How San Diego Prepared for this Drought…
…and the Next One, and the Next One

County of San Diego, Winter Weather Workshop
October 13, 2015

Teresa Penunuri,
Public Affairs Supervisor

San Diego County Water Authority

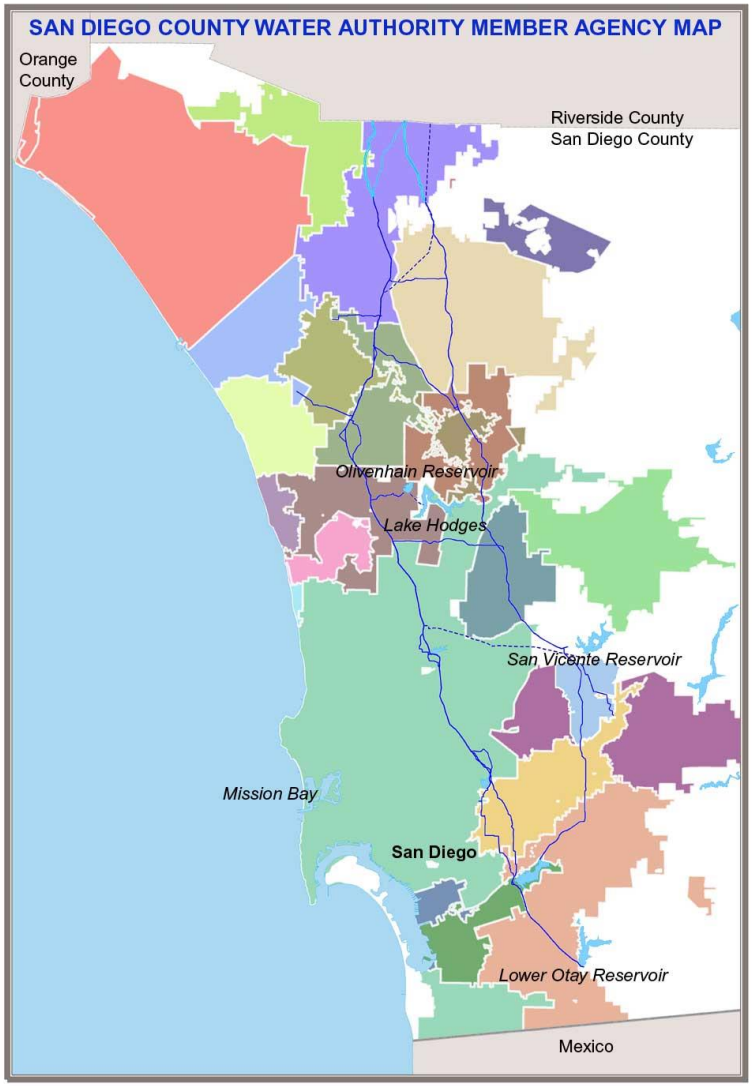
San Diego County Water Authority

Wholesale water agency created by State Legislature in 1944

- 24 member agencies
- 36-member board of directors
- Serves 3.2 million people and region's $218 billion economy

Imports 80%-90% of water used in San Diego County

- Builds, owns, operates and maintains regional water infrastructure
- Largest member agency of Metropolitan Water District of Southern California



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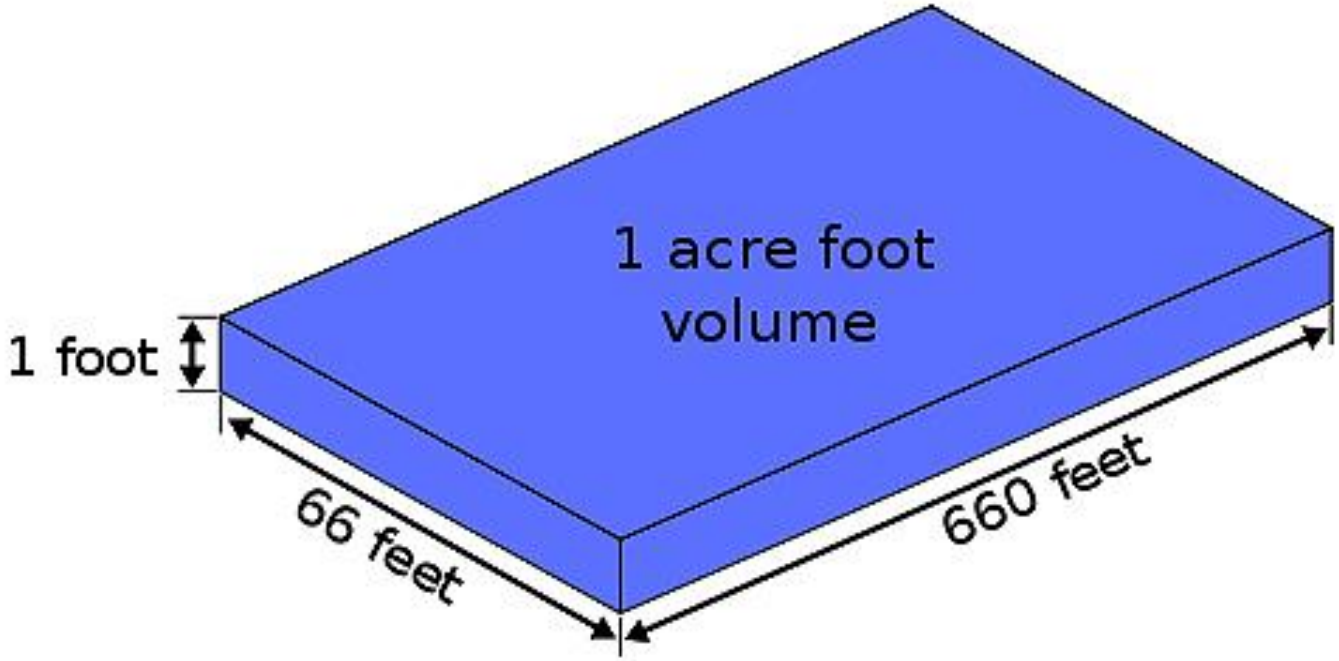
Acre-Foot of Water (AF)

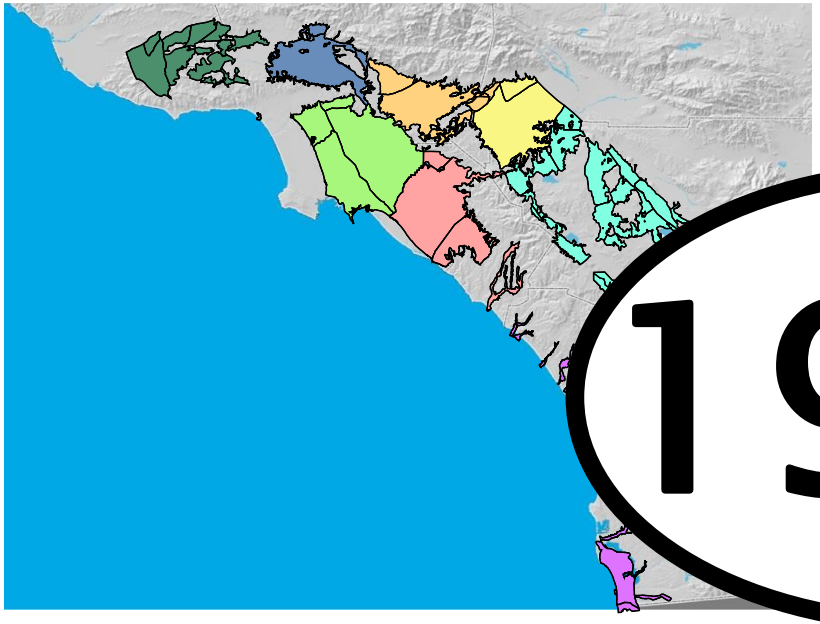


- 325,851 gallons (43,560 cubic feet)
- Enough to serve the annual needs of two single-family households of four people

San Diego County Water Authority

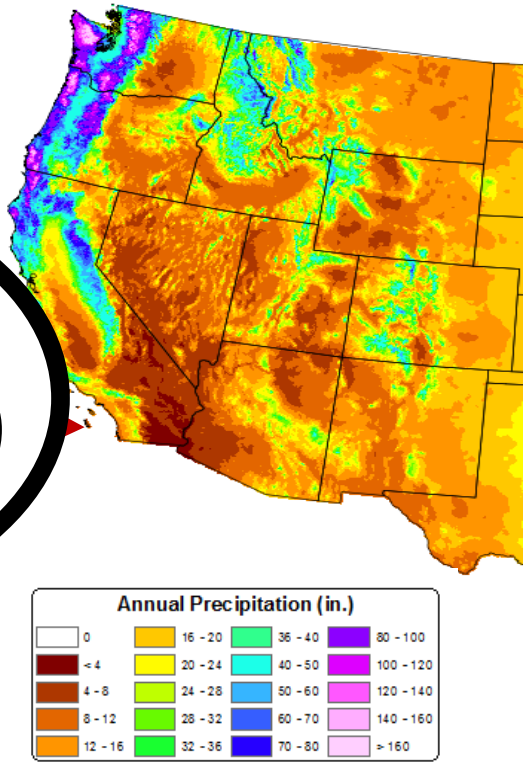
San Diego Has Few Natural Water Assets

Very Little Groundwater



1946

Very Little Rainfall

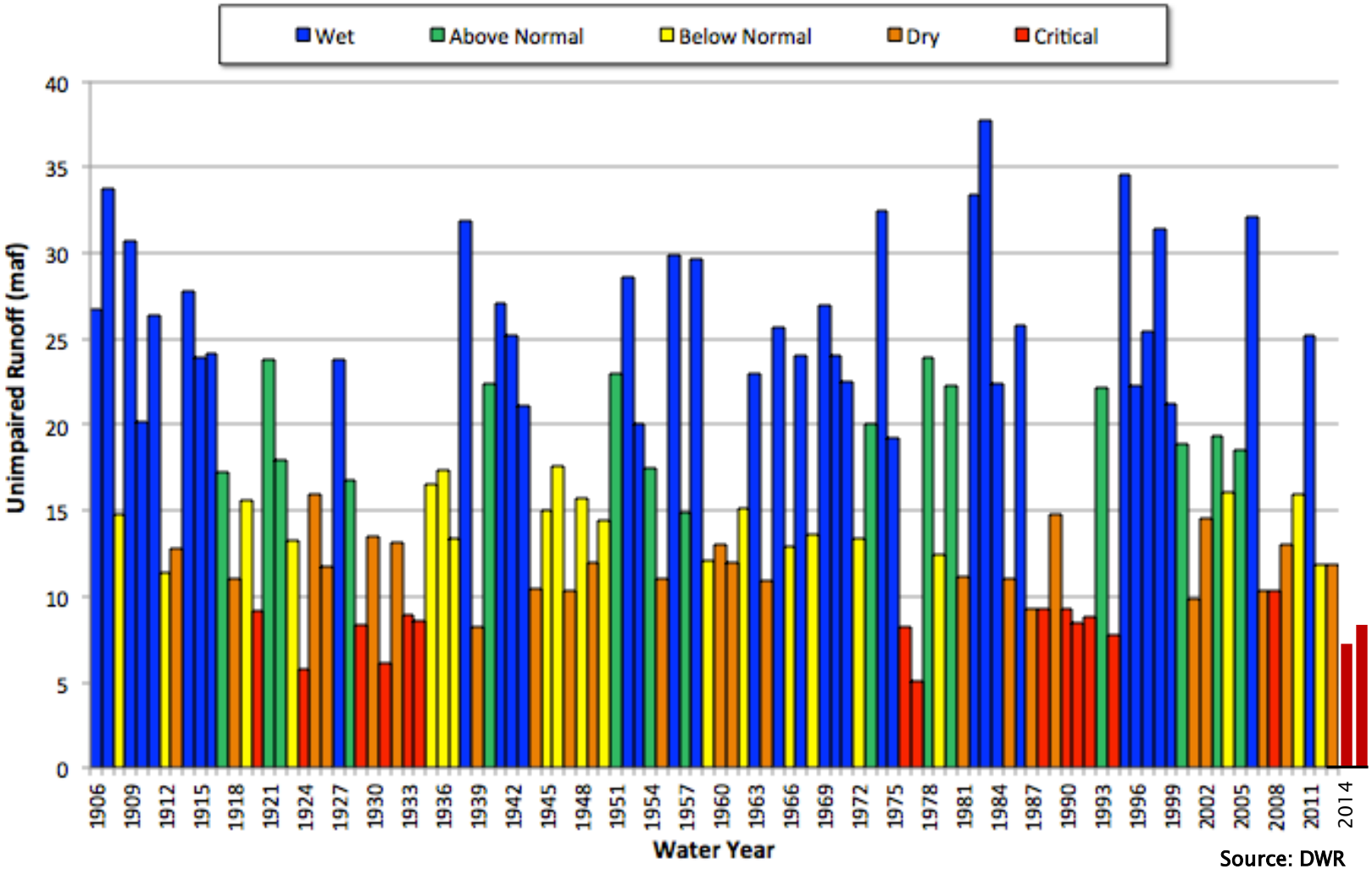


*10-year average, 2005-2014

San Diego County Water Authority

Droughts are Common in California

Sacramento River Unimpaired Runoff through 2015



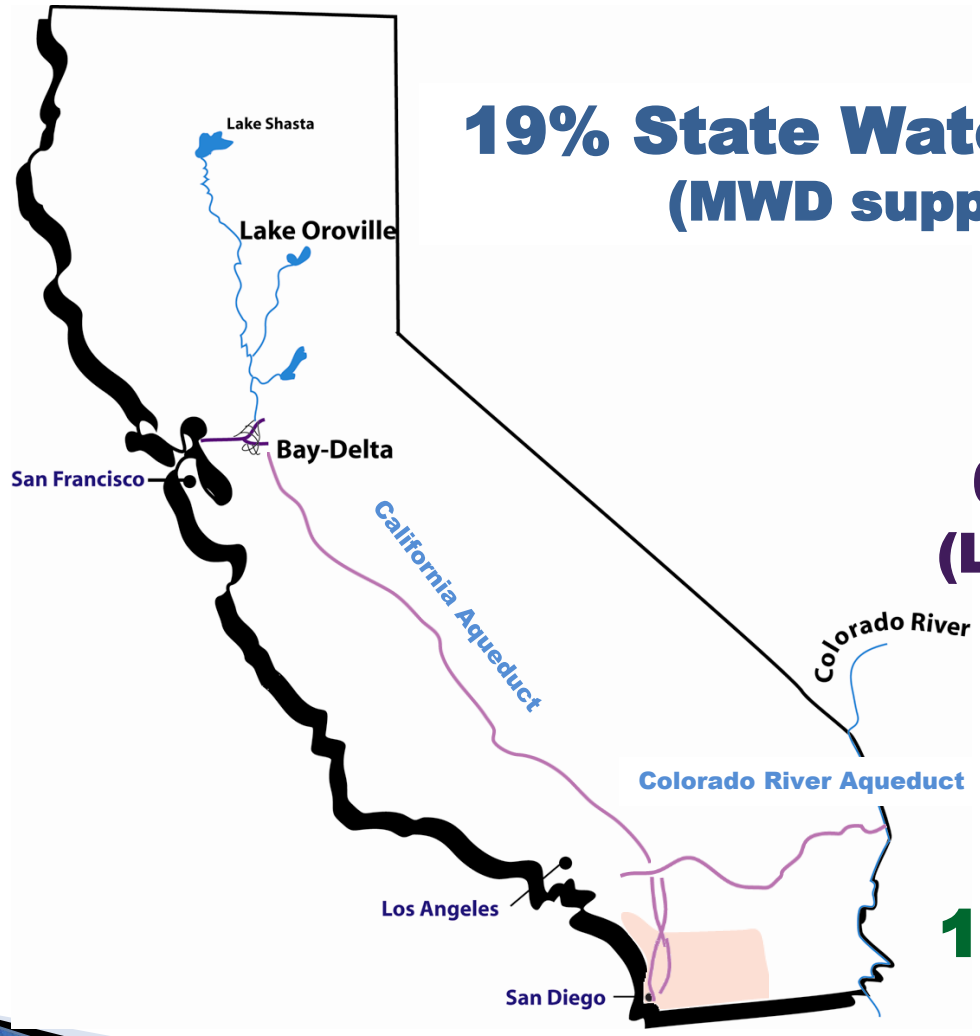
Source: DWR

Sacramento River Runoff is the sum of Sacramento River flow at Bend Bridge, Feather River inflow to Lake Oroville, Yuba River flow at Smartville, and American River inflow to Folsom

San Diego County Water Authority

We're at the End of a Very Long "Pipeline"

Sources of San Diego County's Water Supply (2010–2014 five-year average)



19% State Water Project
(MWD supplies)

64% Colorado River
(Long-term Transfers and MWD supplies)

17% Local Supplies

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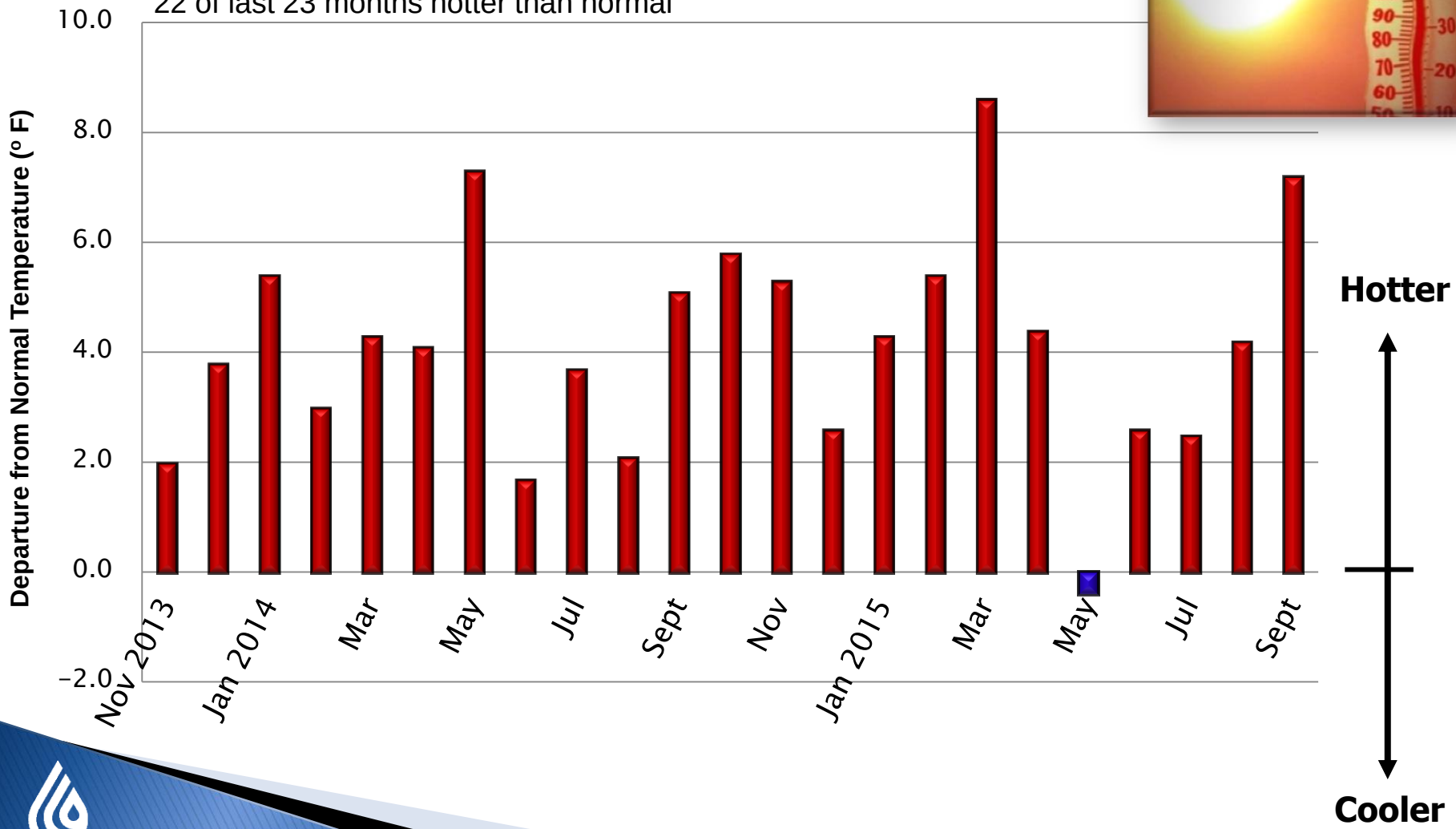
San Diego Has Plenty of Sunshine… and Heat

Departure from normal monthly temperature at Lindbergh Field:
22 of last 23 months hotter than normal



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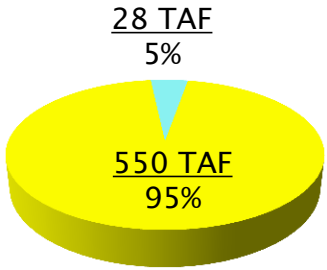
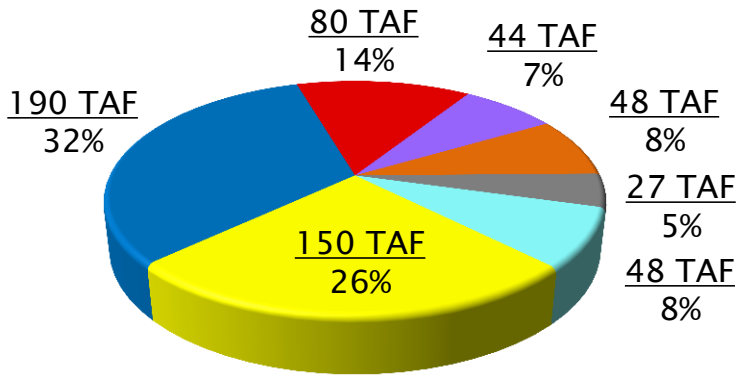
Increasing San Diego County's Water Supply Reliability through Supply Diversification

1991



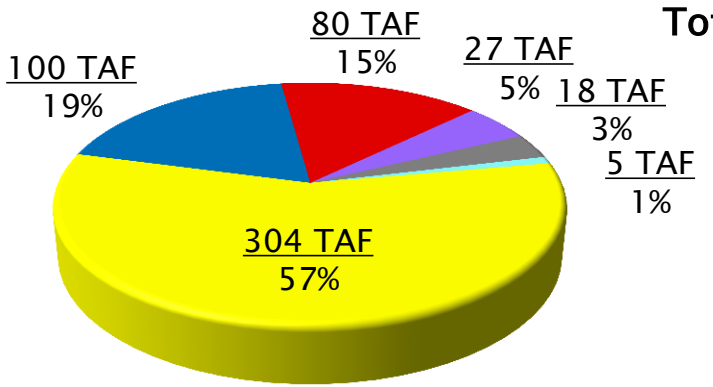
Total = 578 TAF

Estimated 2020



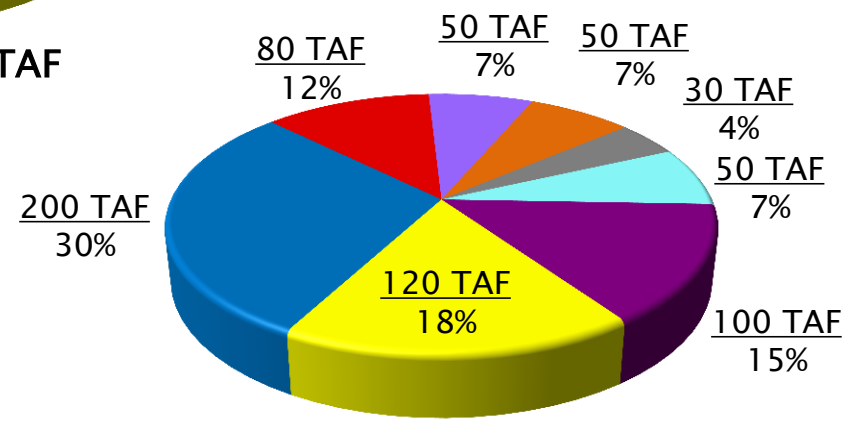
Total = 587 TAF

2015



Total = 534 TAF

Projected 2035

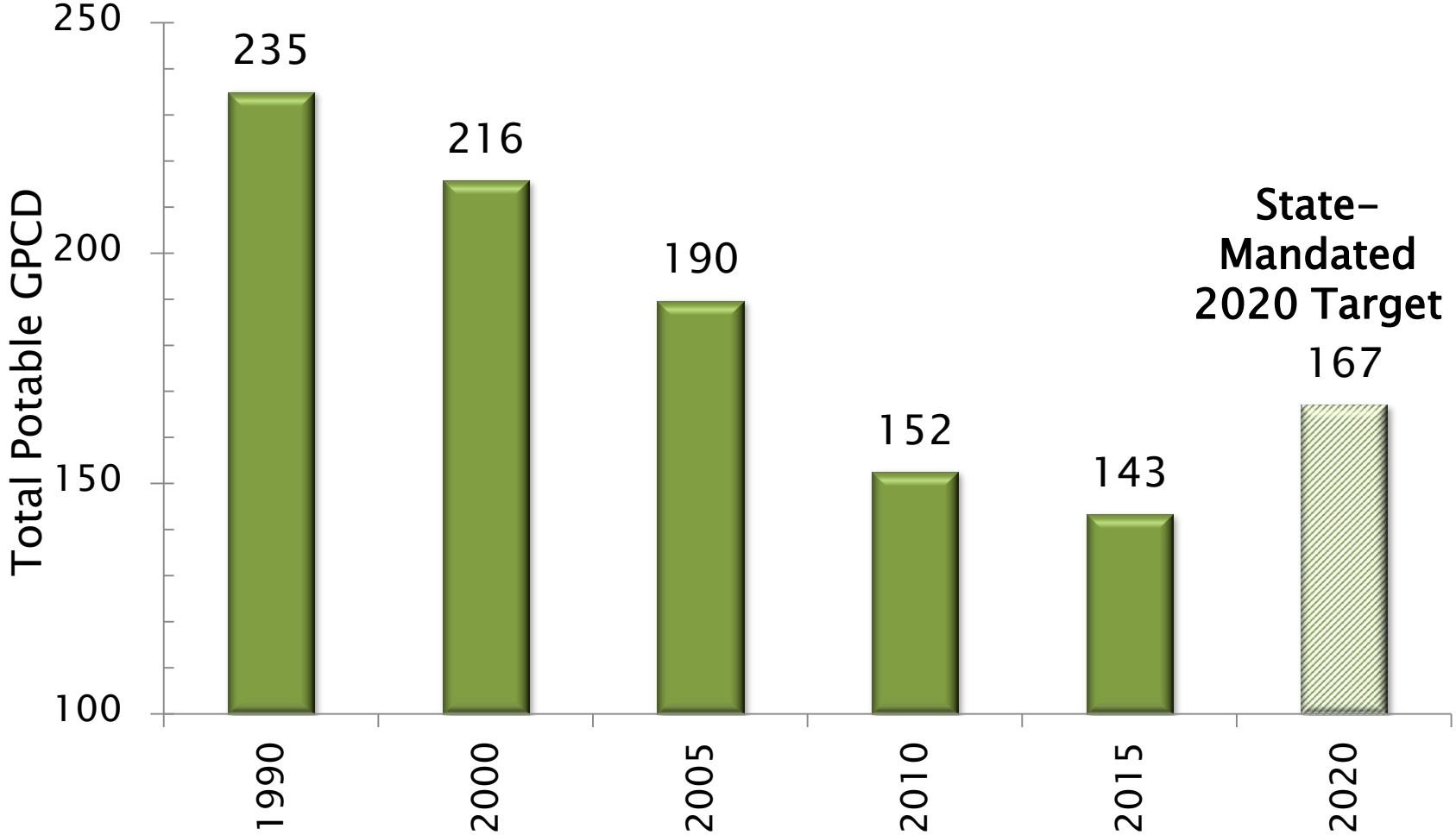


Total = 680 TAF

- Metropolitan Water District
- Imperial Irrigation District Transfer
- All American & Coachella Canal Lining
- Recycled Water
- Seawater Desalination
- Groundwater
- Local Surface Water
- Potable Reuse (Includes conceptual and planned projects)

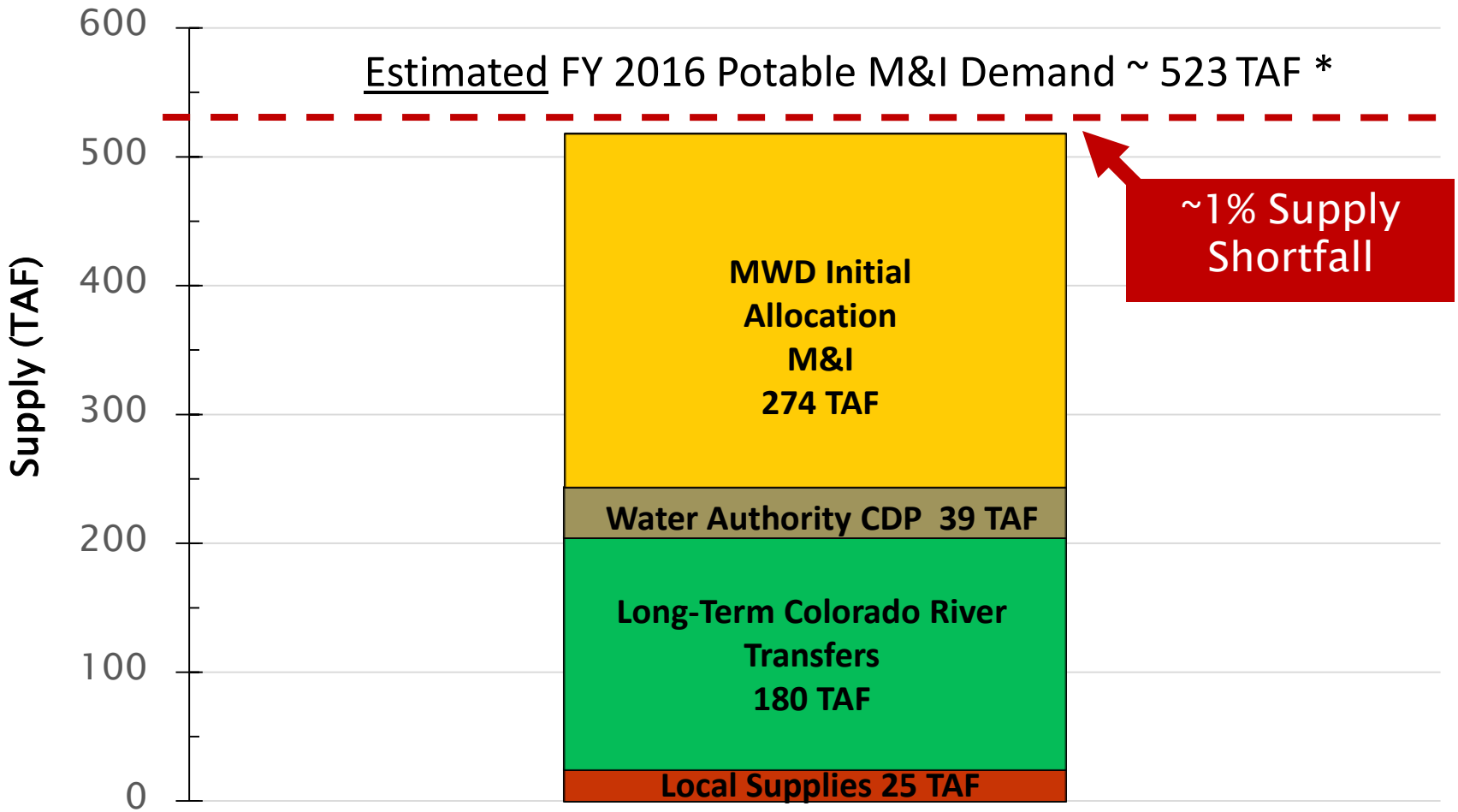
TAF=Thousand Acre-Feet

39% Decline in Per Capita Water Use in Water Authority Service Area Since 1990



The reduction in potable per capita water use since 1990 offsets the need for over 300,000 acre-feet per year within the region.

Water Authority Can Meet 99% of Projected Demands in FY 2016, Even with 15% MWD Shortage Allocation



- Based on actual FY 2014, escalated at 1/2% per year.
- MWD supply allocation in effect 7/1/15 through June 30, 2016.

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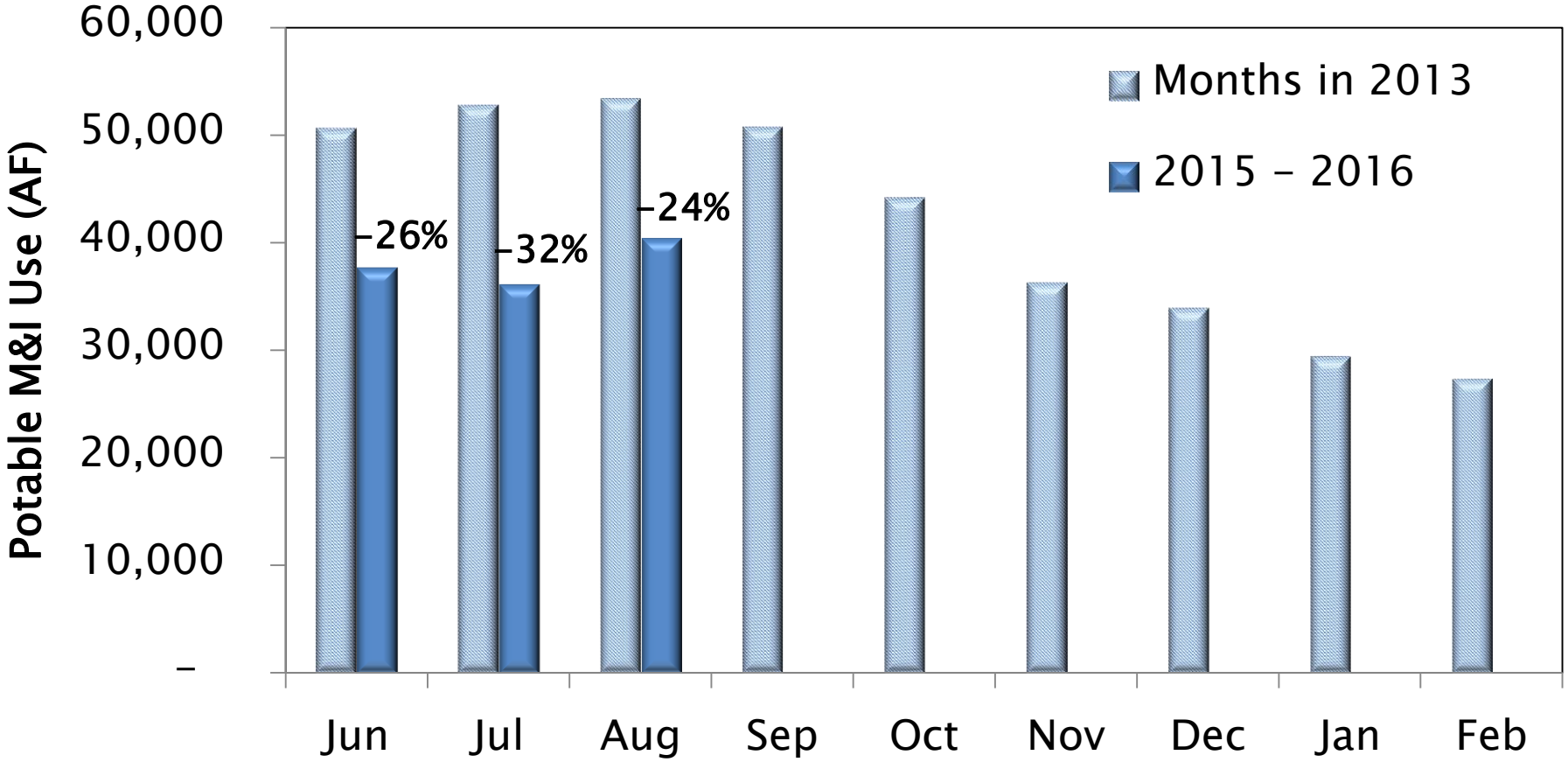
Total Potable M&I Water Use: SWRCB Emergency Regulation Reporting Months

Cumulative June – August 2015 is <u>27%</u> lower than 2013



Source: Member Agency monthly water use reporting to the Water Authority

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Water Authority Storing Conserved Water

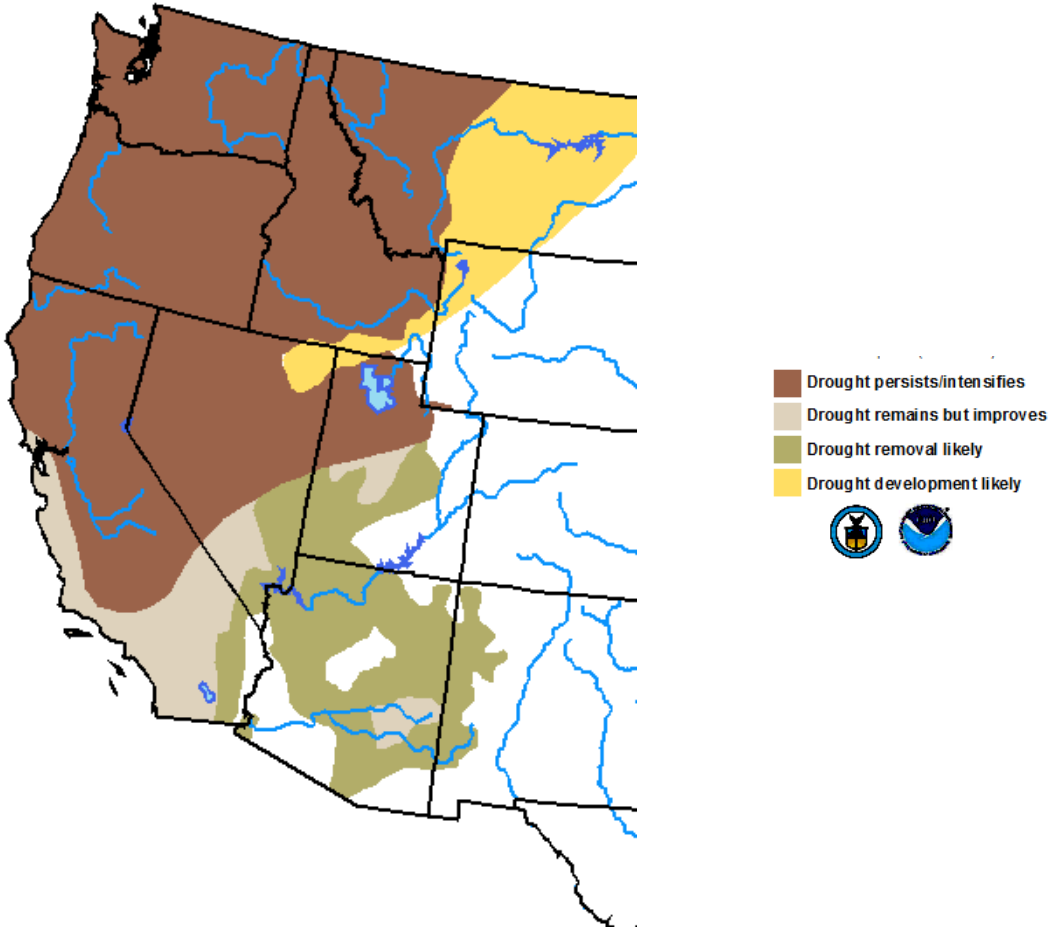
- Water conserved by residents and businesses is being stored in the newly expanded San Vicente Reservoir
  - 42,000 AF of 100,000 AF carryover supplies stored since early May
    - Potential to store 100,000 AF by June 30, 2016
- Reservoir already holds 36,000 AF of 52,000 AF emergency storage target

San Vicente Dam & Reservoir

San Diego County Water Authority

Initial Outlook for Water Year 2016

Seasonal Drought Outlook
Oct-Dec 2015



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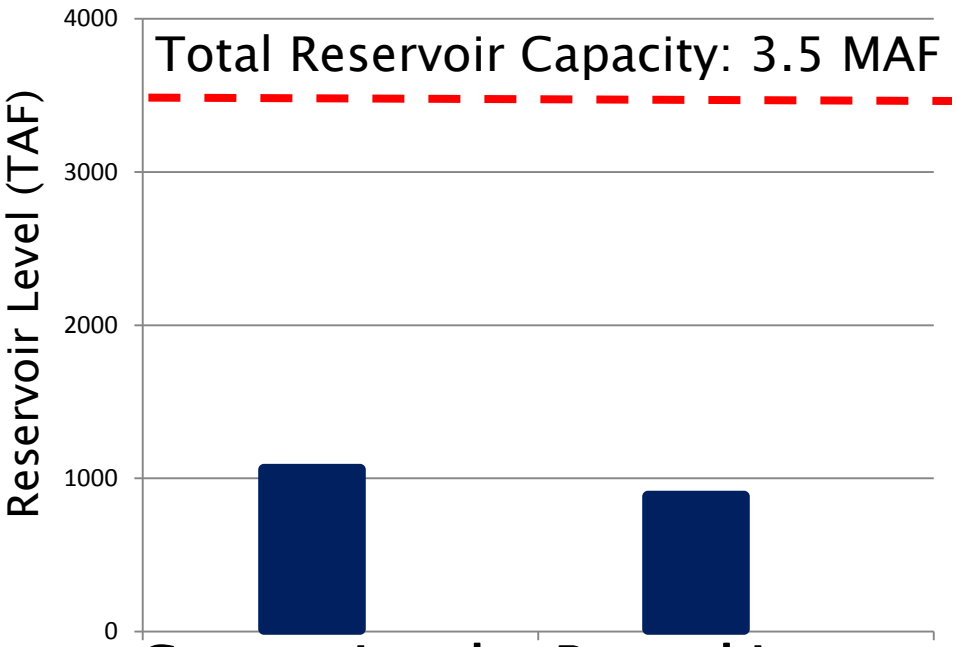
Lake Oroville Near Record Low Levels



Current Level
1,053,983 AF
30% capacity
(Sept. 18, 2015)

Record Low Level
882,000 AF
25% capacity
(Sep. 7, 1977)

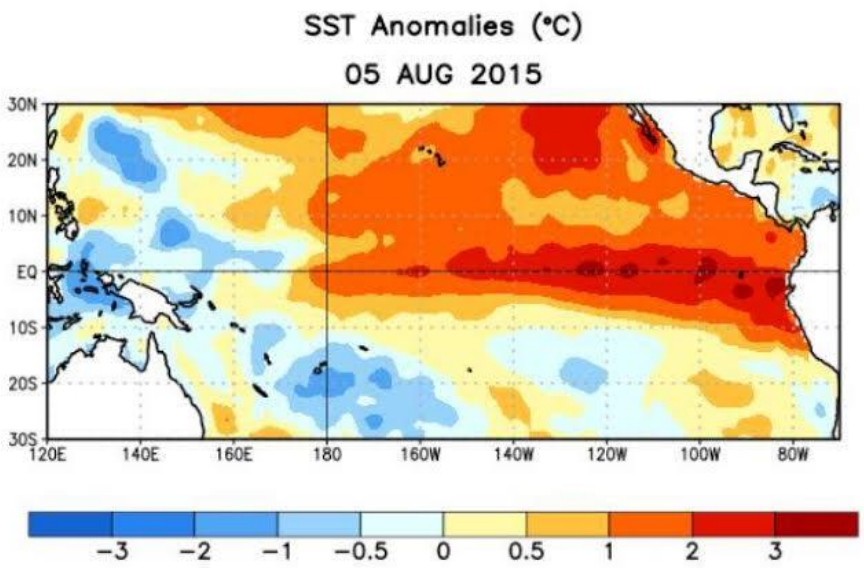
100% capacity – July 2011

30% capacity – Sept. 2015

San Diego County Water Authority

NOAA Climate Prediction Center El Niño Update

- **September 2015: El Niño <u>Advisory</u>**
  - Issued when El Niño conditions are observed and expected to continue
  - >95% chance El Niño will continue through winter and gradually weaken through spring 2016



- **September 2014: El Niño <u>Watch</u>**
  - Issued when conditions favorable for development of El Niño
  - Chance of El Niño had decreased to 60-65% for fall and winter

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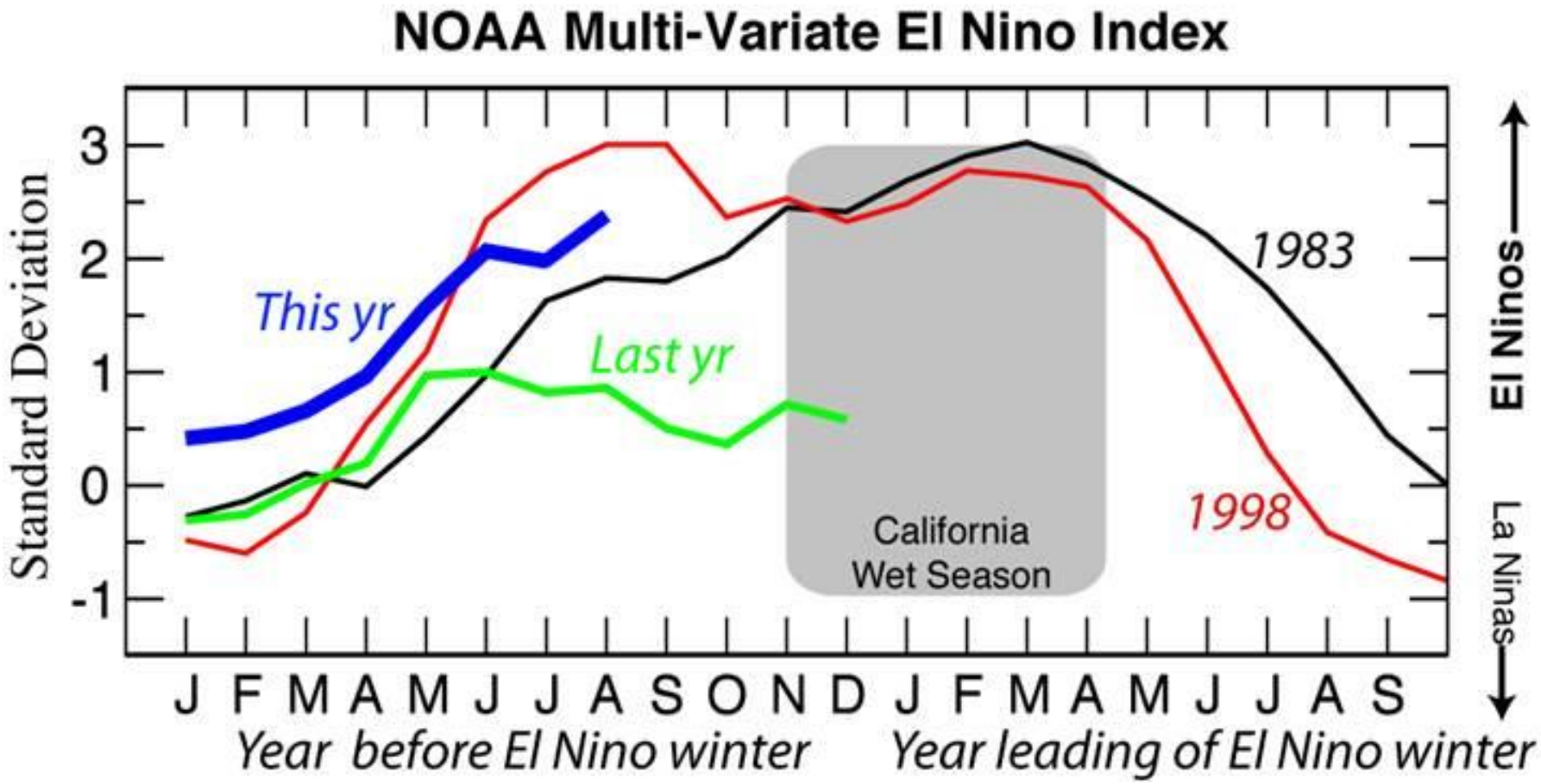
Current El Niño is Tracking Consistent with Strong Events in 1983 and 1998



Source: Mike Dettinger, USGS/SIO

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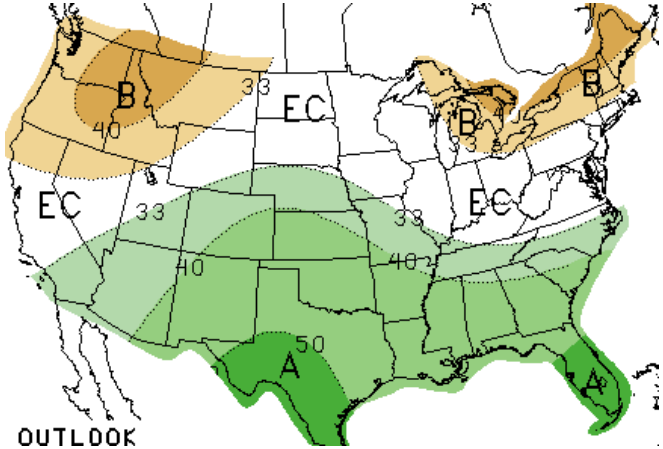
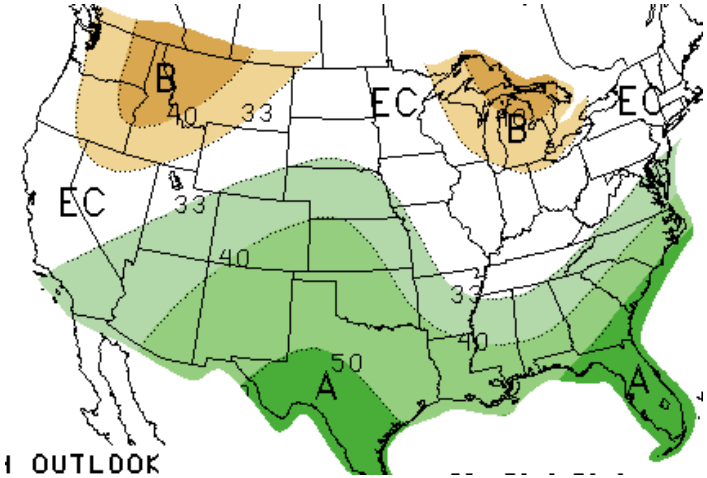
National Weather Service Precipitation Outlook

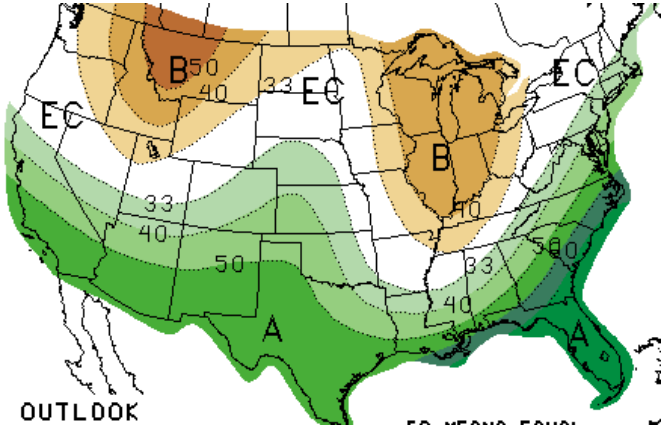
October – December



November – January



December – February

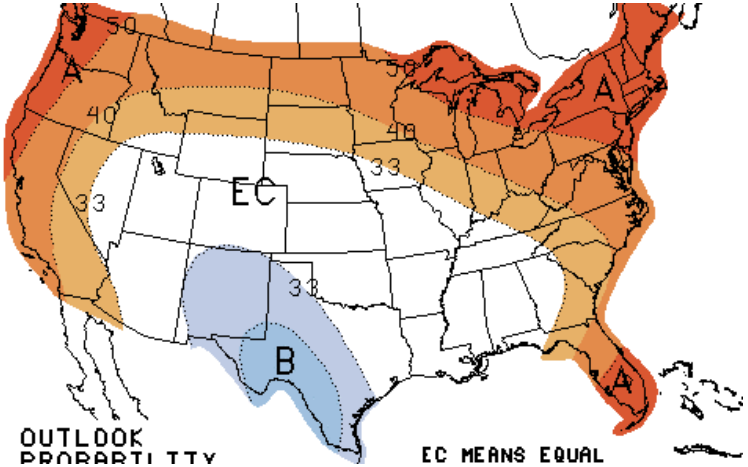


A = Above Average **B = Below Average** **EC = Equal Chances**

Made September 17, 2015

National Weather Service Temperature Outlook

October – December



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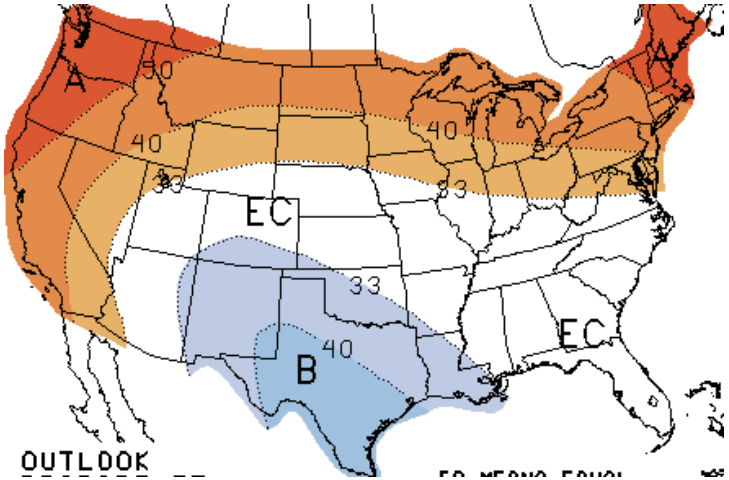
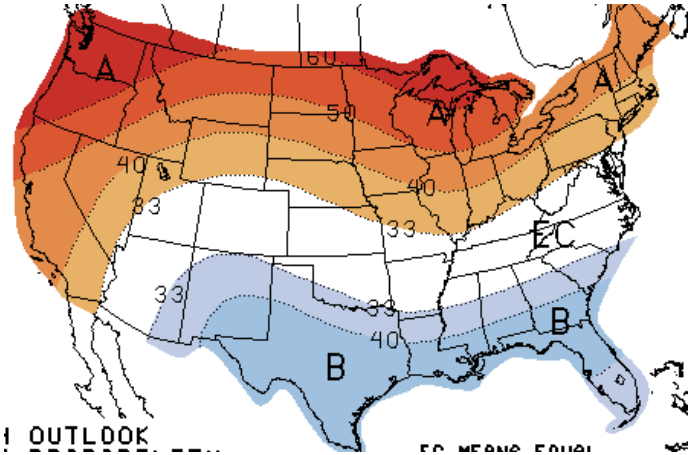


December – February



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Made September 17, 2015

Stay in Touch with the Water Authority

whenindrought.org

Video & Slide Sharing

youtube.com/SDCWAvideo

slideshare.net/waterauthority

Mobile App

sdcwa.org/mobile-news-app

Social Media

facebook.com/
SanDiegoCountyWaterAuthority

@sdcwa
@mwdfacts

sdcwa.org/rss

www.sdcwa.org

Investments in Local Supplies

- Carlsbad Seawater Desalination Project
  - $1 billion investment
  - 56,000 acre-feet/year of drought-proof supplies
    - Largest seawater desalination facility in North America
  - Expected on-line in Fall 2015

San Diego County Water Authority

Despite Adequate Supplies in San Diego County, State Orders Water Cutbacks

- Governor Jerry Brown's April 1 Executive Order:
  - 25% water savings statewide
- State Water Resources Control Board's May 5 Emergency Conservation Regulation
  - Set water use reduction target for every urban water agency in California, regardless of their supply condition
  - Effective June 1, 2015–Feb. 29, 2016

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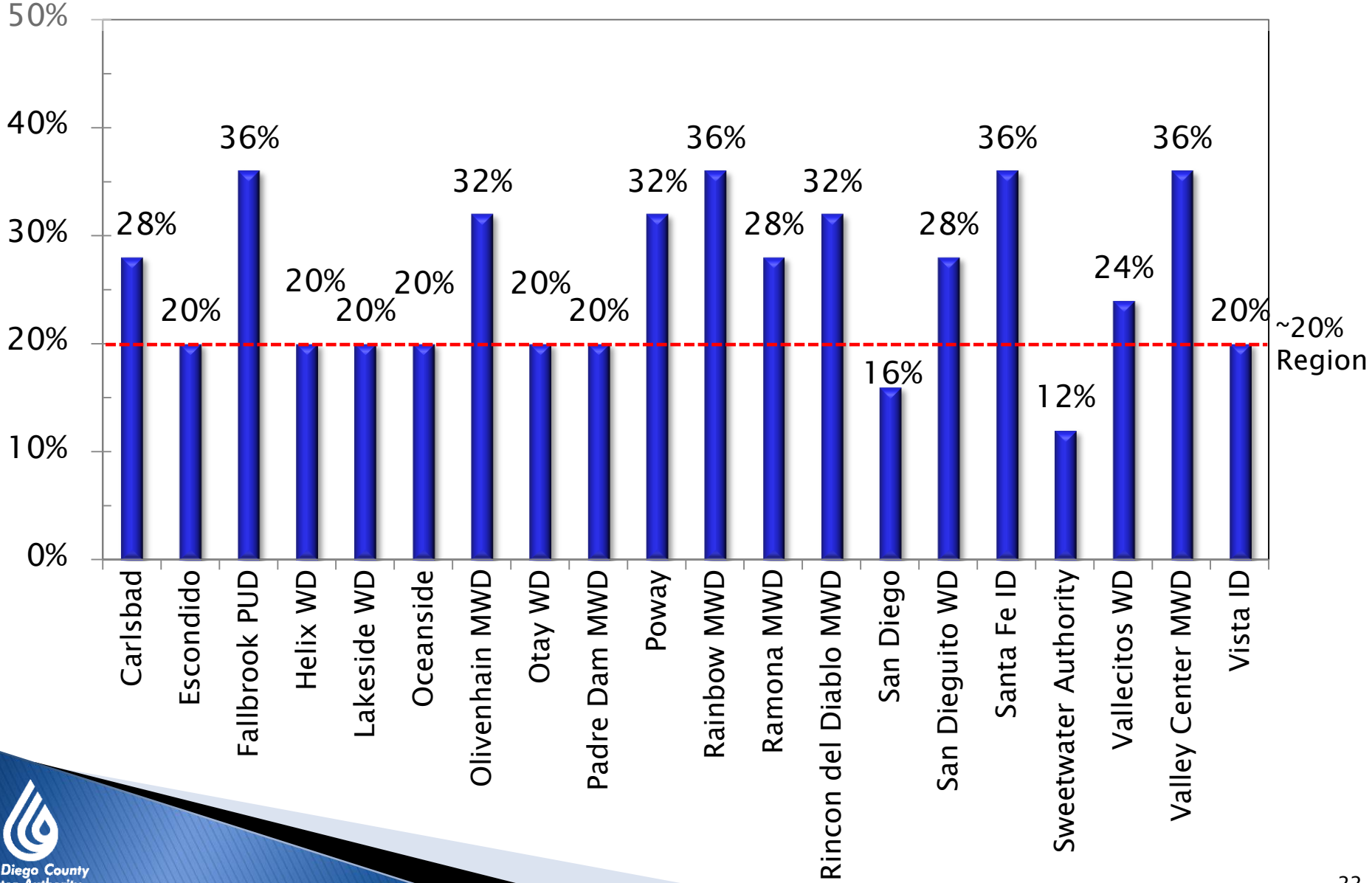
State Water Board Emergency Regulations Member Agency Conservation Standards



San Diego County Water Authority

Water Authority's Comprehensive Conservation Outreach Campaign: "When in Drought'

Online & Outdoor

TV

Civic Events

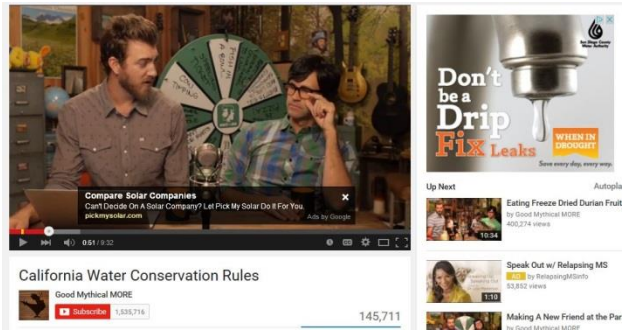
Web Site

Partnerships

Radio/ Pandora

Landscaper Training

Social Media YouTube



Large Events: SD County Fair

#droughtbucketlist