

California Water 2015: *The drought, the future, and us*

Felicia Marcus
Chair, State Water Resources Control Board
Center on Civility and Democratic Engagement
Goldman School of Public Policy
Berkeley, October 3, 2015



STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

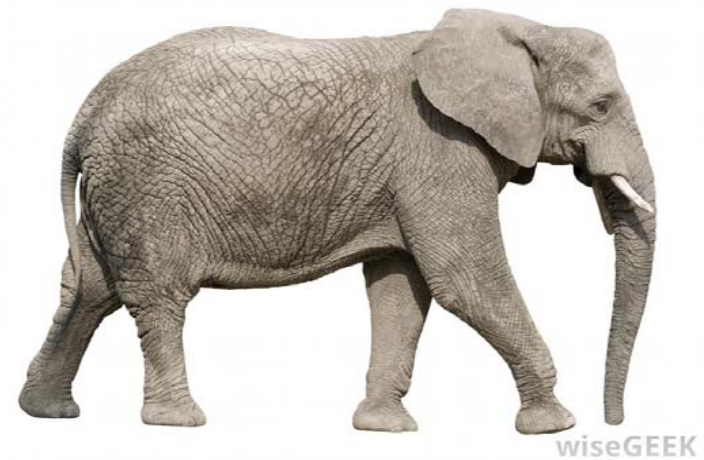
Overview



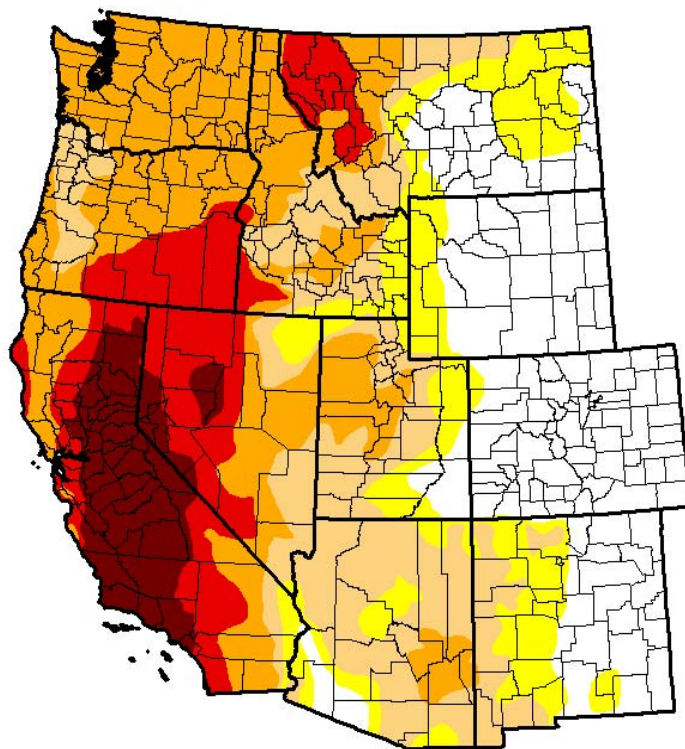
- Overview
- Drought update
- Where do we go from here? How do we go from here?

Setting—the whole elephant

- **Most Variable hydrology**
 - Year to year
 - Location to Location
 - Time of year
- **Mix of sources**
 - Surface Water local or imported (storage/conveyance)
 - Groundwater (intensely local)
 - Every locale different mix
 - Mix of water rights varies greatly
 - Impact of drought varies greatly
- ***Climate change and other drivers as game-changers***
 - ***Snowpack/Population/Australia's Millennial Drought***
- **Mix of solutions**
 - Conservation/Recycling/Stormwater/Desal
 - Integrated Water Management in regions and statewide
 - Storage, storage, storage, storage and other infrastructure improvements
- **Drought**
 - Worst in impact in modern history
 - Multiple low precipitation years; disaster of a snow year
 - More pop; more irrigated ag; more endangered and threatened species make impact greater than '24 & '77
 - 2015 far worse despite December/February rains because of temperature=dismal snowpack



U.S. Drought Monitor West



July 21, 2015

(Released Thursday, Jul. 23, 2015)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	25.49	74.51	61.04	41.92	18.87	7.17
Last Week 7/14/2015	25.49	74.51	61.37	43.76	18.87	7.17
3 Months Ago 4/21/2015	28.21	71.79	61.51	37.95	17.19	7.95
Start of Calendar Year 12/01/2014	34.76	65.24	54.48	33.50	18.68	5.40
Start of Water Year 9/30/2014	31.48	68.52	55.57	35.65	19.95	8.90
One Year Ago 7/22/2014	27.30	72.70	60.66	47.17	23.19	6.02

Intensity:

D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought
D2 Severe Drought	

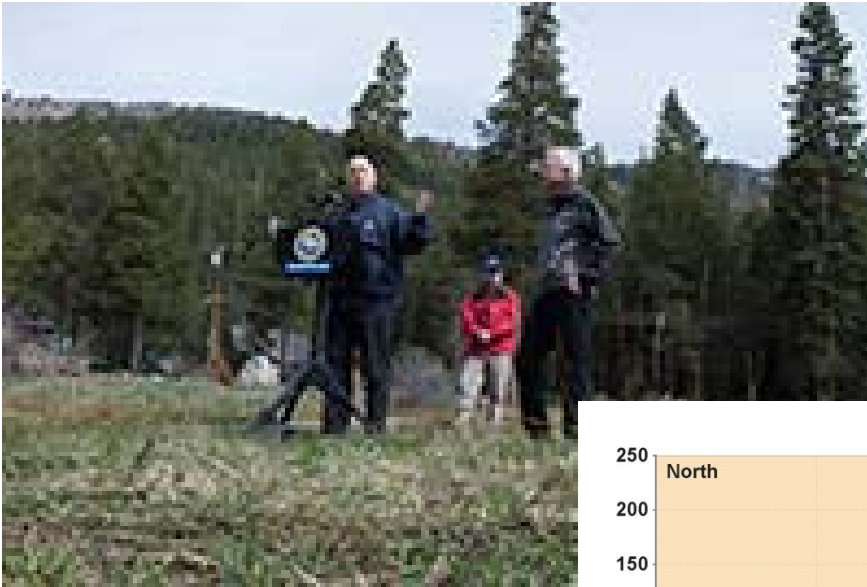
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

David Simeral
Western Regional Climate Center



<http://droughtmonitor.unl.edu/>

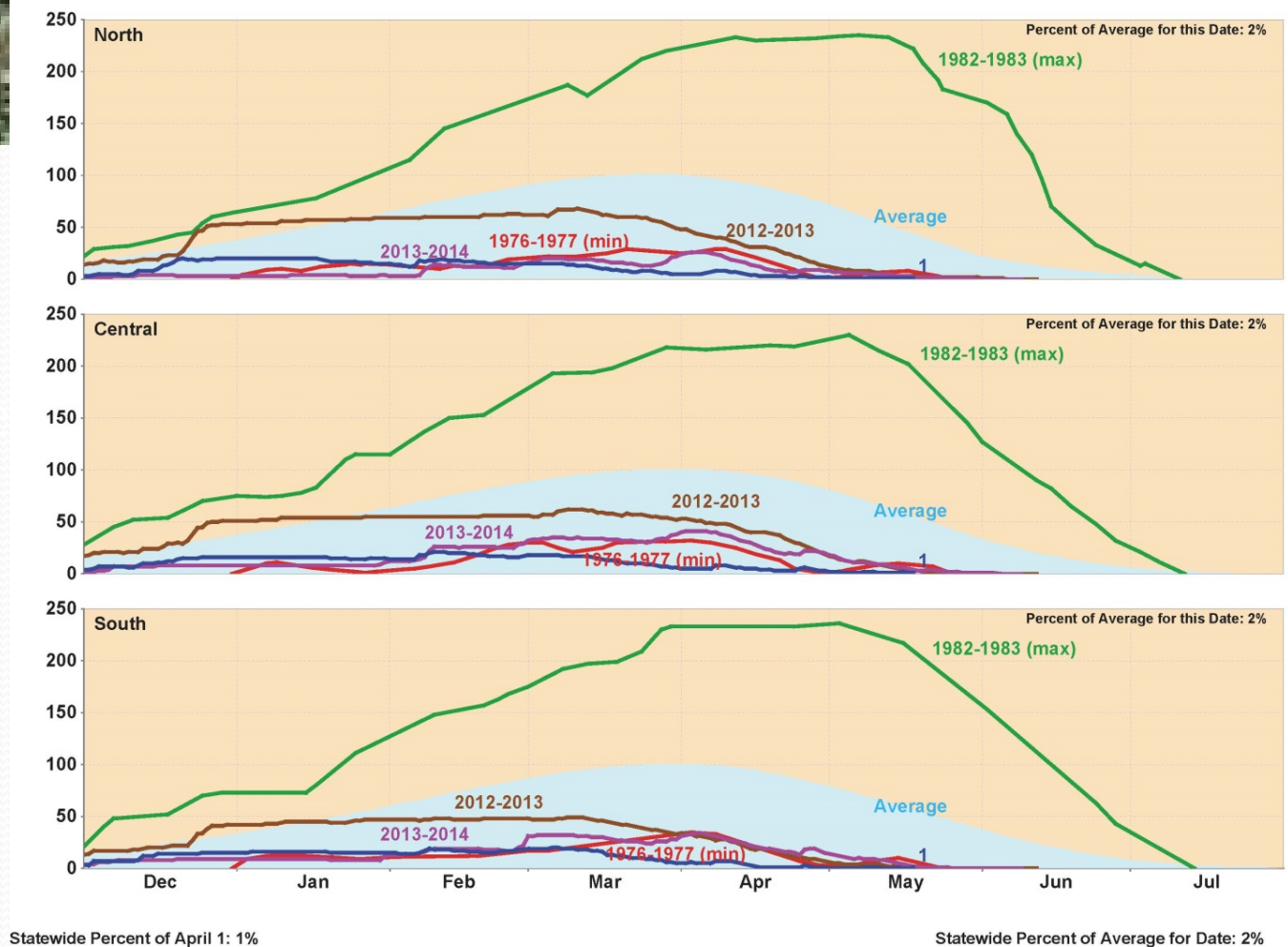


- No Snow Storage
- Minimum Runoff
- Loss of Cold Water

Statewide Snow Water Content

April 1st = 25% of Historic Low

California Snow Water Content, May 18, 2015, Percent of April 1 Average





Selected impacts

- 500,000+ acres fallowed*
 - Diminished yield on others
 - 18,000+ out of work directly connected to agriculture
 - Groundwater levels dropping precipitously
 - Communities running out of drinking water
 - Fish and wildlife impacts across the board
 - Increased wildfires=\$\$, ecological devastation, air, land, and water impacts now and into future
-
- 5-10x worse without groundwater



Selected Actions—

- Drought Task Force
- Emergency Orders
- Emergency Legislation--\$680m (2014) \$2+b (2015)
- Disaster relief—Food and Water
- State Federal coordination:
 - Temporary urgency changes to water right permits and flexible implementation of federal biological opinions
 - Contract water allocation cutbacks by state and federal projects

Actions—con't

- “Curtailments” of water rights
- Adding supply →
 - IRWM \$\$\$
 - Recycled water advancement
 - 1% financing through SRF (\$800m/150,000 af/yr)
 - Streamlined permitting at state and regional level
- Fish and Wildlife rescues/voluntary agreements
- **Water Conservation—statewide regulations on urban water purveyors and SaveOurWater.com campaign**
- \$7.57 BILLION water bond passes





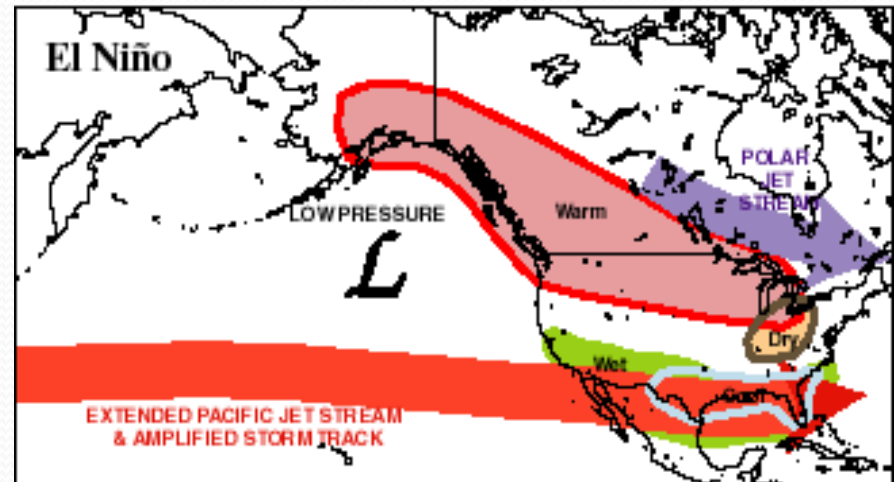
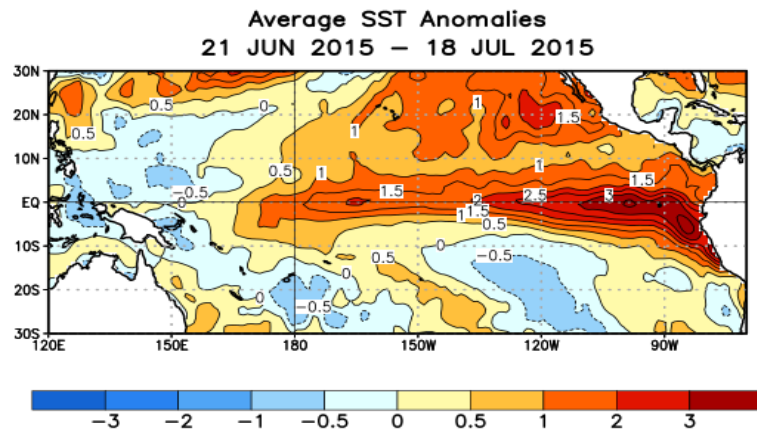
How we're doing—

- Effective and rapid conservation—*results*
- *July Statewide Average was 31%!* But we needed it to be. August 27%—still good.
- Last big drought we learned what we could do indoors and built local storage; this one we're learning what we can do outside and have put recycling, stormwater capture, and desal in high gear for the future. We also discovered our groundwater basins.
- Yet, continuing rhetorical and political conflict—fish v. people; environmental vs. ag; urban vs. ag; scapegoating/blaming

El Nino for Winter 2015/16?

- Cannot plan on above-normal precipitation for interior *Enough already.....* California

<http://www.wrh.noaa.gov/sto/climate/ENSO>.



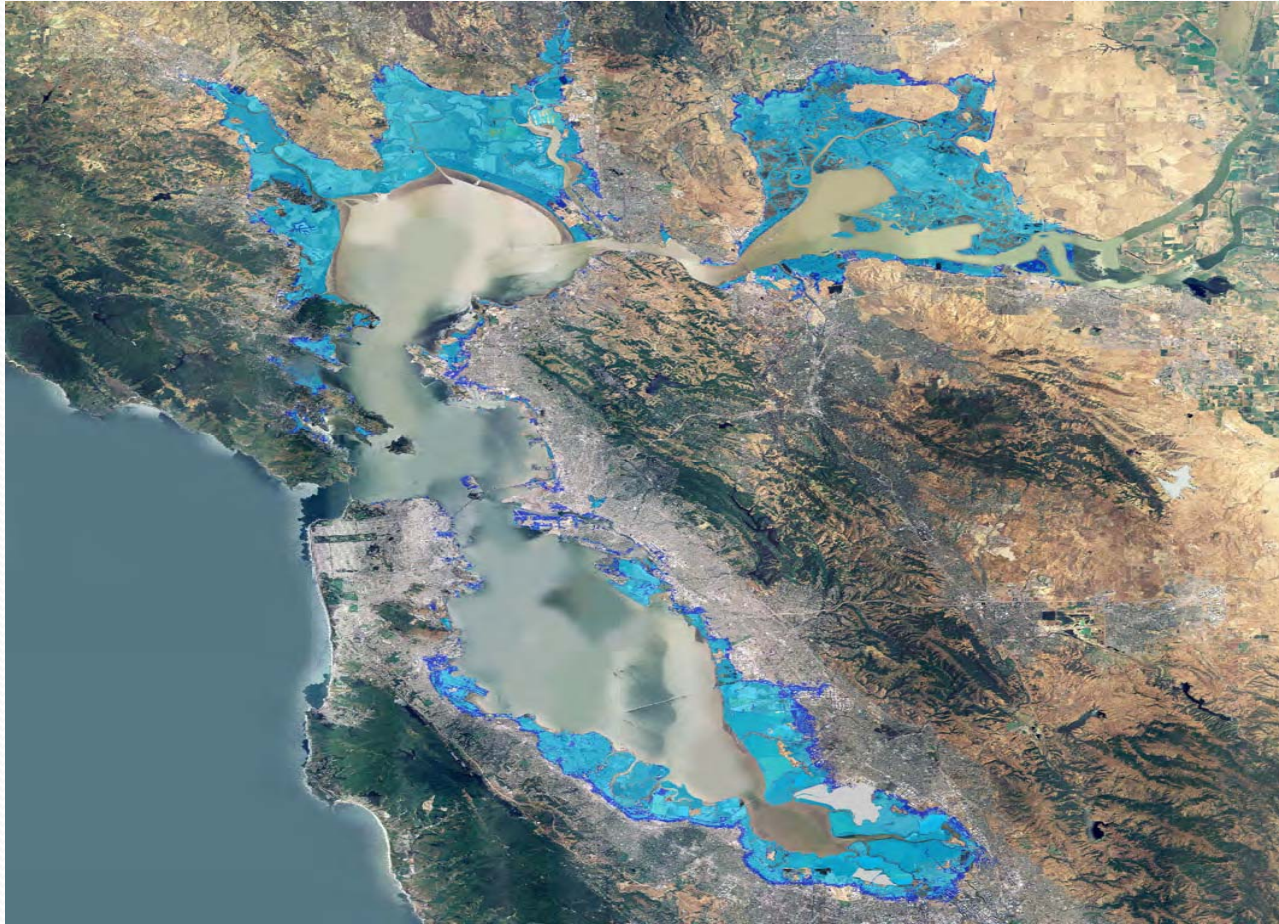
What's it gonna be?



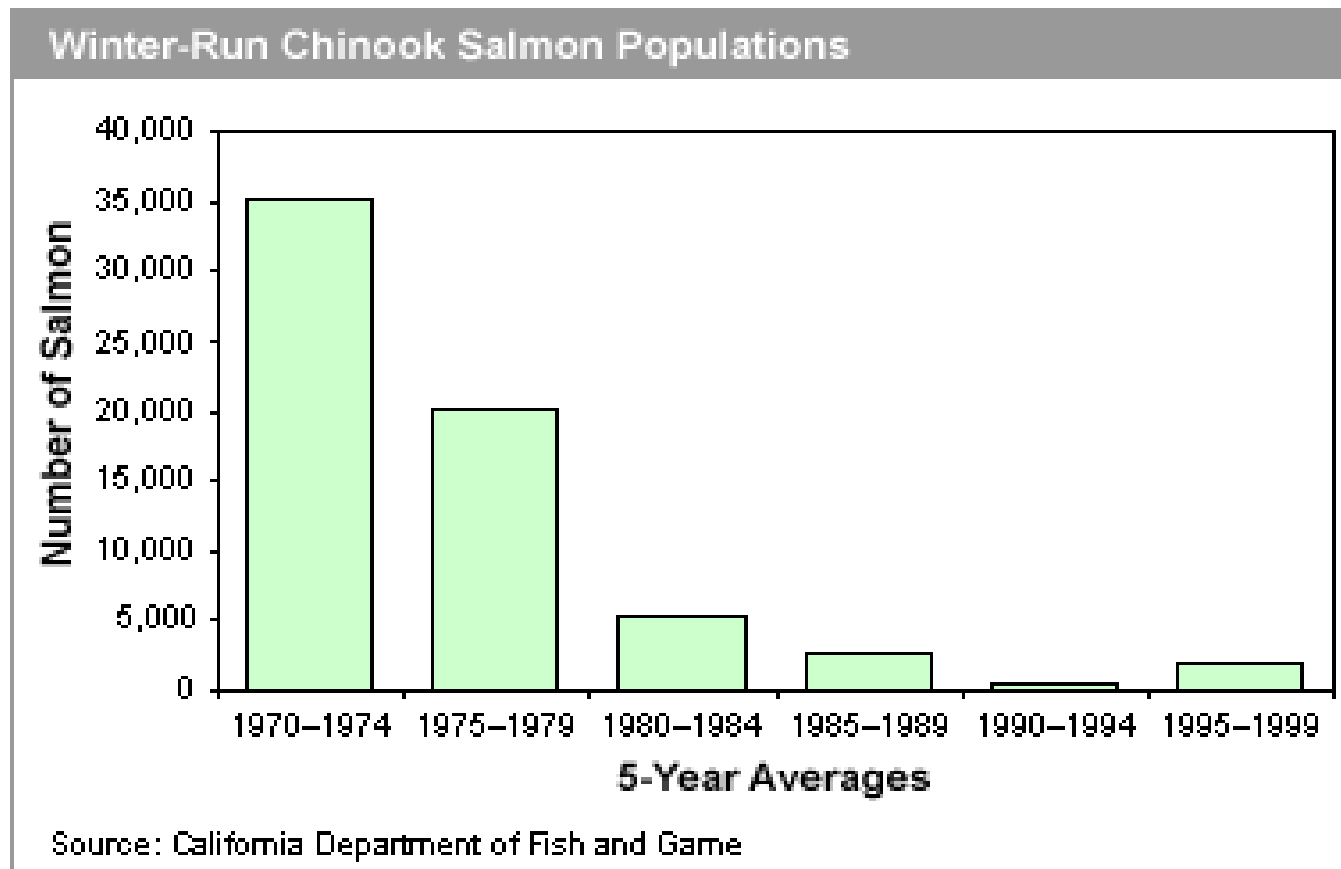
Reality: Loss of snowpack



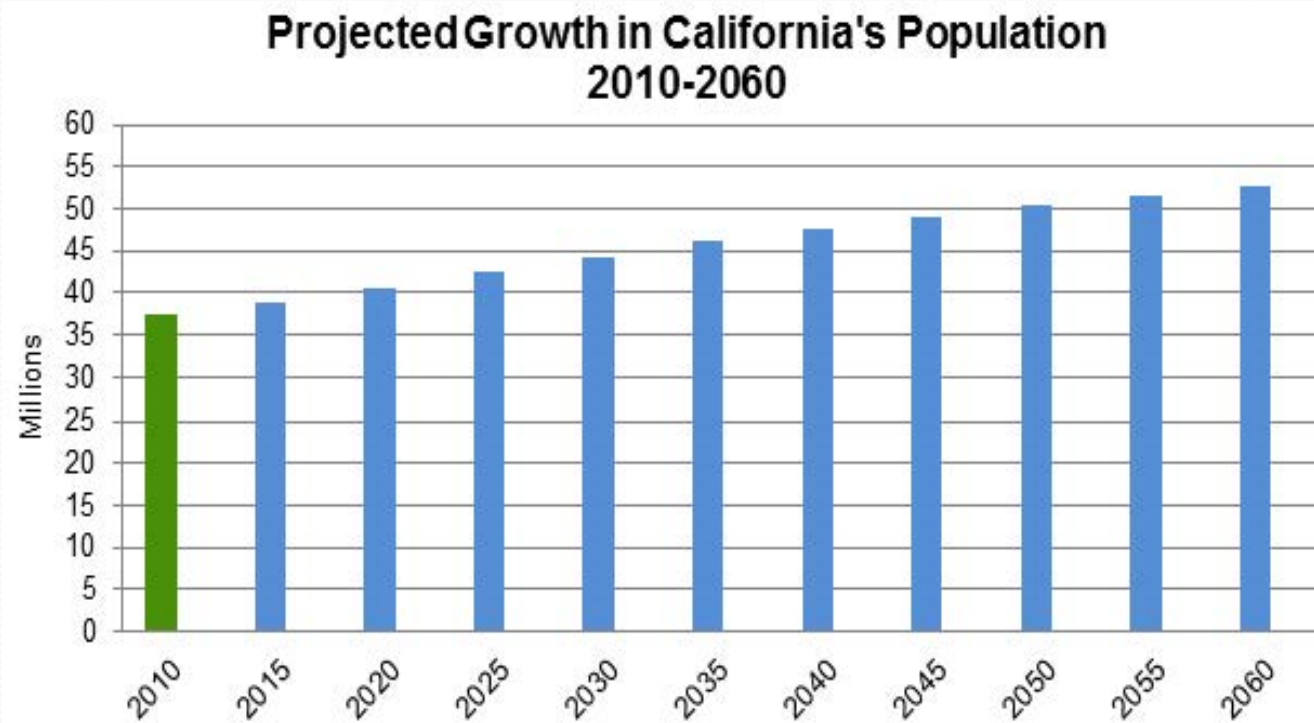
Reality: Sea Level Rise



Reality: Fish and wildlife are imperiled



Reality: Population will rise



- Source: Department of Finance; Controller Betty Yee website

Reality: We can do something about it

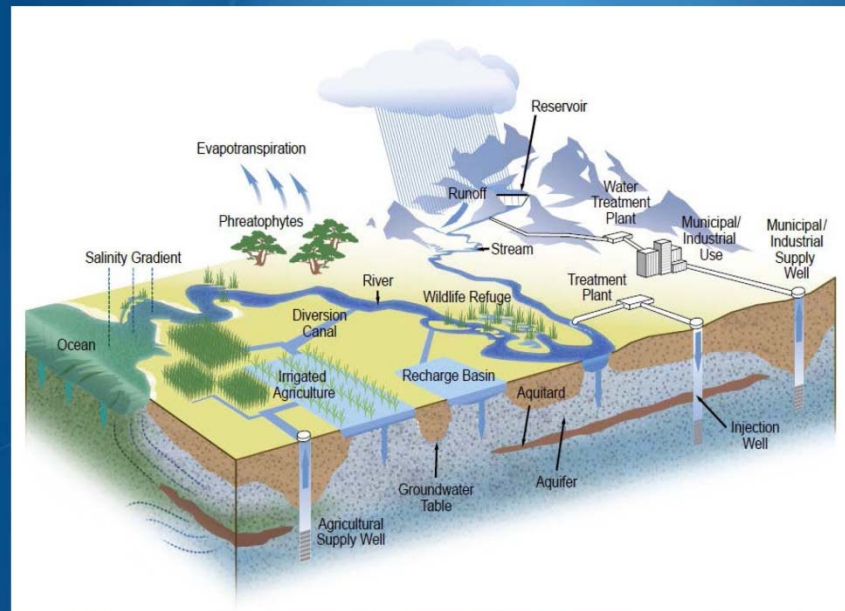


Water 4.0

The Past, Present, and Future of
the World's Most Vital Resource

David Sadloak

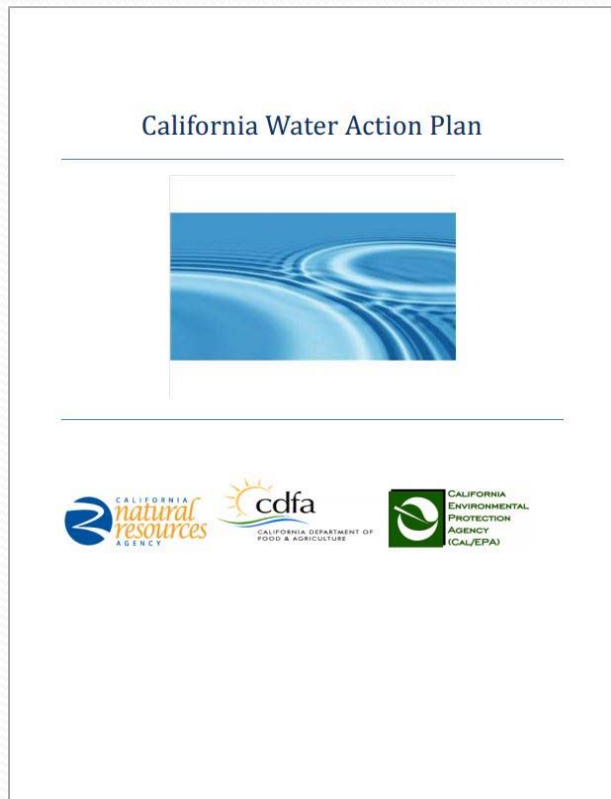
A Call to Integrate Interconnected Systems Require Integrated Solutions



Reality: We are doing something about it

- Myriad Individual acts of transcending traditional silos
 - Integrated Regional Water Management
 - Drought “angels”
 - Fish/farmer win/wins
- Legislative action, e.g.,
 - “Human right to water”
 - 2009 legislation/“coalition of the willing”
 - Groundwater legislation
 - Water Bond
 - Move of drinking water program and creation of Office of Sustainable Solutions
 - More enforcement and information gathering authority over water rights including seniors
- Local leadership
 - Conservation heroes—turf attitudes
 - Stormwater capture/Recycled water/Contaminated basin reuse—and other integrated solutions
- Water Action Plan—see infra

California Water Action Plan



- Make Conservation a California Way of Life
- Increase Regional Self-Reliance and Integrated Water Management Across All Levels of Government
- Achieve the Co-Equal Goals for the Delta
- Protect and Restore Important Ecosystems
- Manage and Prepare for Dry Periods
- Expand Water Storage Capacity and Improve Groundwater Management
- Provide Safe Water for All Communities
- Increase Flood Protection
- Increase Operational and Regulatory Efficiency
- Identify Sustainable and Integrated Financing Opportunities

*“Our relationship with water has
to evolve.”*

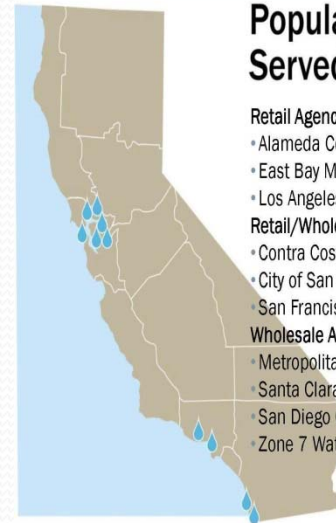
Los Angeles Mayor Eric Garcetti, October 14, 2014



Our relationship with each other has to evolve



Who is CUWA?



Population
Served **24 million**

Retail Agencies:

- Alameda County Water District (ACWD)
- East Bay Municipal Utility District (EBMUD)
- Los Angeles Department of Water and Power (LADWP)

Retail/Wholesale Agencies:

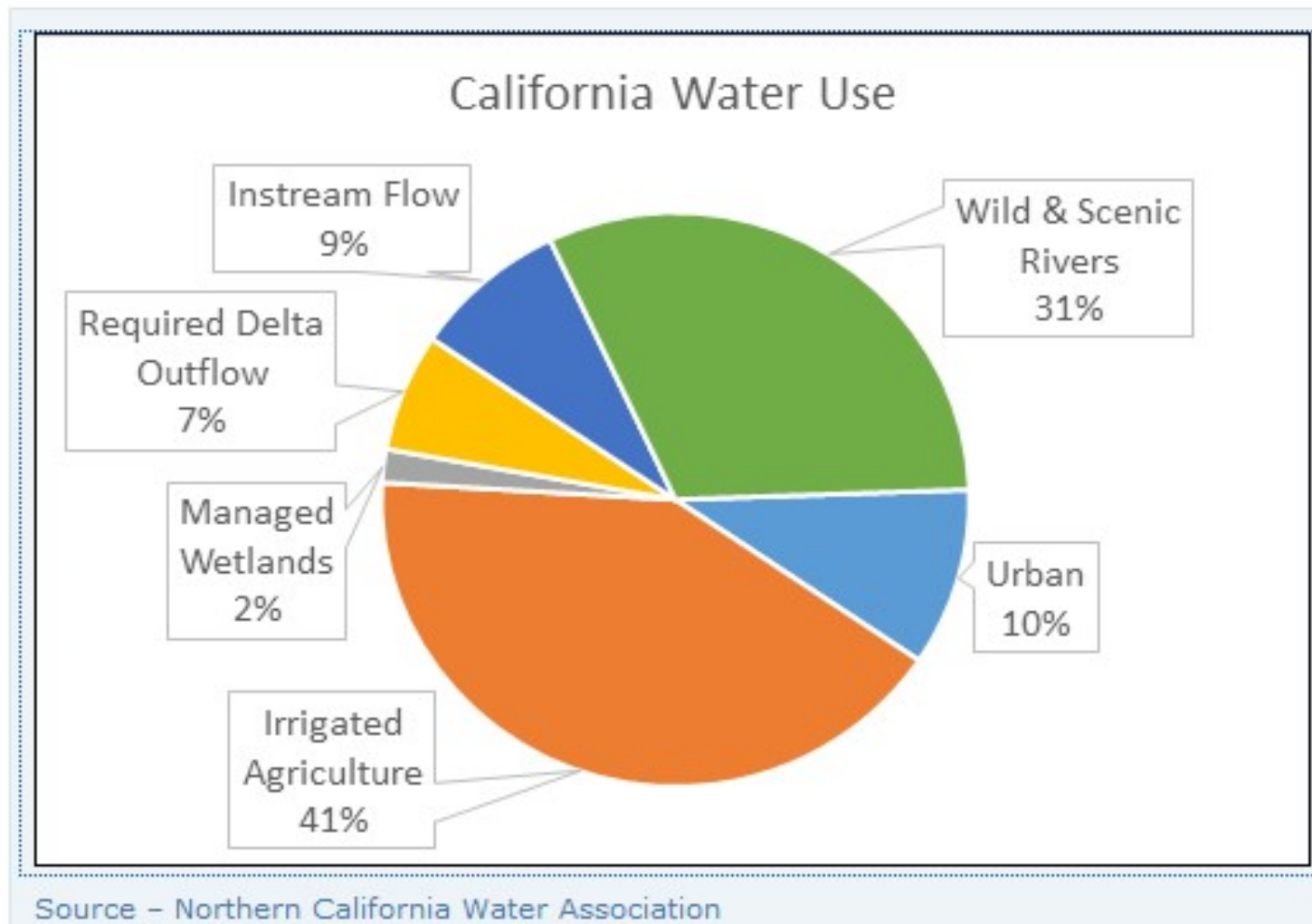
- Contra Costa Water District (CCWD)
- City of San Diego (San Diego)
- San Francisco Public Utilities Commission (SFPUC)

Wholesale Agencies:

- Metropolitan Water District of Southern California (MWDSC)
- Santa Clara Valley Water District (SCVWD)
- San Diego County Water Authority (SDCWA)
- Zone 7 Water Agency (Zone 7)

CALIFORNIA **URBAN WATER AGENCIES**

One way to slice the California Water Pie







Thank you!!!

