Water Demand Projections and Water Management

Santa Margarita Groundwater Agency

Board Meeting

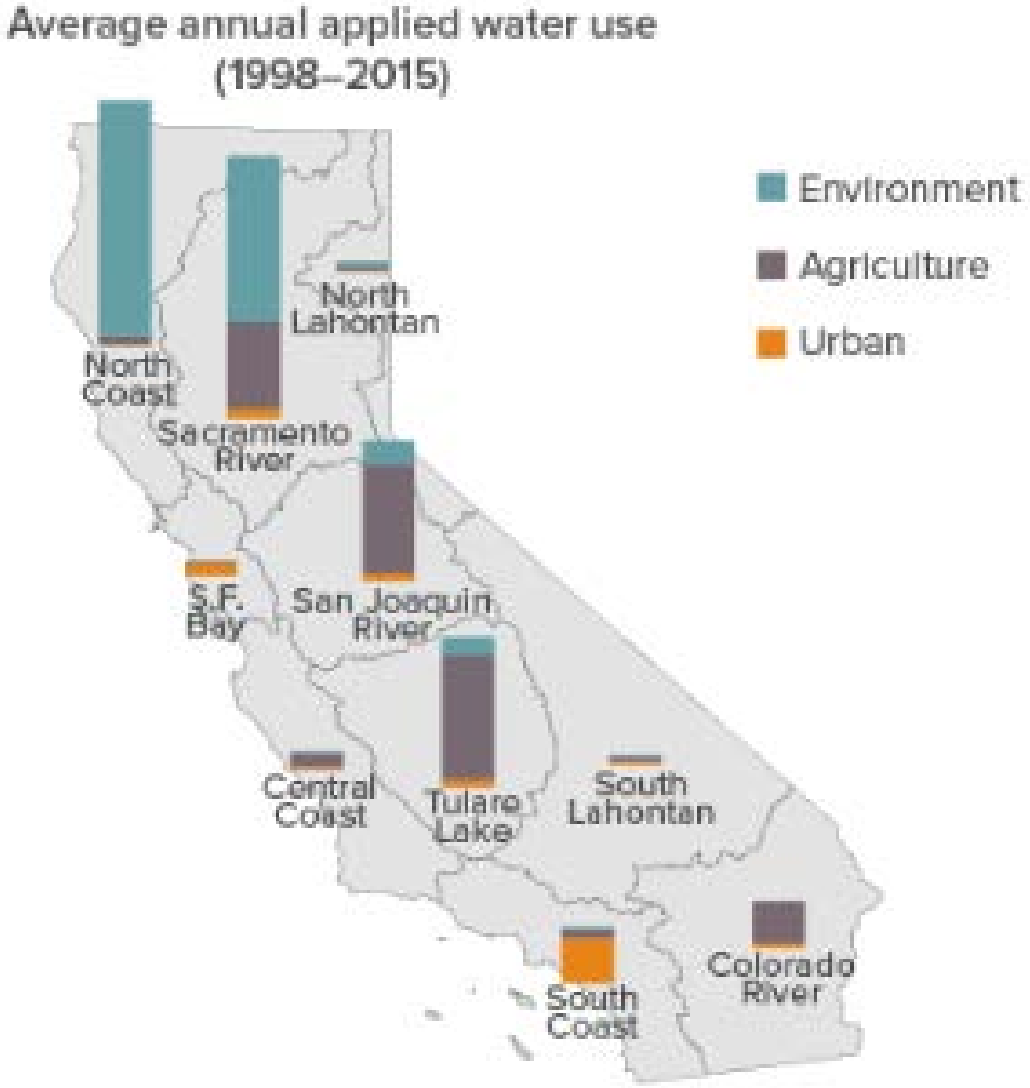
March 26th 2020

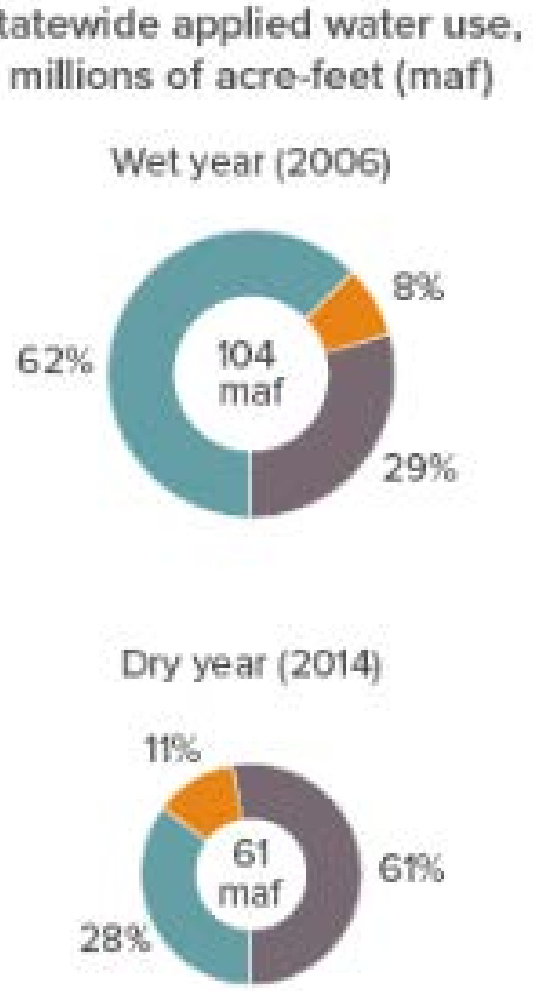
SMGWA

Water Use in California

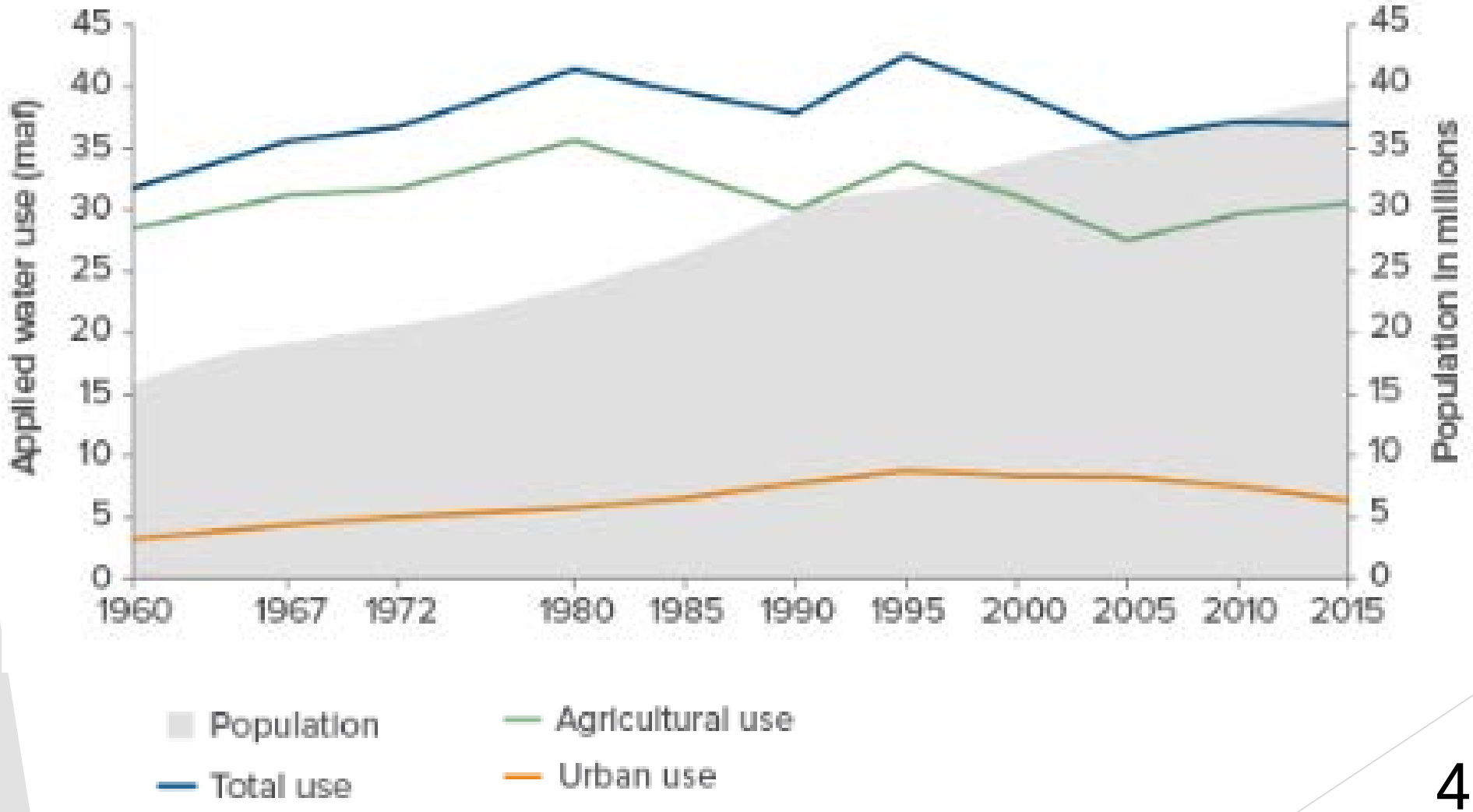
- 50% environmental, 40% agricultural, 10% urban
- Varies drastically between wet and dry years
- In dry years, the share of water that goes to the environment decreases significantly
- Agricultural water use is falling while the economic value of farm production is growing
- Despite population growth, total urban water use has fallen

Water Use Variations: Regions and Climate

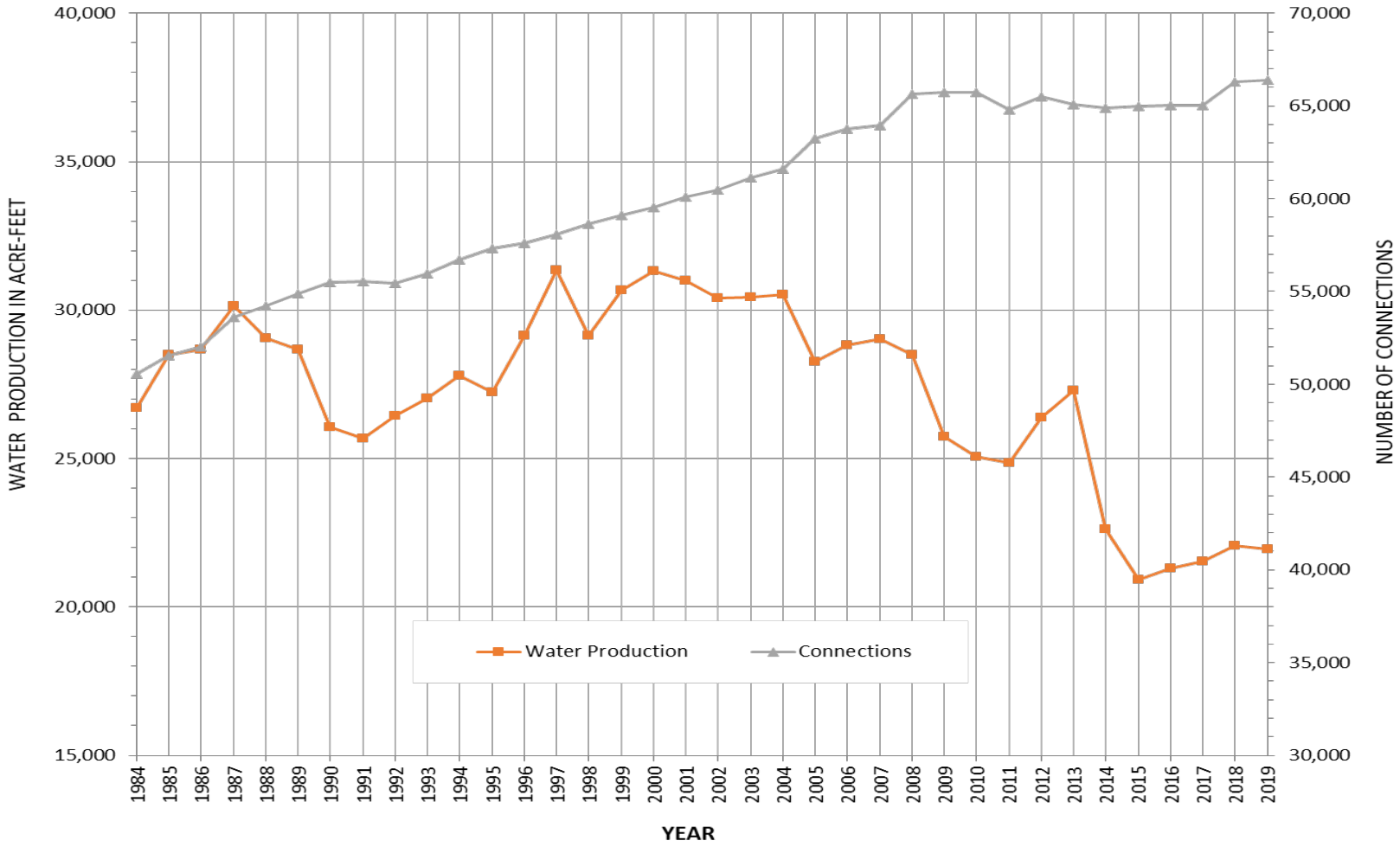




Statewide Water Use



County Wide Municipal Water Production



Water Use in the Region

	Santa Cruz WD		SLVWD		SVWD	
	Number of Accounts	Annual Demand MGY	Number of Accounts	Annual Demand MGY	Number of Accounts	Annual Demand* MGY
1984	20,228	3,771	5,500	1,422	2,100	310
2019	24,559	2,647	7,900	1,494	3,858	421 (363)
Change	+21%	-30%	+44%	5%	+84%	+36% (17%)

* Includes potable and recycled water

Demand and Capacity

Supply

- Groundwater
- Recycled water
- Supplemental water
- Process water
- Unaccounted for water
- Water use efficiencies

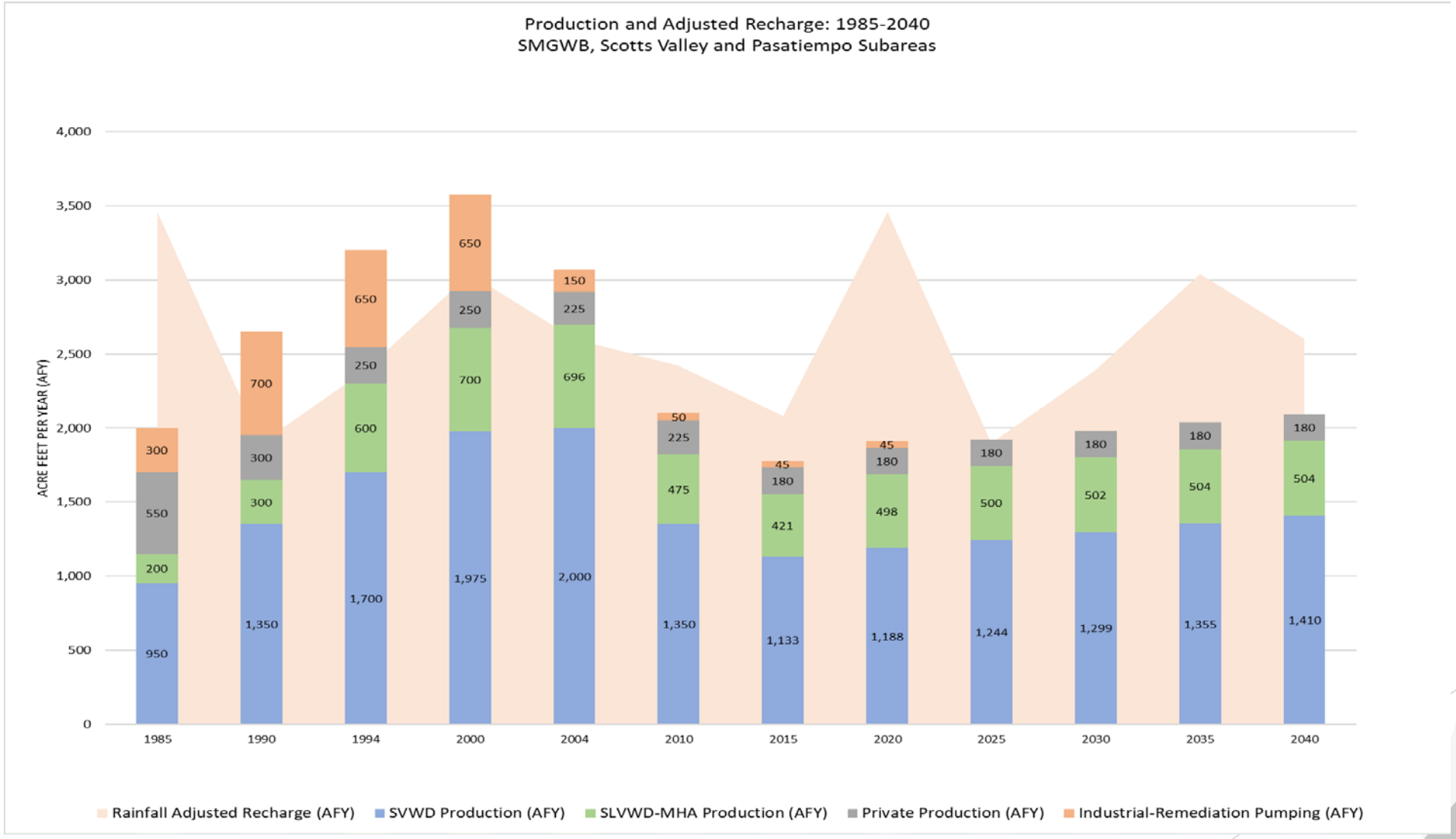
System

- Wells
- Treatment Plants
- Pump Stations
- Reservoirs
- Distribution System
- Staffing

Demand and Water Management

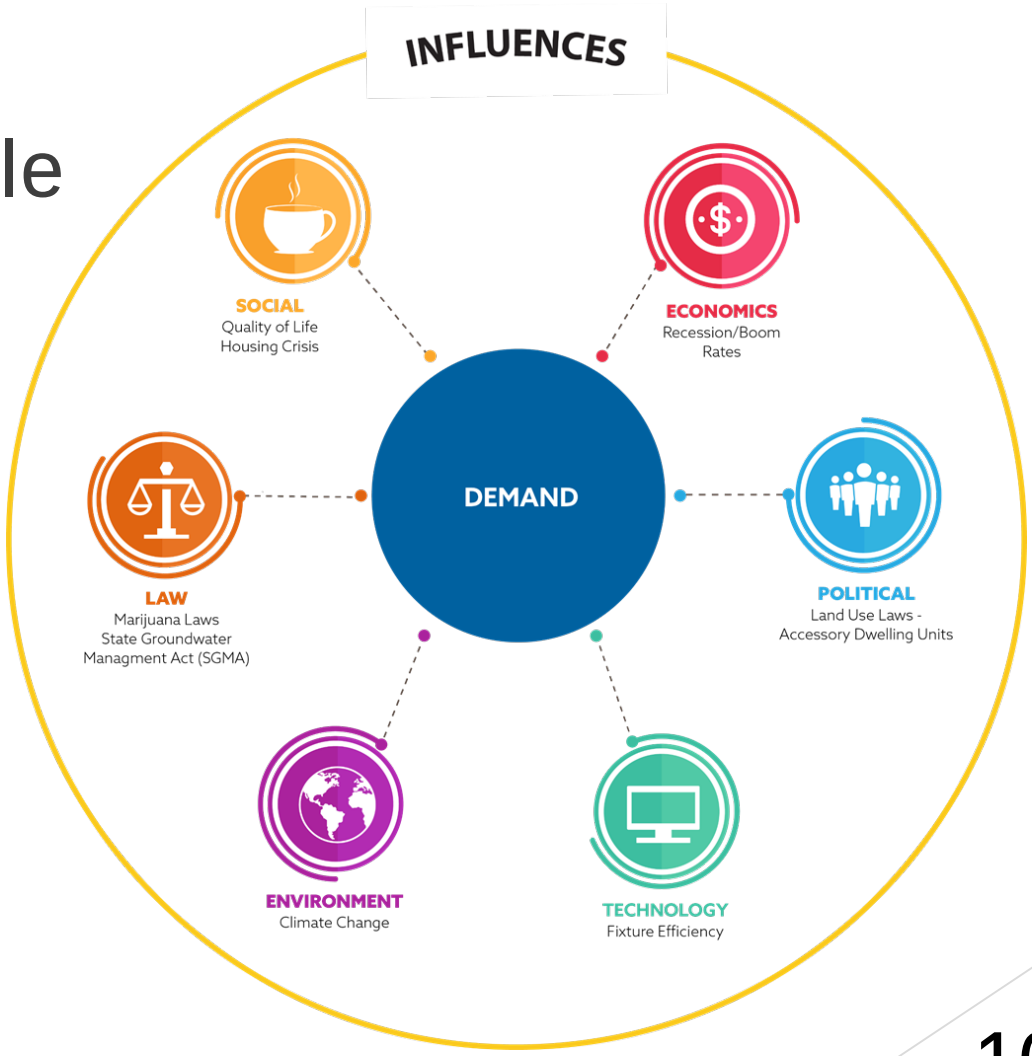
- Urban Water Management Plans
  - Updated every 5 years (current 2015, next 2020)
  - Include demand projections for next 20 years
- Senate Bill 606 and Assembly Bill 1668
  - Establishing new long-term urban water use standards
  - Requiring water suppliers to set annual water budgets
  - Requiring water suppliers to prepare annual report (Nov 2023)
- California Water Plan 2018 Update
  - Six sustainability goals supported by 19 recommended actions
- Governor's Water Resilience Portfolio initiative
  - Developing a comprehensive strategy to build a climate-resilient water system

Demand Forecasting – Classic Approach



Demand Forecasting – Composite Approach

- New demand relatively predictable
- Existing demand (baseline) – has a large margin of uncertainty
- Many possible scenarios



Nexus with Predictive Groundwater Model Assumptions

- Groundwater model will predict groundwater conditions from Water Year 2019 through 2068 (50 years)
  - Requirement of GSP planning
- Predictive scenario will take into account:
  - Climate change
  - Forecasted water demand
  - Projects
  - Management actions

Thank you

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