

Climate Change Adaptation and
Mitigation Policy:
Statewide Vision and Framework

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Multiple State Planning Efforts

- Water Action Plan
- AB 32 Scoping Plan
- Safeguarding California Plan
- California Water Plan Update
- Desert Renewable Energy Conservation Plan



Research and Policy Guidance

- Statewide Climate Assessments
 - 4th Assessment proposals under development
 - <http://resources.ca.gov/climate/fourth/>
- Adaptation Planning Guide
- Governor's Office of Planning and Research – General Plan Guidelines Update
- Federal focus on resilience

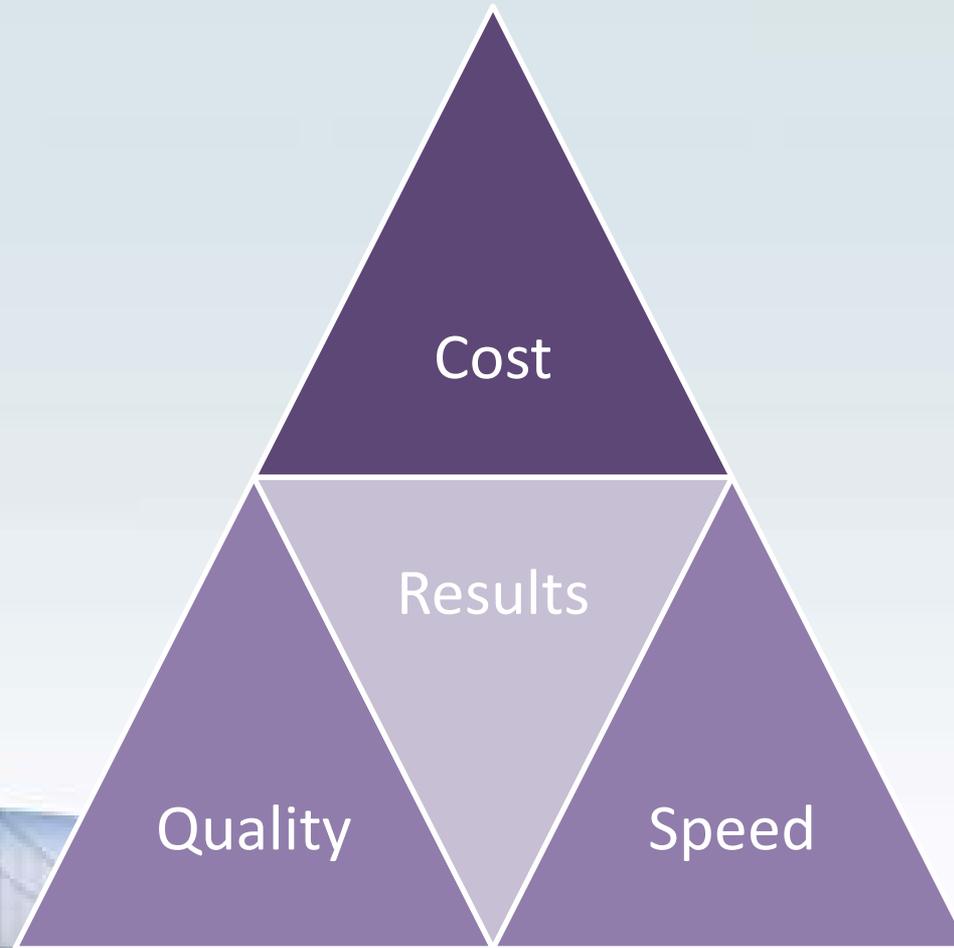


Challenges

- Lack of funding
 - Siloes in funding streams
- Disaster response and recovery vs. slower moving changes (e.g., loss of Sierra snowpack)
- Regulatory uncertainty



Effective Adaptation Requires Investment



2014 Executive and Legislative Drought Response Actions

- Three Executive Orders
- Emergency Legislation (\$687 million)
- Water Bond (\$7.5 billion)
- Groundwater Management Legislation
- Other Drought Bills
 - Homeowner Associations
 - Pavley & Wolk Bills (Stormwater capture, Voluntary energy use reporting, Leak detection)



Water Bond 2014

Watershed Protection, Watershed Ecosystem Restoration, State Settlements - \$1.495B

- Conservancies \$327.5M
- Wildlife Conservation Board \$200M (restoration of flows)
- Department of Fish and Wildlife \$285M (out of Delta, no mitigation on BD)
- Department of Fish and Wildlife \$87.5M (in Delta with constraints)
- State settlement obligations including CVPIA \$475M.
- Rivers and Creeks \$120M.

Statewide Flood Management - \$395M

- Statewide flood management projects and activities \$100M.
- For Delta levee subvention programs and delta flood protection projects \$295M.

General Provisions

- Funding eligibility requires urban or agricultural water management plans Conservation Act.
- Bay Delta Conservation Plan neutral.
- Protects existing water rights and reaffirms area of origin protections.
- The bond includes \$7.12 billion in new debt, plus the repurposing of existing unspent bond funds of \$425 million for a total of \$7.545 billion. None of the repurposed bond funds would be taken from existing projects.
- Assumes repurposing of \$105M from Prop. 84, \$95M from Prop. 50, \$86M from Prop 13, \$25.5M from Prop 204, \$13.5M from Prop 44, and \$100M from Prop IE



Water Bond 2014

Regional Water Reliability \$810M

- Integrated Regional Water Management \$510M.
- Stormwater capture \$200M.
- Water conservation \$100M.

Safe Drinking Water - \$520M

- Provide clean, safe and reliable drinking water to all Californians. With minimum to leverage federal funds for safe drinking water and clean water programs and for disadvantaged communities.
- Small Community Wastewater Program \$260M.
- Drinking Water Public Infrastructure \$260M.

Storage - \$2.7B

- Continuous appropriation for water storage projects.

Water Recycling - \$725M

- Statewide water recycling projects and activities.

Groundwater Sustainability - \$900M

- Prevent and reduce groundwater contaminants \$800M.
- Provide sustainable groundwater management planning and implementation \$100M.

Inter-Agency Coordination

- Water-Energy Team of Climate Action Team (WETCAT)
 - WETCAT Principals
 - Ann Chan, Resources Agency
 - Rob Oglesby, Energy Commission
 - Catherine Sandoval, Public Utilities Commission
 - Frances Spivy-Weber, State Water Board
- Water and Wastewater Sector response to SONGS shut down
 - Dialogues between Gov's Office, agencies, water & wastewater agencies, IOUs, and other stakeholders



Lessons from Australia

- The most effective drought response starts ahead of the drought
- Changes in water use initiated during a drought can become permanent



At the local Bunnings hardware store in Perth, soak well kits and rainwater harvesting tanks are available off-the-shelf.

August Water Production by Hydrologic Region and Percentage Reduction (Million Gallons)

■ Production August 2013
 ■ Production August 2014
 ●— Percentage August Reduction
 - - - State Average August Reduction



Current Snapshot

Drought Monitor

Drought Severity

D0 - Abnormally Dry
 D1 Drought - Moderate

D2 Drought - Severe
 D3 Drought - Extreme

D4 Drought - Exceptional

**Official State of Emergency
 Declared in California on
 January 17, 2014**

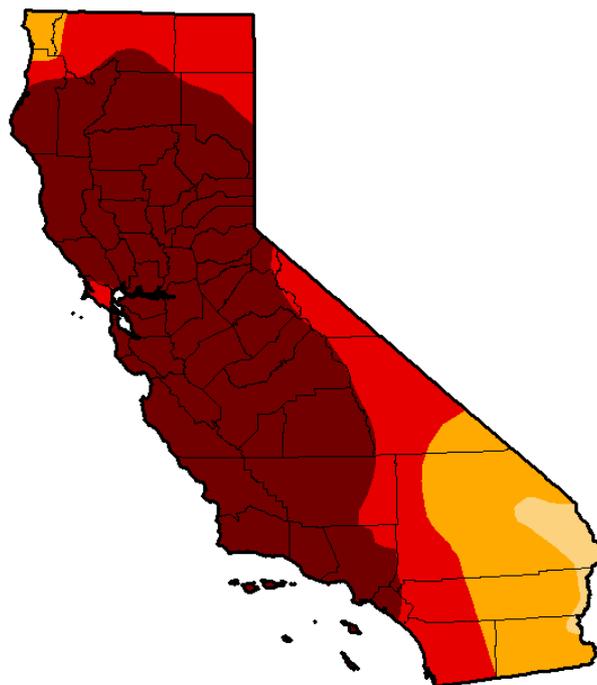
Local Emergencies Declared

- 23 Counties
- 13 Cities
- 08 Tribal Reservations
- 11 Special Districts

County & Tribal Drought Task Force

- 30 Counties
- 02 Tribes

U.S. Drought Monitor California



August 19, 2014

(Released Thursday, Aug. 21, 2014)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	97.59	81.92	58.41
Last Week <i>9/12/2014</i>	0.00	100.00	100.00	99.80	81.92	58.41
3 Months Ago <i>5/20/2014</i>	0.00	100.00	100.00	100.00	76.68	24.77
Start of Calendar Year <i>12/01/2013</i>	2.61	97.39	94.25	87.53	27.59	0.00
Start of Water Year <i>10/1/2013</i>	2.63	97.37	95.95	84.12	11.36	0.00
One Year Ago <i>8/20/2013</i>	0.00	100.00	98.23	93.86	11.36	0.00

Intensity:

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

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

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



INCREASED WILDFIRE THREATS

- State firefighters have responded to 5,329 fires so far this year, compared to 4,356 normally this time of year.
- Fires have burned 91,912 acres in state responsibility areas.





Drinking Water

Drought Impacts

- Several cities and towns in danger of running out of drinking water in **60-90 days**.
- Several dozen communities on “critical watch” list: **120-150 days** from running out of drinking water.
- Domestic wells are already **dry** and we expect more to dry up as water tables decline.



Drought Resilience Gaps

