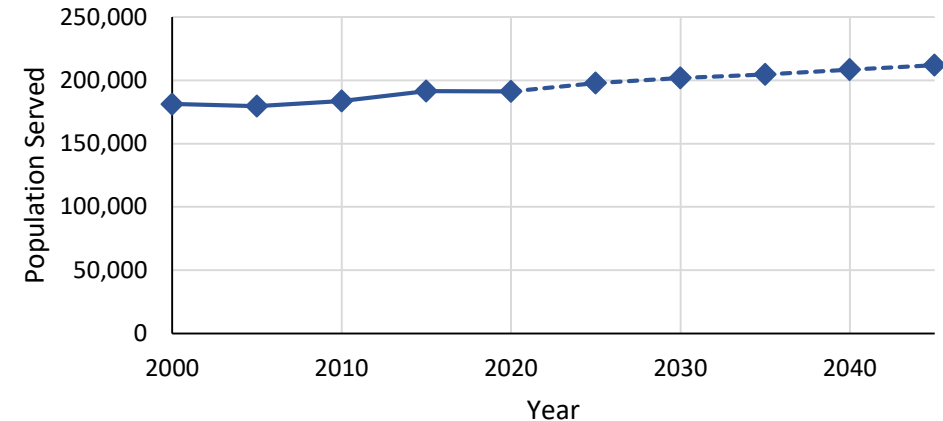
■ Population

- Using ABAG (2018) adjusted unincorporated area outside county
- Total growth rate: 8.5%
- Average annual growth rate: 0.34%

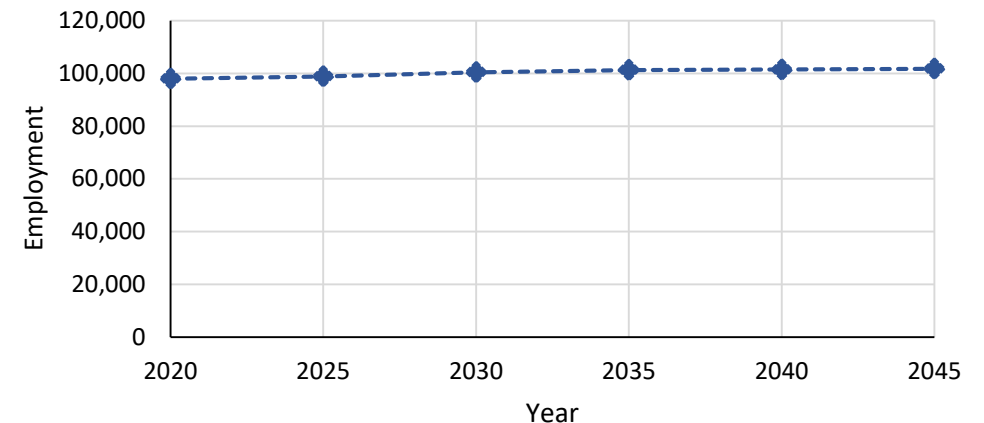
■ Employment

- Using ABAG (2018) adjusted unincorporated area outside county
- Total growth rate: 3.8%
- Average annual growth rate: 0.15%

Current and Projected Population

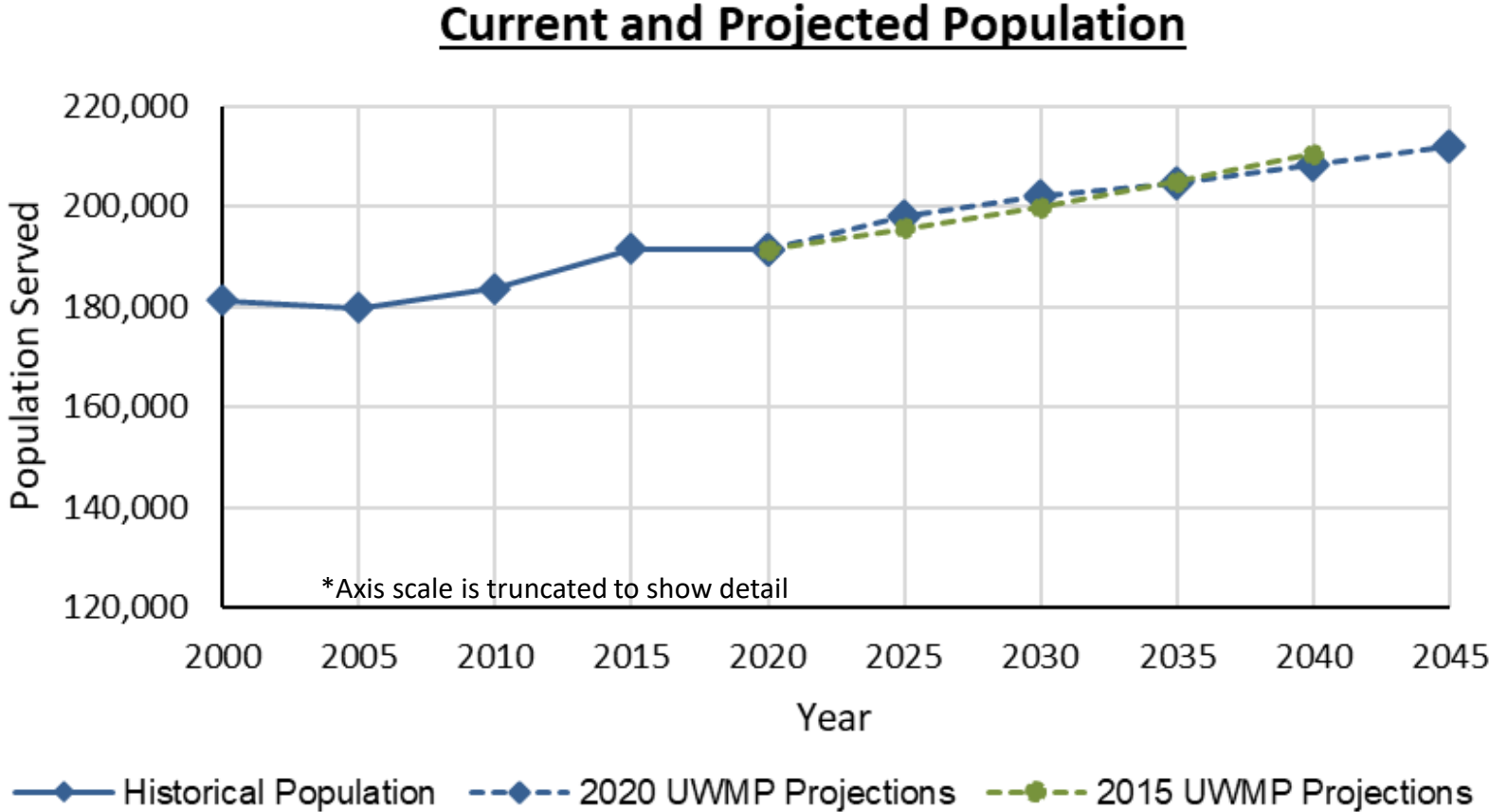


Current and Projected Employment



Population Comparison

- Updated population projections similar to 2015 UWMP projections



Demand Projections

Demand Factor Evaluation

- Considered a range of demand factors based on:
 - Pre-Drought usage
 - Post-Drought usage
 - A mid-point between pre- and post-drought

Potential Water Demand Factors Considered

Water Use Sector	Water Demand Factor (GPD/account)		
	Pre-Drought (2011-2013)	Partial Rebound	Post-Drought (2017-2019)
Single Family Residential			
Existing Accounts	270	255	240
New Accounts	365	350	335
Multi-Family Residential	795	758	720
Business/Industrial	785	759	734
Institutional	6,228	5,839	5,449
Agricultural/Irrigation	1,708	1,595	1,482
Other	89	90	92
Raw Water	156,569	147,509	138,449
Recycled Water	2,252	2,129	2,006

Abbreviations:

GPD = gallons per day

Demand Factor Evaluation

- Combination of Pre-Drought and partial rebound factors were selected
- Considers climate change:
 - Demand projections are relative to a period of sustained drought
 - Representative of likely future drought periods

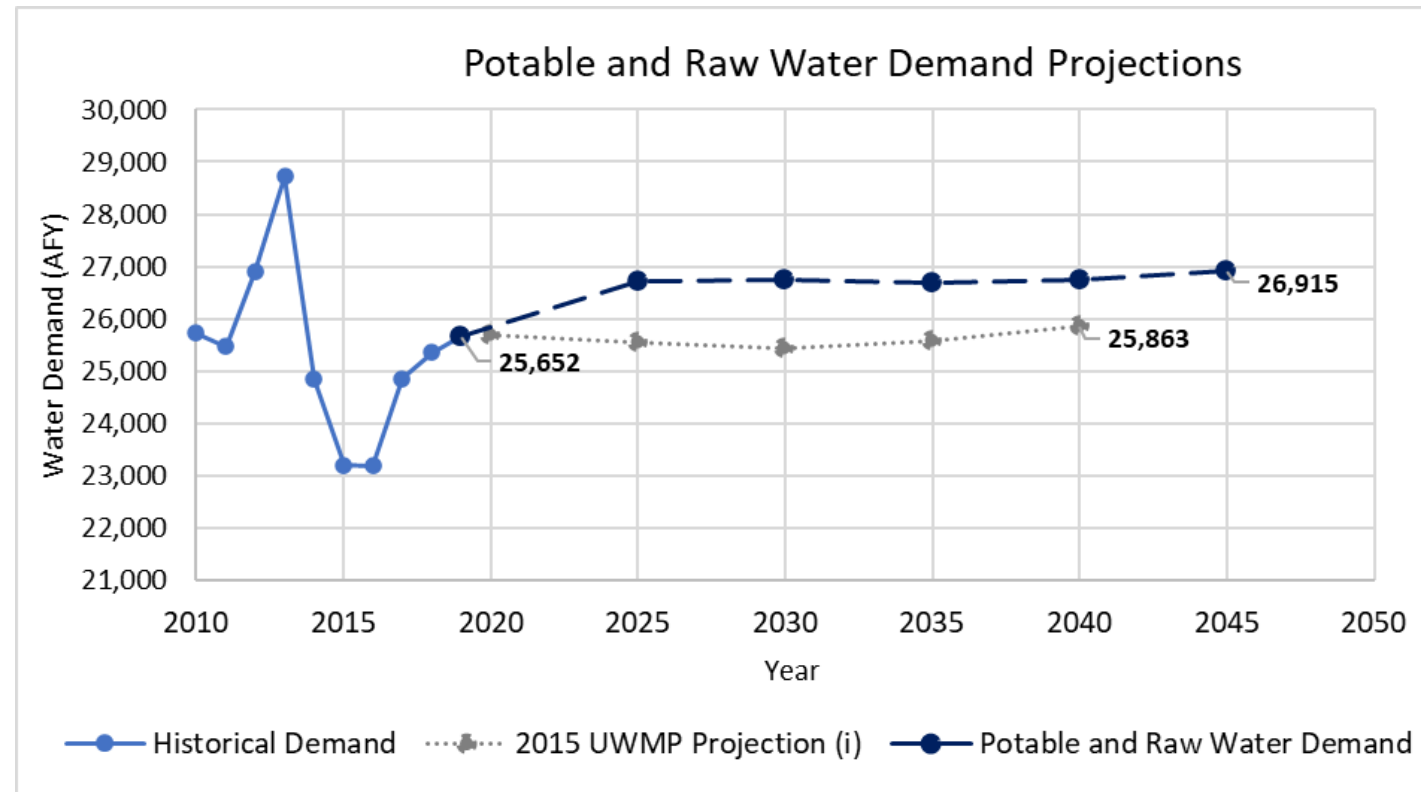
Selected Water Demand Factors

Water Use Sector	Water Demand Factor (GPD/account)	Basis for Demand Factor
Single Family Residential		
Existing Accounts	255	Partial rebound
New Accounts	350	Partial rebound
Multi-Family Residential	758	Partial rebound
Business/Industrial	785	Pre-drought
Institutional	6,228	Pre-drought
Agricultural/Irrigation	1,708	Pre-drought
Other	89	Pre-drought
Raw Water	147,509	Partial rebound
Recycled Water	2,252	Pre-drought

Abbreviations:
GPD = gallons per day

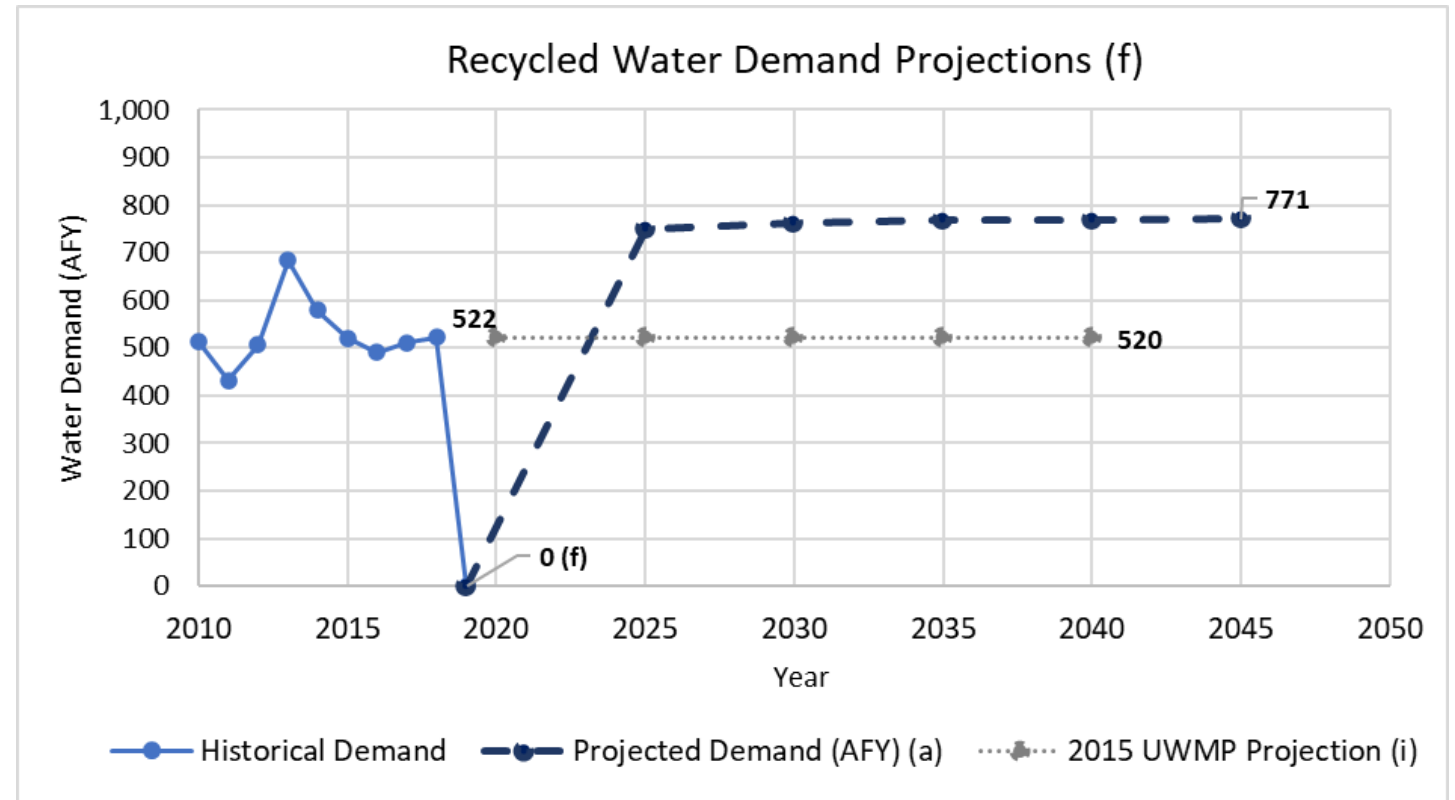
PROJECTED Potable Water Demands

- 2045 projected demand is 4.9% higher than current 2019 demand
- In 2040, projected demand is 895 AF higher than 2015 UWMP projections
- 2045 demand is within range of historical demands



PROJECTED Recycled Water Demand

- Using pre-drought demand factor
- Projected demand assumes no significant potable water make-up in future
- 2045 projected demand is 17% higher than 2019 recycled water system demand (i.e., potable make-up)



Next Steps

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UWMP requires a demonstration of the ability to meet customer demands under various supply conditions

- Incorporate demands into water supply reliability analysis
- Update the Water Shortage Contingency Plan

UWMP must be formally adopted by the Board and submitted to DWR by June 2021

