

Recycled Water in South Orange County

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SOCWA Service Area

10 Member Agencies

- City of Laguna Beach
- City of San Juan Capistrano
- City of San Clemente
- El Toro Water District
- Emerald Bay Service District
- Irvine Ranch Water District
- Moulton Niguel Water District
- Santa Margarita Water District
- South Coast Water District
- Trabuco Canyon Water District

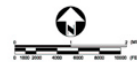
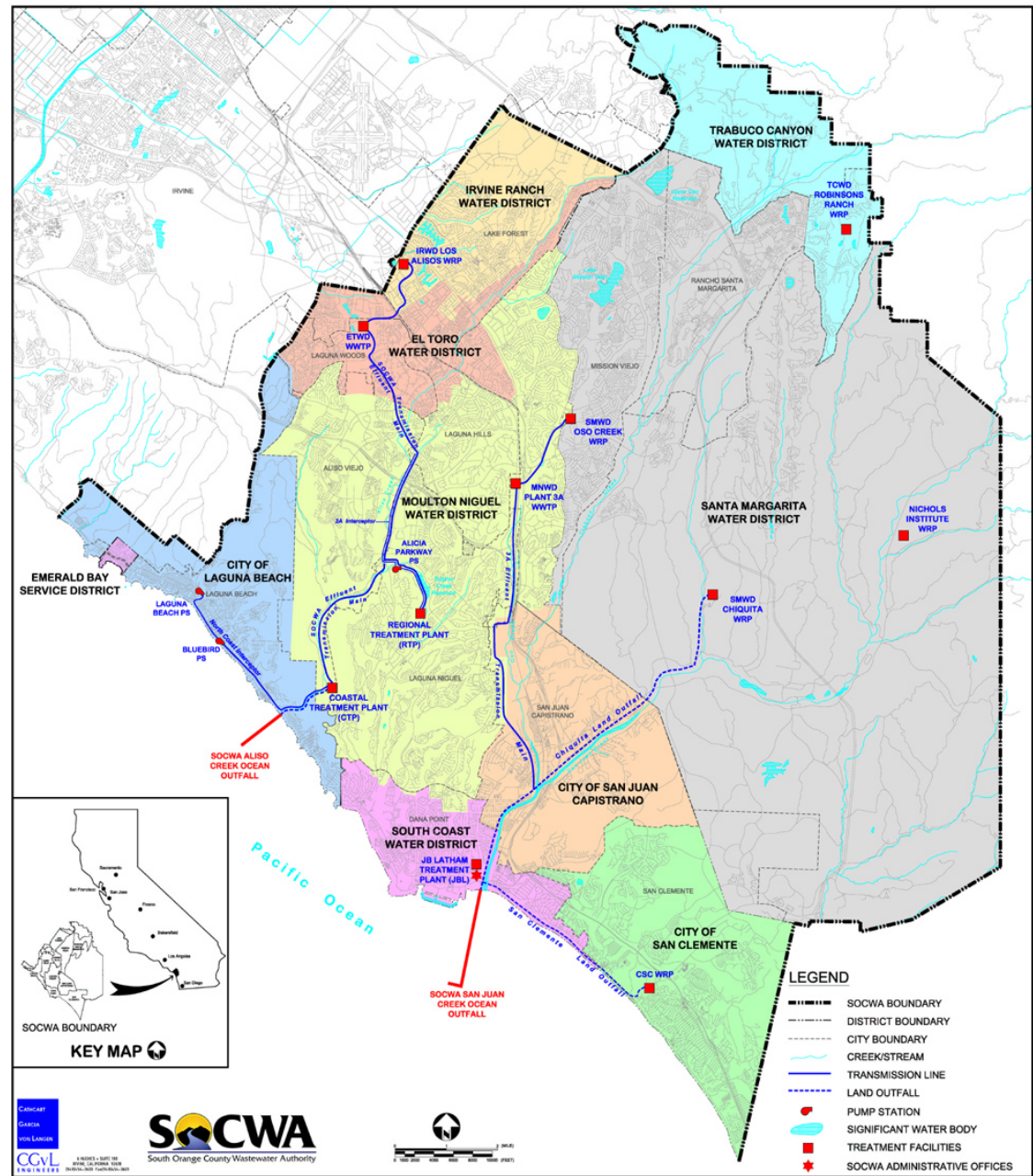
220 Square Mile Service Area

550,000 Population

11 WW Treatment Plants

9 Recycled Water Facilities *

2 Ocean Outfalls



South Orange County Recycled Water

10 RW Facilities in South OC

41.39 MGD total Title 22
treatment capacity

~4000 Recycled Water Use Sites

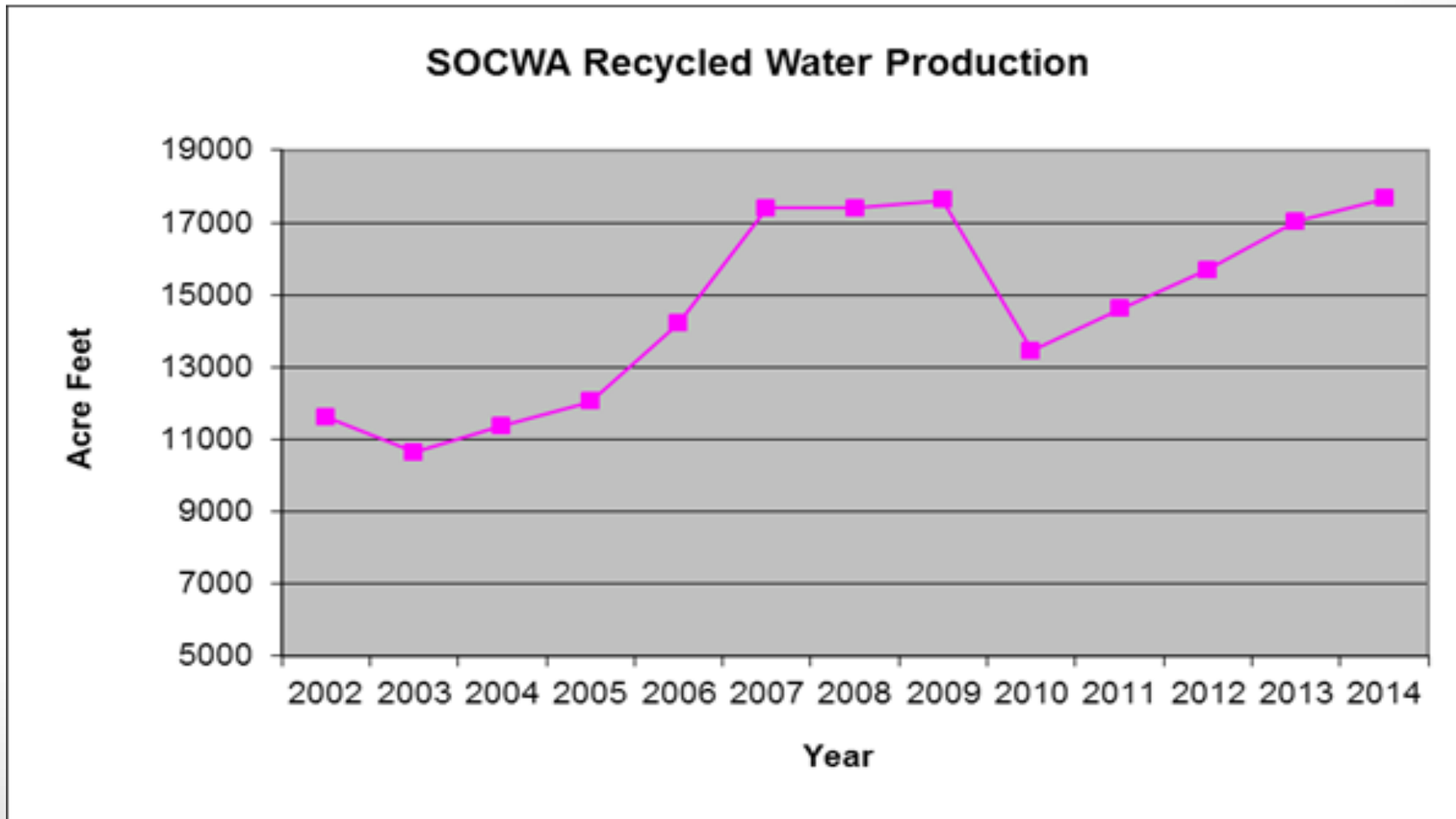
Producing > 17,000 afy

Projected RW Irrigation Demand:
33,000 afy (2030)



Recycled Water Today

SOCWA produced 17,664 acre feet of recycled water in 2014



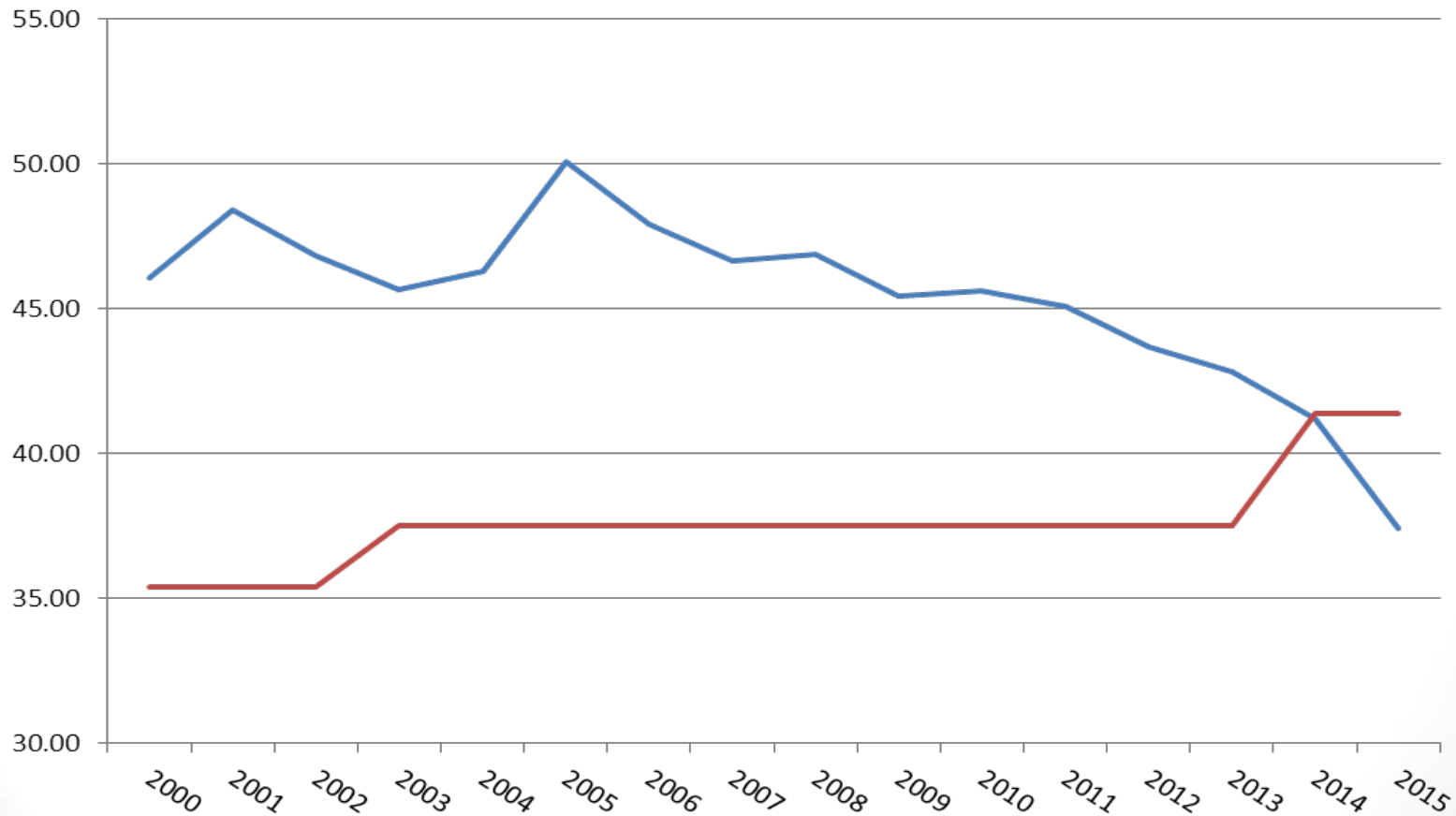
Recycled Water Treatment Capacity Growth

- In 1995 SOCWA Agencies had a combined tertiary treatment capacity of 28.28 MGD or about 87 acre feet per day.
- Today the capacity is 41.39 MGD or about 127 acre feet per day. (46 % Increase)
- The 2030 projected SOCWA recycled water demand for irrigation will be 33,000 acft/yr or about 90 acre feet per day. (29.5 MGD)

South Orange County Wastewater Volume – Treatment Capacity

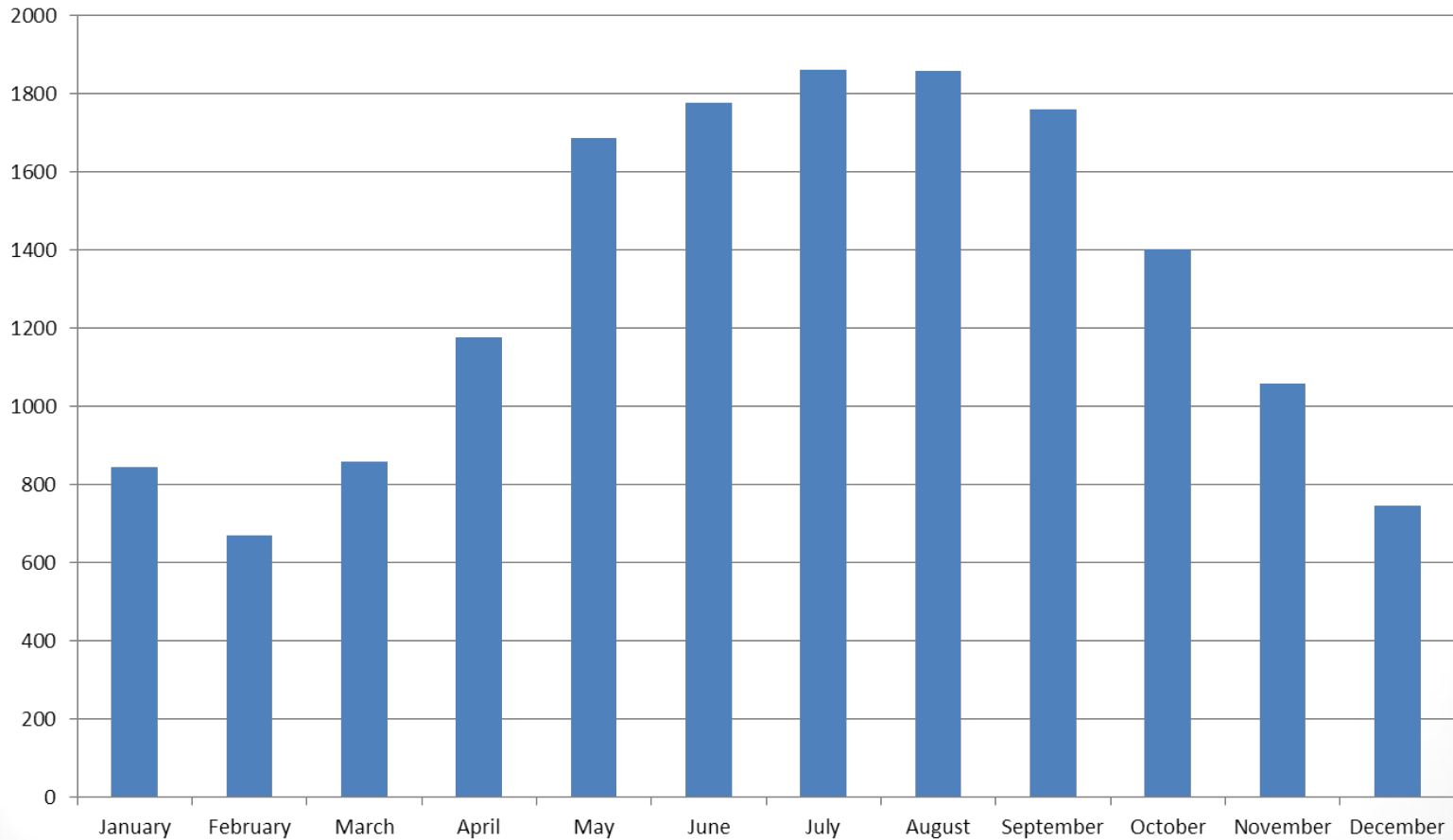
Annual Average 2000–2015

Million Gallons / Day

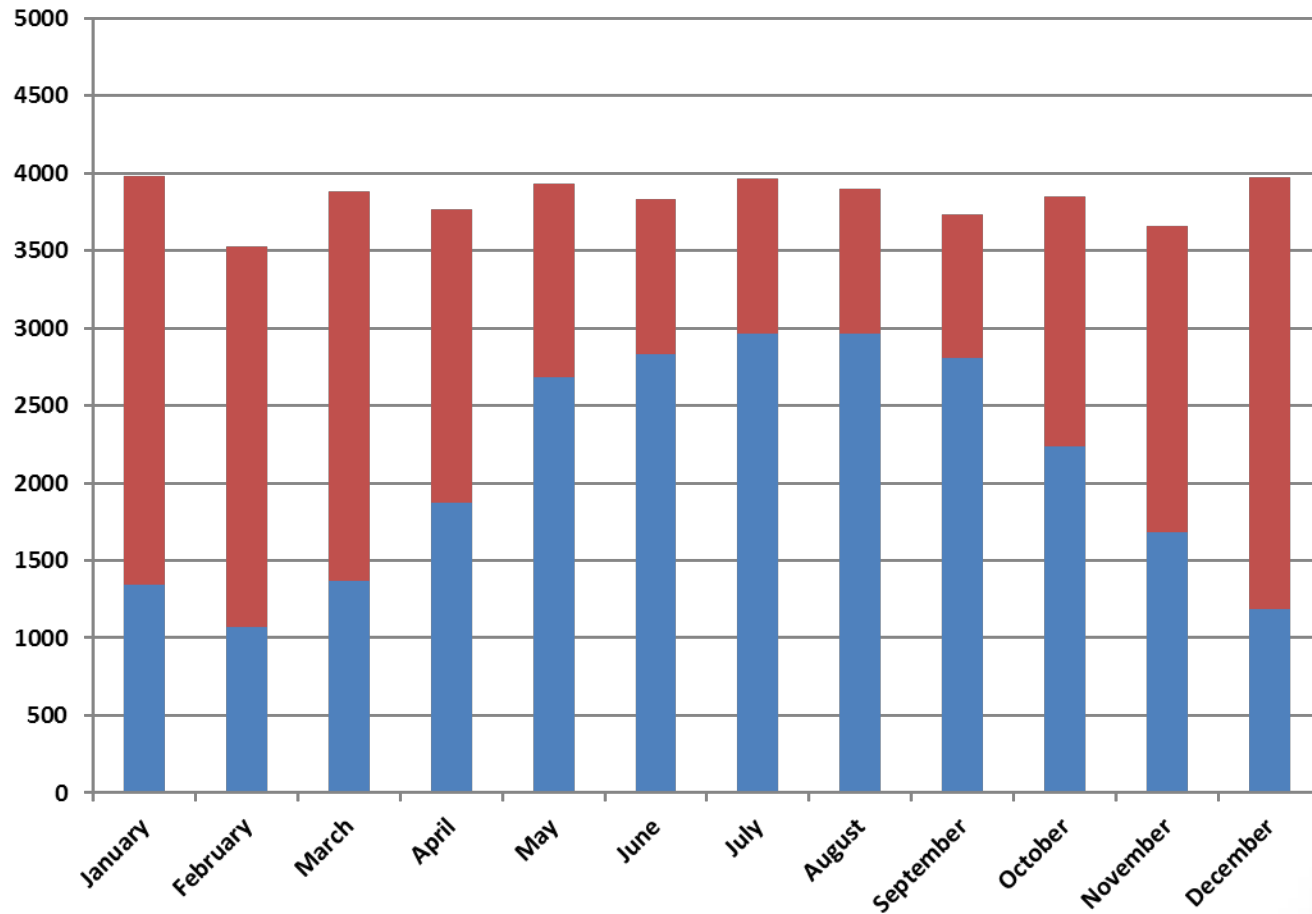


Pattern of RW Use

SOCWA Avg. Monthly RW Use acft



Projected Wastewater –vs- Recycled Water Production acft per month (2030)



South Orange County Recycled Water Storage Pool

SOCWA agencies have ~ 5500 acft of Recycled Water Storage Capacity

The annual RW production in the Region was 17,664 acft in 2014

The system functions as an on-demand system when the demand increases, production at the plants must increase

The SMWD is in the planning stage for developing the Trampas Reservoir which would add about 5,000 acft of recycled water storage for the Region



South Orange County Water Basin Poor

The South County area is water basin poor: there is very little available groundwater storage

81 % of the region's potable water need are met through imported water

San Juan Basin storage capacity is believed to be ~ 41,000 acft

The OCWD basin has an annual yield of about 350,000 afy

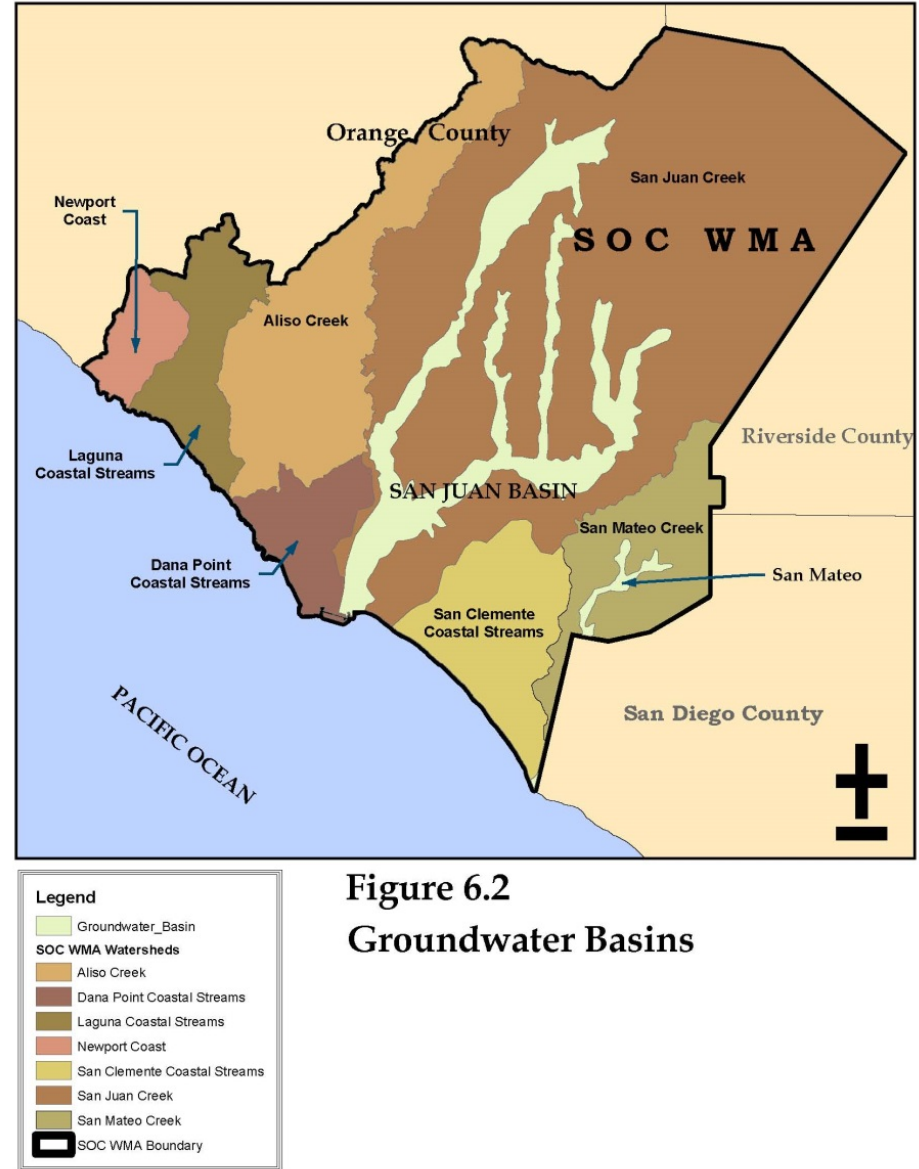


Figure 6.2
Groundwater Basins

Proposed Water Diversification Projects South Orange County

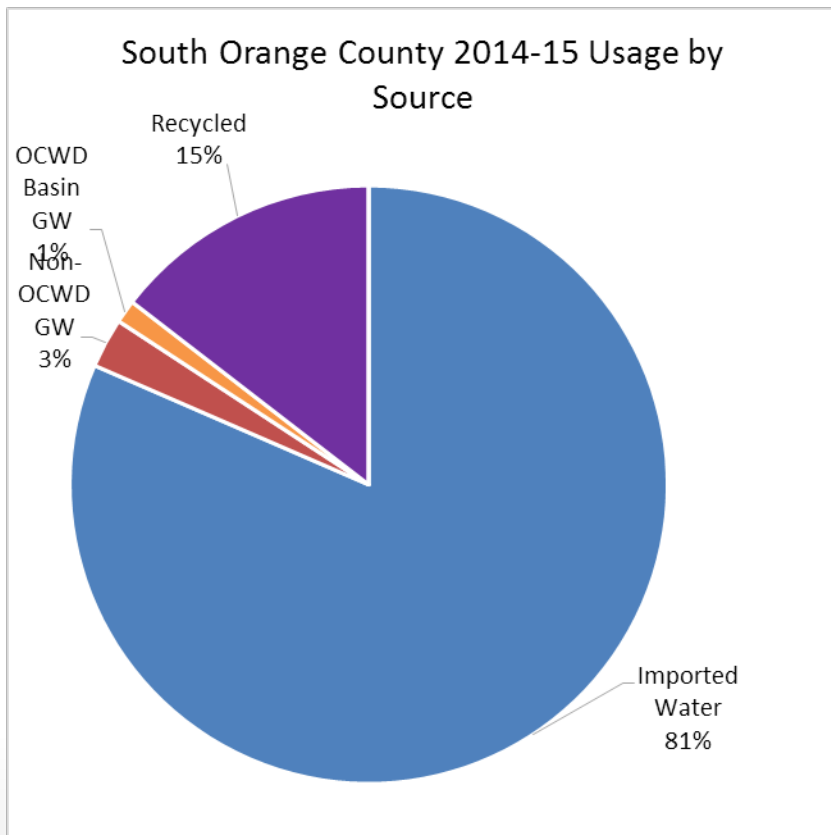
- San Juan Groundwater Basin Augmentation
(recycled water & stormwater)
- Sea Water Intrusion Barrier (recycled water)
- Ocean Desalination (Doheny & Poseidon)
- Develop Additional Groundwater Sources
(from outside of the region)

Each region has unique challenges to increasing recycled water

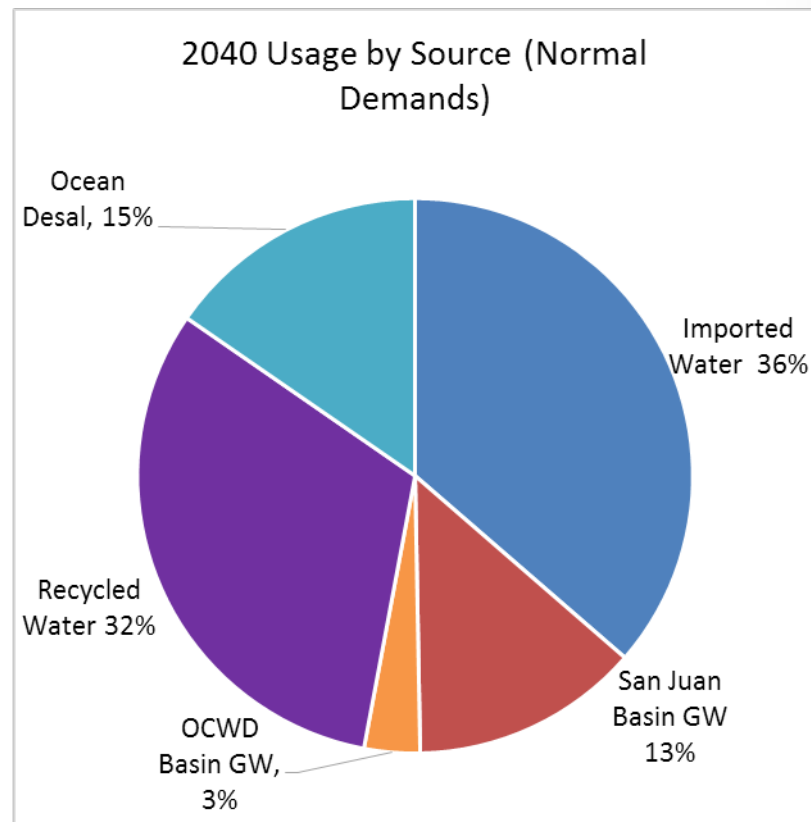
- South Orange County is primarily developed, there are limited options for increasing surface storage capacity
- The region is also very limited with respect to groundwater storage
- Without some level of DPR, recycling 100% of municipal wastewater will not be feasible
- All of the groundwater in the region requires RO treatment for potable use, which creates a brine disposal to the ocean, and like many areas of the State there are salinity management issues

South Orange County Use by Source

Current Water Use 110,000 AFY



Projected Water Use 104,000 AFY



South Orange County Water Sources

- Current Water Use

110,000 AFY

- 81 % Imported Water
- 15 % Recycled Water
- 4 % Groundwater

- Projected 2030 Water Use

104,000 AFY

- 36 % Imported Water
- 32 % Recycled Water
- 16 % Ground Water
- 15 % Ocean Desalination

Questions ?