Planning a Sustainable Water Supply for Southern California
Regional water wholesaler to 6 counties
- 5,200 square mile service area
- 26 member agencies
- ~19 million residents
- Regional economy: $1 trillion

Retail demand:
- 4 million acre-feet
- Metropolitan supplies over 50% of retail demand
Southern California Water Trends

Declining LA Aqueduct allocation
Reduced CRA deliveries
Growing population
Fishery conflicts cause cutbacks
Abnormally Dry
Moderate Drought
Severe Drought
Extreme Drought
Exceptional Drought

U.S. Drought Monitor – October 2015

http://droughtmonitor.unl.edu/
Northern Sierra Rainfall - Cumulative

- **Current:** 0.40 in.
- **Last Year:** 37.2 in.
- **Driest:** 17.1 in.
- **Wettest:** 88.5 in.
- **Average:** 50.0 in.

- **97-98 El Nino:** 82.4 in.
Upper Colorado River Basin Snowpack

Water Content (in.)

- Normal
- Current Water Year
- Previous Water Year

Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep

Water Year to date: 0%
Assuming 20% SWP Allocation

Dry Year Storage Reserves (MAF)

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Million Acre-Feet

April Assumption
Warmer than usual surface temperatures in the equatorial waters of the Pacific
Strongest El Niño in the Making?

Current Year Compared to Strongest El Niño on Record

Very Strong El Niño

Departure from Normal °C

Average Temperature

Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec

1997

2015
What Could El Niño Mean for the U.S.?

- Warmer regions
- Cooler & Wetter regions
- Increased Hurricane Activity
- Decreased Hurricane Activity
Three Month Precipitation Outlook
December 2015 – February 2016

THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
2.5 MONTH LEAD
VALID DJF 2015
MADE 17 SEP 2015

EC MEANS EQUAL CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW
Water Delivery Reliability

- Reliability
  - Water Supply
  - System Capacity
  - Infrastructure Reliability
  - System Flexibility
  - Emergency Response
Heavy dependence on imported supplies

Emphasis on conservation, recycling & local supplies
Increased Storage Capacity

13x Increase in Capacity

- Desert / Coachella
- Lake Mathews & Lake Skinner
- Mojave Demo & Additional Prop. 13
- Kern Delta Prop. 13 Programs
- Diamond Valley Lake
- Arvin Edison
- Castaic & Perris
- Semitropic
- Additional Lake Mead
- Lake Mead Demo
- Mojave Amendment
Diamond Valley Lake

- Constructed on coastal side of major faults
- Can directly supply 4 of 5 treatment plants
- With local production & conservation, can provide 6 months of emergency supply
Gov. Brown declaration of drought emergency

“Perhaps the worst drought California has seen since records began being kept”

Calls for citizens to do their part & reduce water use by 20%

Clears the way for water transfers, exchanges & recycled water
Deliveries to Member Agencies
Comparison: 2014 vs. 2015

Lowest Deliveries since 1980's
California Water Fix

CONVEYANCE
- Three intakes/pumping plants
- State-of-the-art fish screens
- Forebay temporarily stores water pumped from river
- Two gravity flow tunnels (30 miles long, 9,000 cfs)

ECOSYSTEM RESTORATION
- 56 species
- ~150,000 acres

Sacramento River

Preliminary Subject to Revision
Regional Approach Meets Resource Needs

- Significant, reliable new supply
  - Up to 150 MGD
- Favorably located to meet multiple member agency needs
- Importance of timing

Addresses Uncertainty

- Climate change
- Variations in existing supplies
- Demographic & economic change
- Emergencies & earthquakes