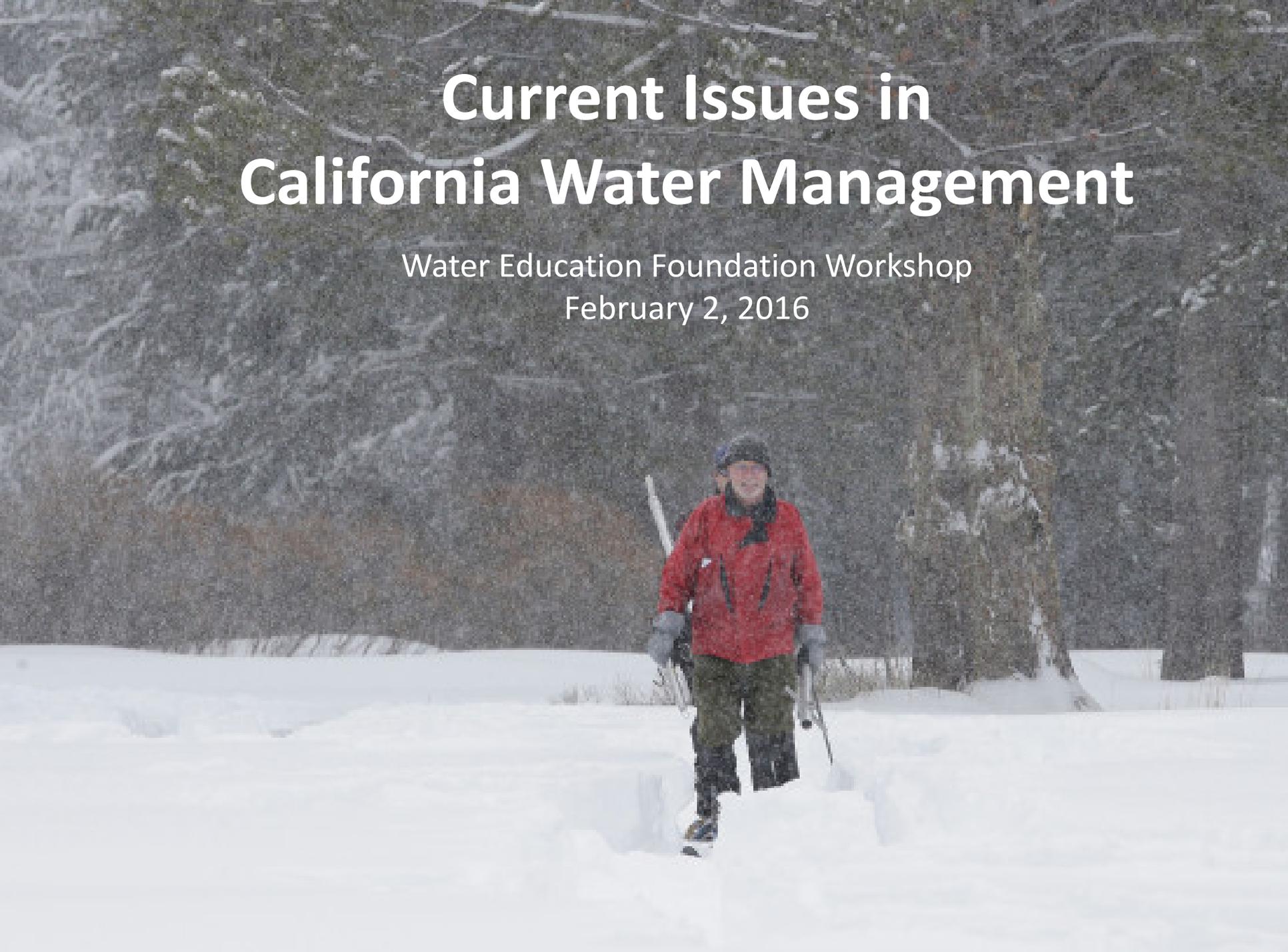


Current Issues in California Water Management

Water Education Foundation Workshop
February 2, 2016



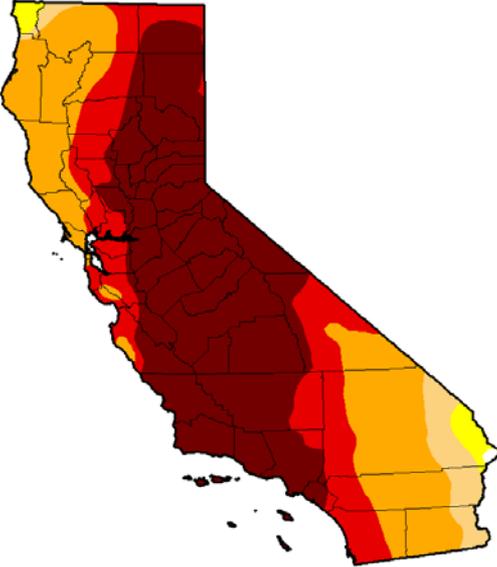
Update on California Water

CFEE Conference **October 13, 2016**

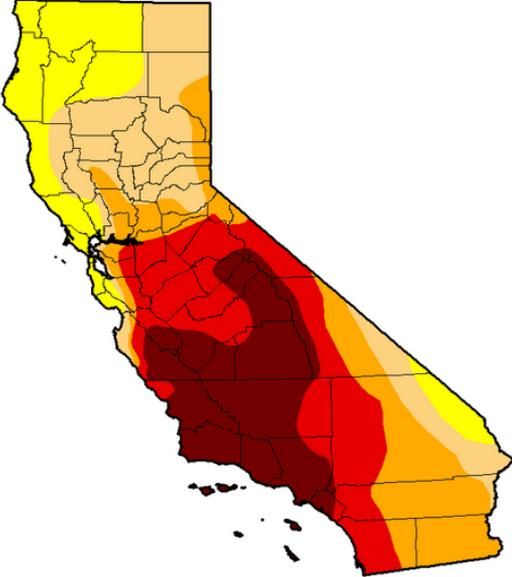


California's Drought Continues

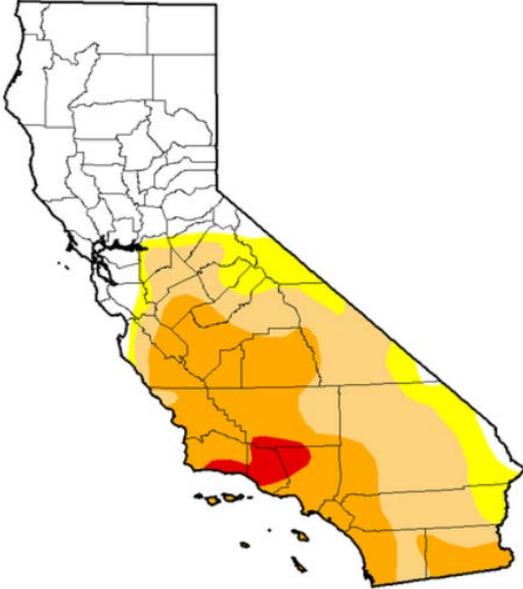
April 2015



October 2016



January 24, 2017



Drought Intensities

None: No Drought
D0: Abnormally Dry

D1: Moderate Drought
D2: Severe Drought

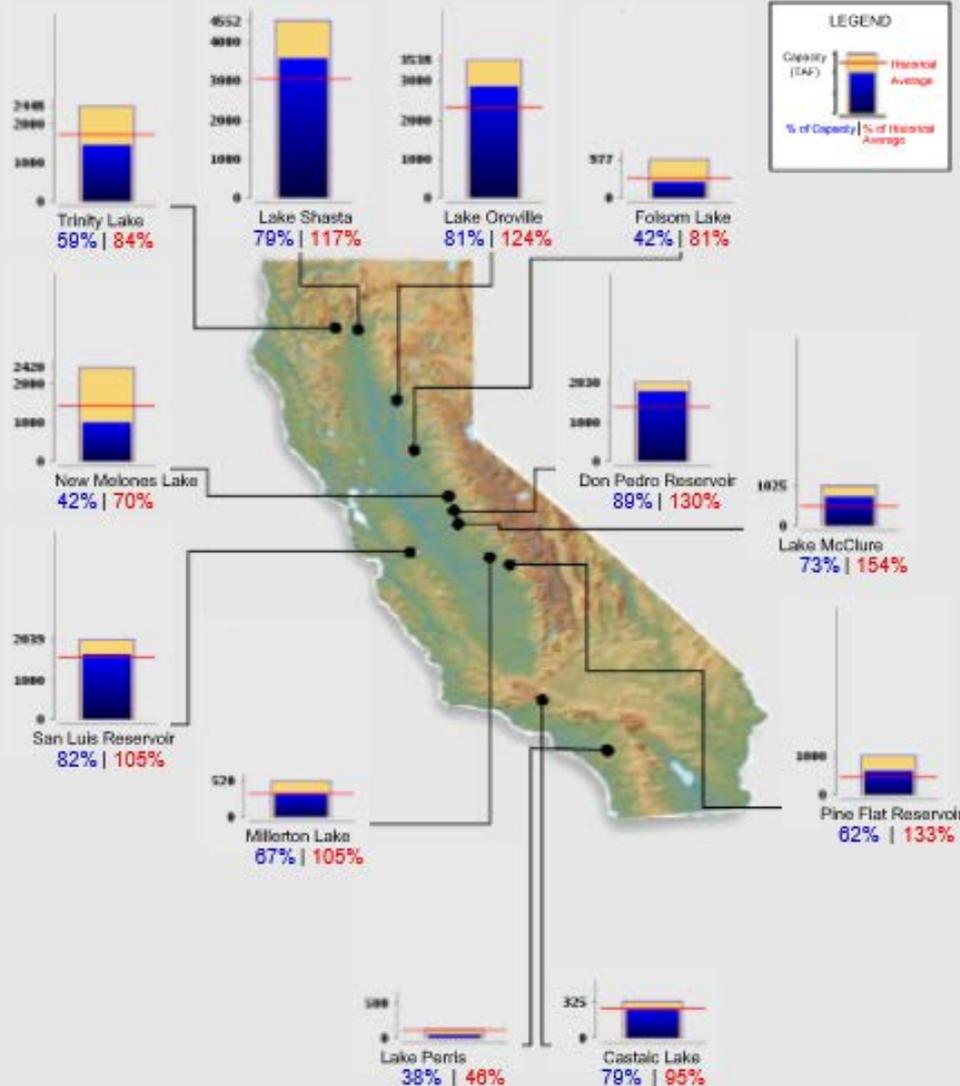
D3: Extreme Drought
D4: Exceptional Drought



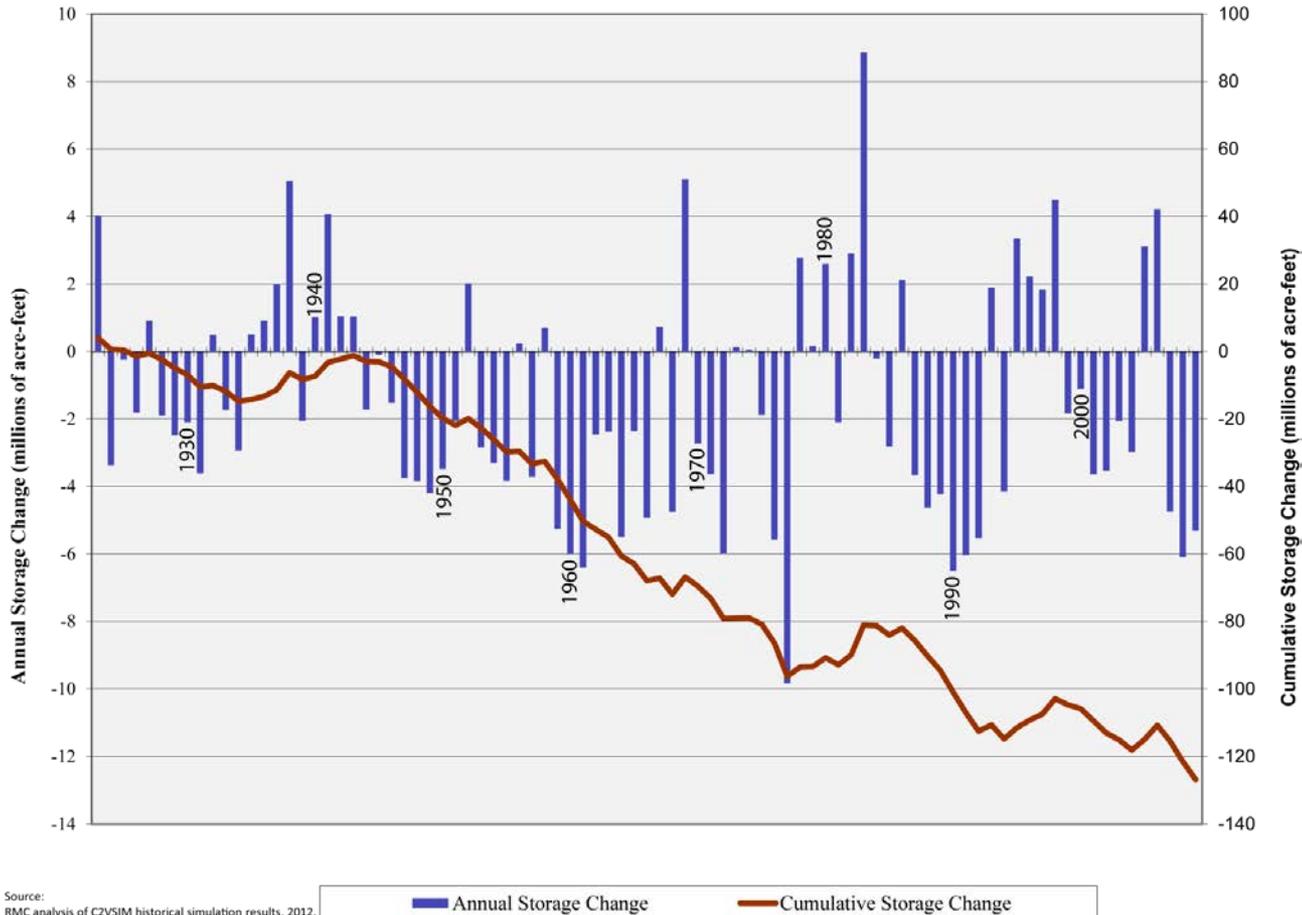
Reservoir Conditions

Ending At Midnight - January 29, 2017

CURRENT RESERVOIR CONDITIONS



Groundwater is Depleted

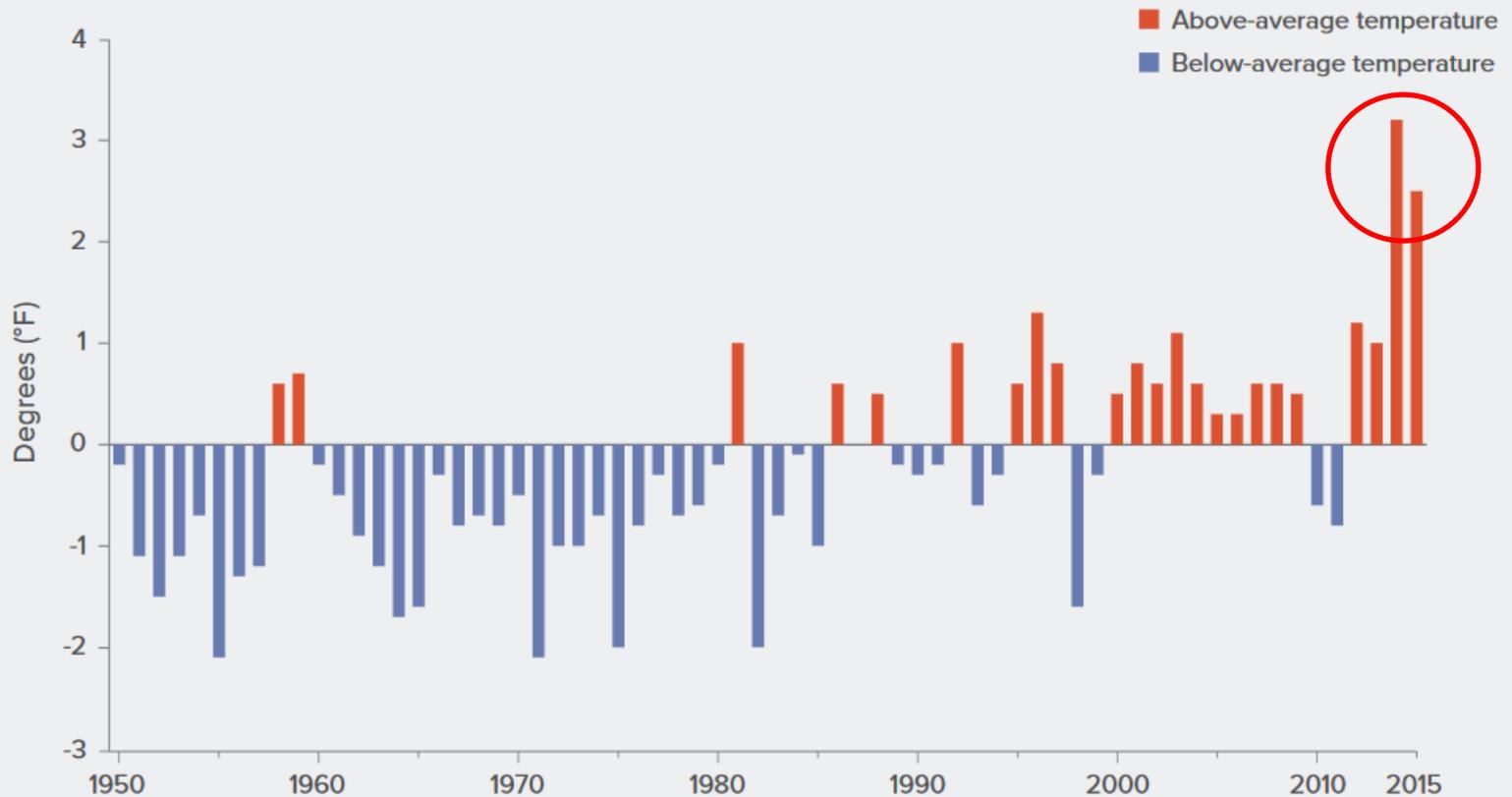


70% of surface water reductions for agriculture have been made up for by increased groundwater pumping.

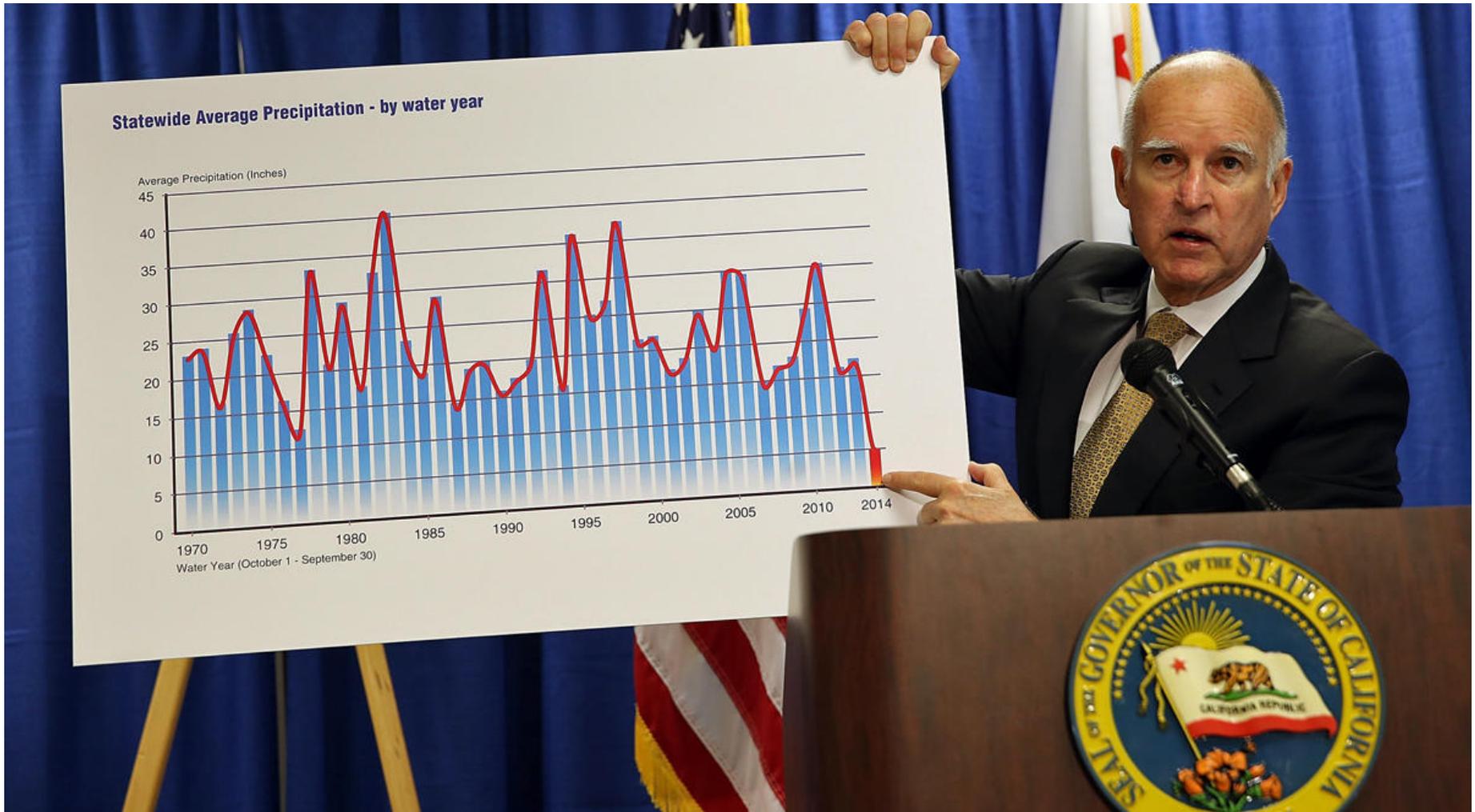
Source:
RMC analysis of C2VSIM historical simulation results, 2012.

Climate Change drives more frequent and severe droughts

CALIFORNIA IS GETTING WARMER



Droughts are not new in California



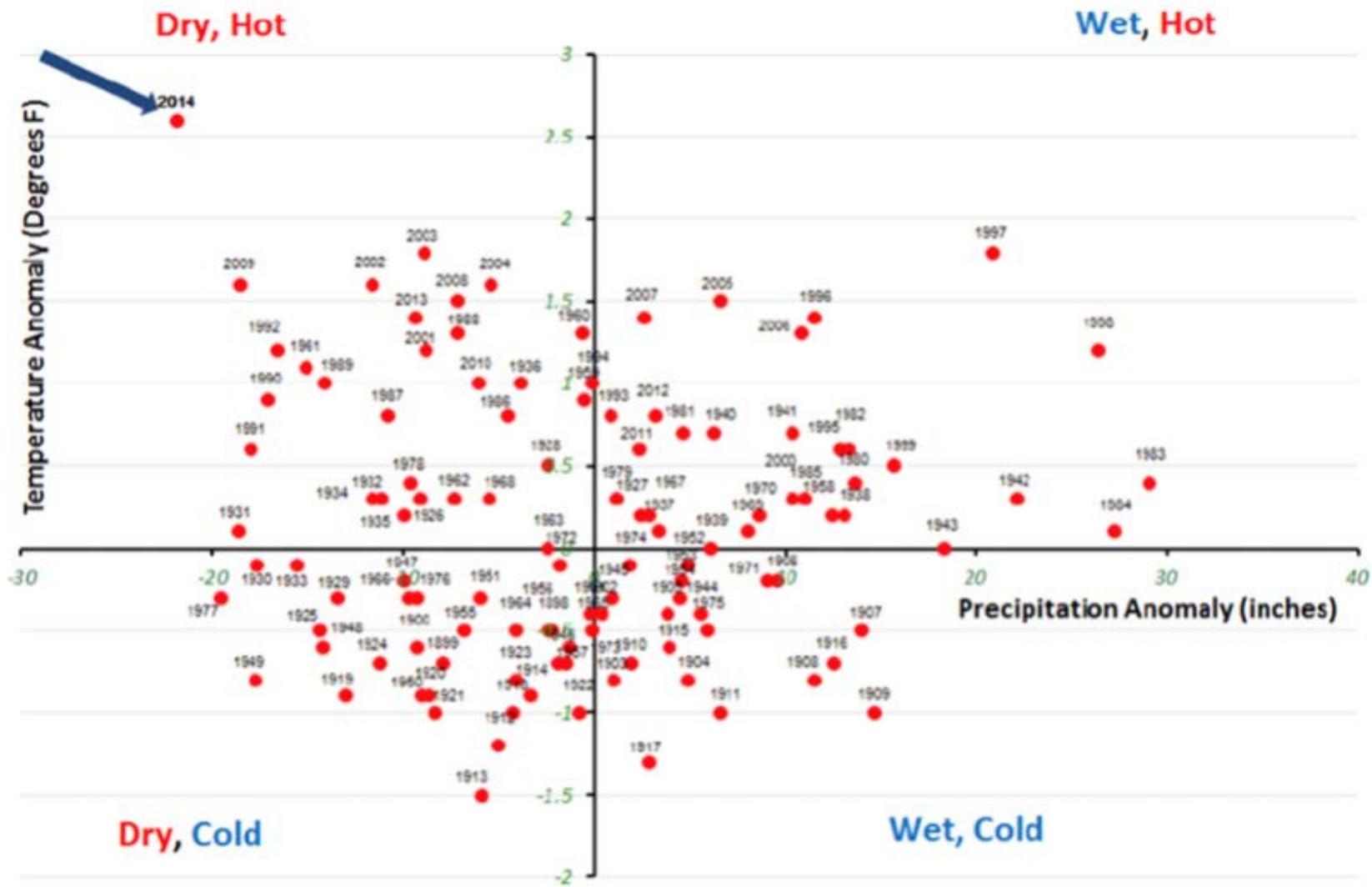
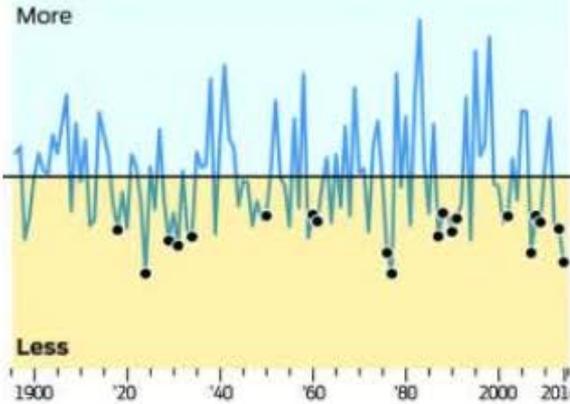


Fig. 1. California temperature (°F) and precipitation (inches) anomalies from January 1895 to November 2014,

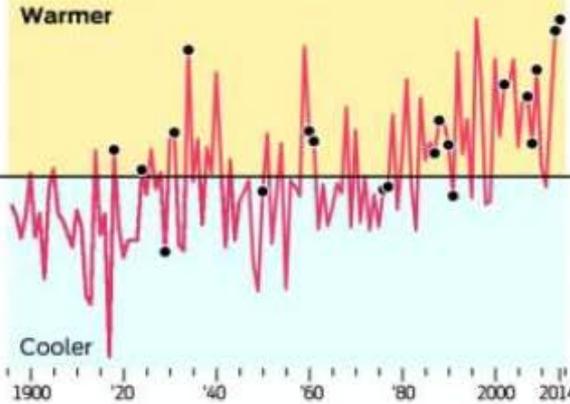
Disturbing trends

When coupled, less precipitation and warmer temperatures mean less moisture in the ground – and less water available in California.

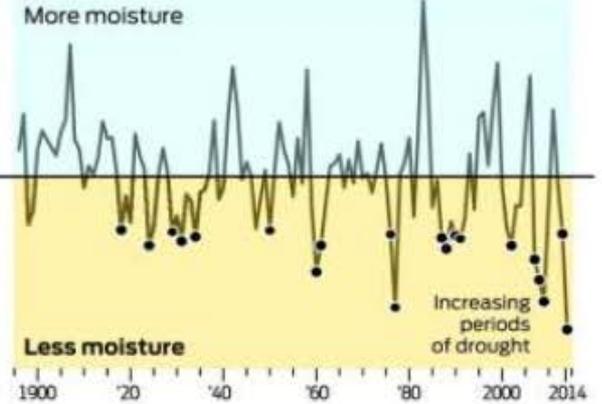
Precipitation (Rain and snow)



Temperature



Soil moisture index



The charts above are calculated from records beginning in 1895. The lines represent anomalies from the average. The black dots represent periods of drought.

Source: Noah Diffenbaugh, Stanford University

John Blanchard / The Chronicle

Take-away on how climate change impacts California water:

- No demonstrated impact on the amount of winter rain and snow
- But... clearly makes winters
 - Less accumulated snowpack for water supply
 - Drier soils
 - More evaporation in reservoirs

Hot Topics for 2017

Sacramento and San Joaquin Rivers and Tributaries all flow into the Delta



The Delta is Severely Broken

- **Outdated, brittle infrastructure creates risk.**
 - 50-year old levees threatened by earthquakes, floods and sea level rise.
 - Extreme event could wipe out freshwater supplies that run through Delta for a period of time.
- **Current system wastes water**
 - Cannot capture all water in major storm events for productive use.
- **Current system kills endangered species**
 - Extinction of native fish is possible if nothing is done.

Setting New Flow Standards for Delta, San Joaquin & Sacramento systems

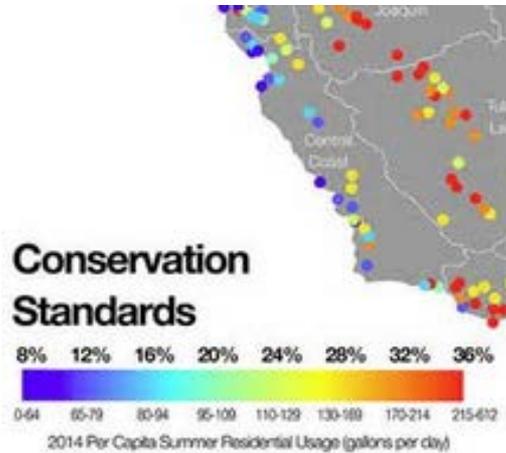


- Water Board must complete regulatory process under Clean Water Act
- Brown Administration working on voluntary agreements to meet standards

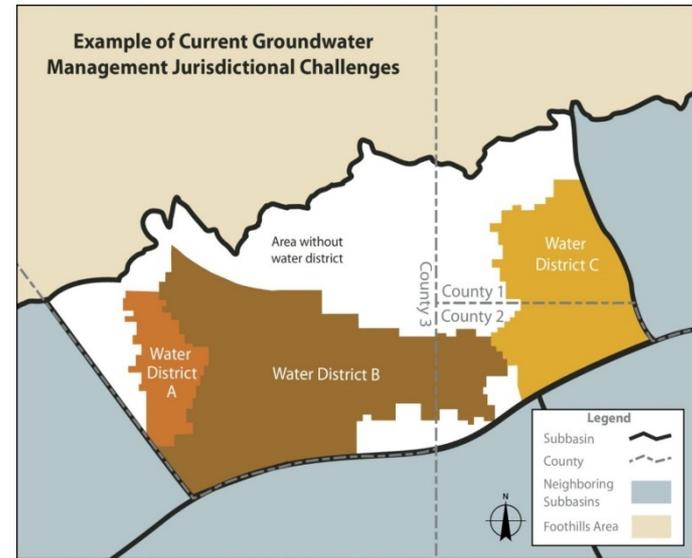
Restoring the Salton Sea



Updating Urban Water Conservation Standards

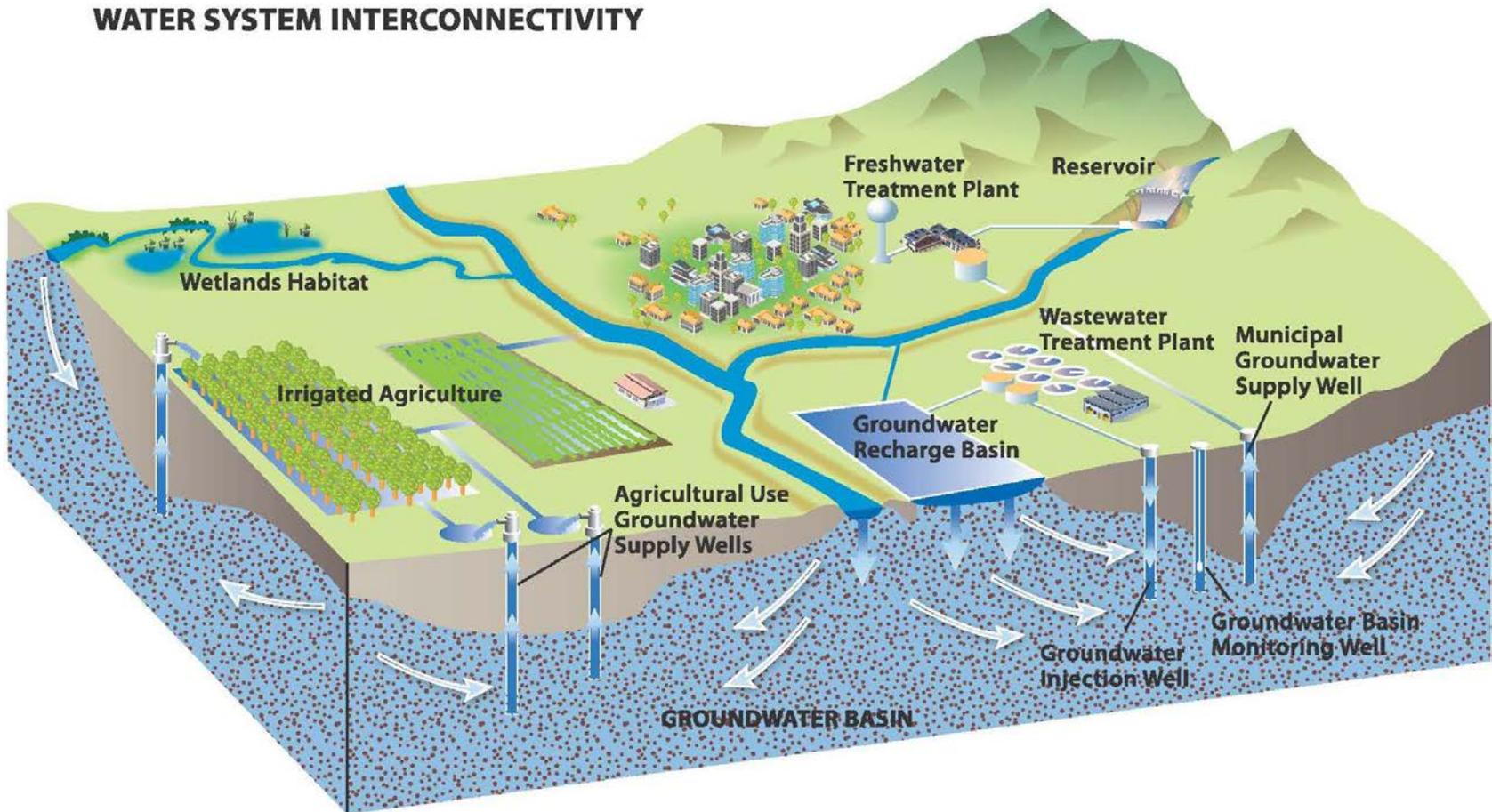


Implementing Sustainable Groundwater Management Act (SGMA)



Achieving Integrated Water Management

WATER SYSTEM INTERCONNECTIVITY



More information at PPIC.org

PPIC WATER POLICY CENTER

CALIFORNIA'S WATER

- CLIMATE CHANGE AND WATER
- THE COLORADO RIVER
- ENERGY AND WATER
- MANAGING DROUGHTS
- PAYING FOR WATER
- PREPARING FOR FLOODS
- PROTECTING HEADWATERS
- THE SACRAMENTO-SAN JOAQUIN DELTA
- STORING WATER
- WATER FOR CITIES
- WATER FOR THE ENVIRONMENT
- WATER FOR FARMS

 **PPIC** PUBLIC POLICY INSTITUTE OF CALIFORNIA

Newsflash: The American West is Dry

