How California is Coping with Drought

Tanya Trujillo, Colorado River Board of California

Tanya Trujillo is the executive director of the Colorado River Board of California. The Colorado River Board is designated by California law to represent the State of California on issues relating to the Colorado River System. Tanya previously served as counselor to the Assistant Secretary for Water and Science with the Department of the Interior and counsel to the Senate Energy and Natural Resources Committee's Subcommittee on Water and Power, in Washington, D.C. Tanya also served as general counsel to the New Mexico Interstate Stream Commission, and prior to working for the State of New Mexico, she was a partner at Holland & Hart in Santa Fe, New Mexico with an emphasis on natural resources issues. She received an undergraduate degree from Stanford University and a law degree from the University of Iowa College of Law.

Figure 1. Introduction.

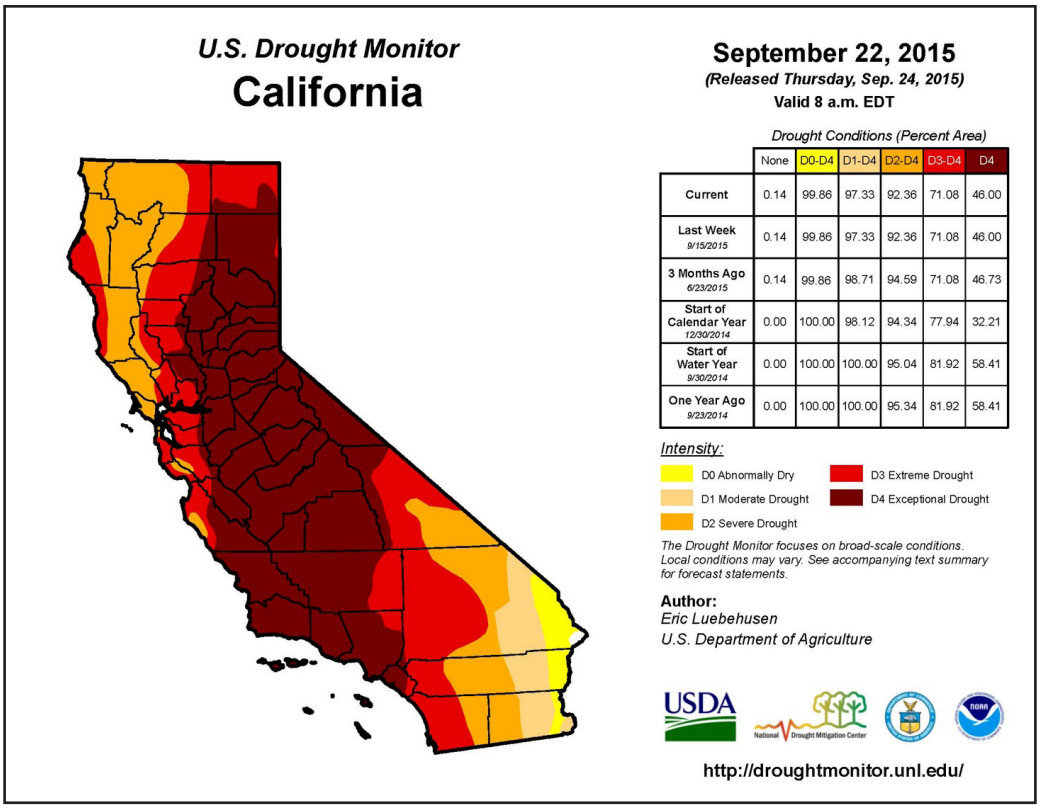

Figure 2. U.S. Drought Monitor for California.

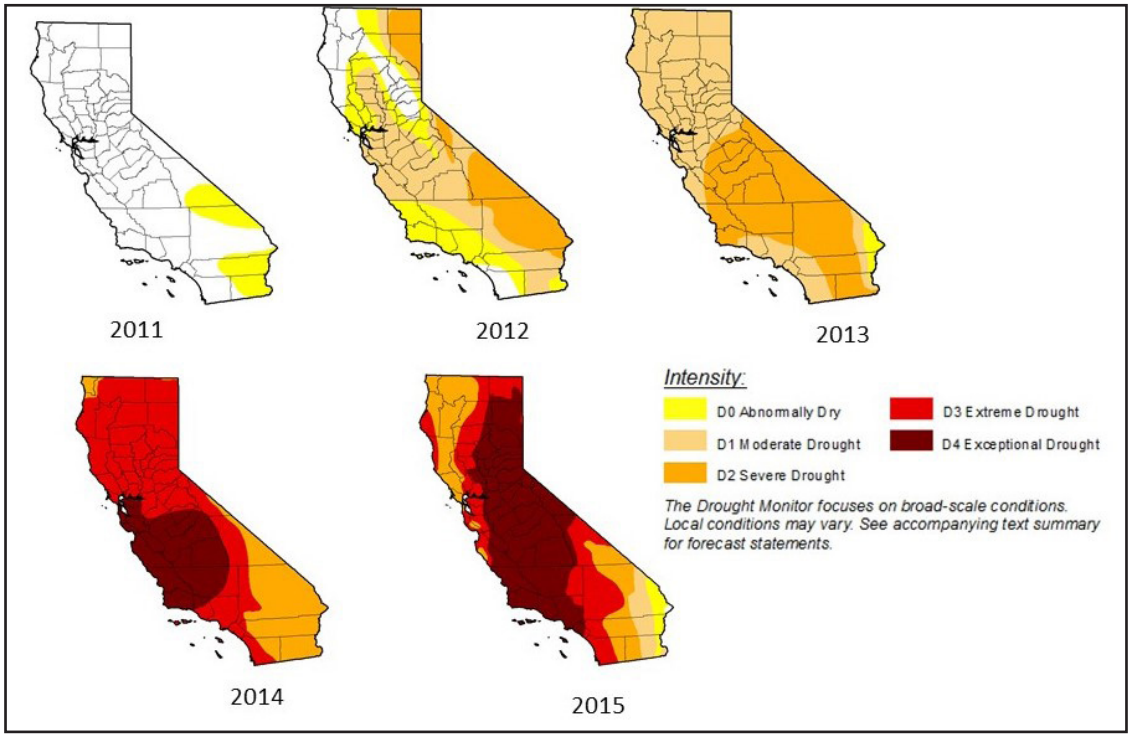

Figure 3. California drought progression from 2011-2015.

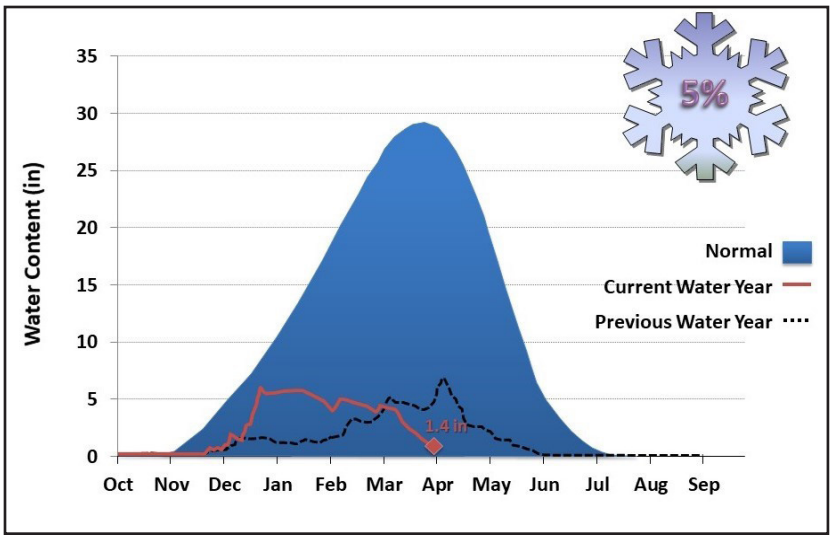

Figure 4. Snowpack water content on April 1, 2015.

Figure 5. Measurement of snowpack on April 1, 2015.

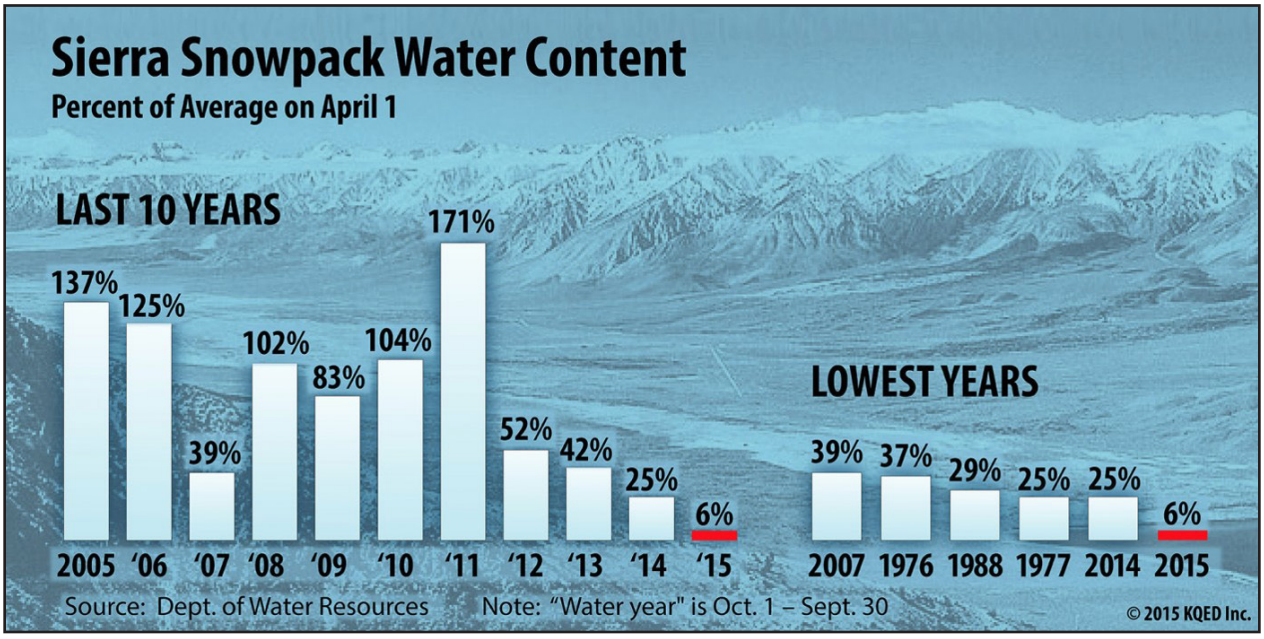

Figure 6. Comparing the April 1, 2015 snowpack to the snowpack of the past ten years.

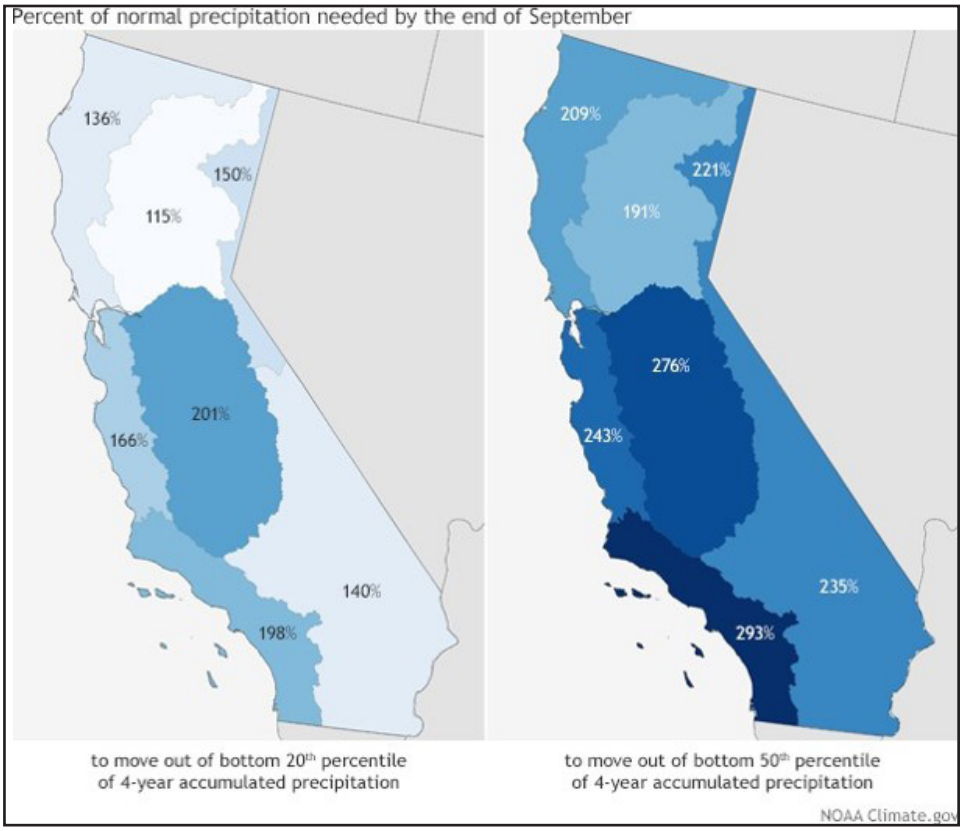

Figure 7. Precipitation deficits.

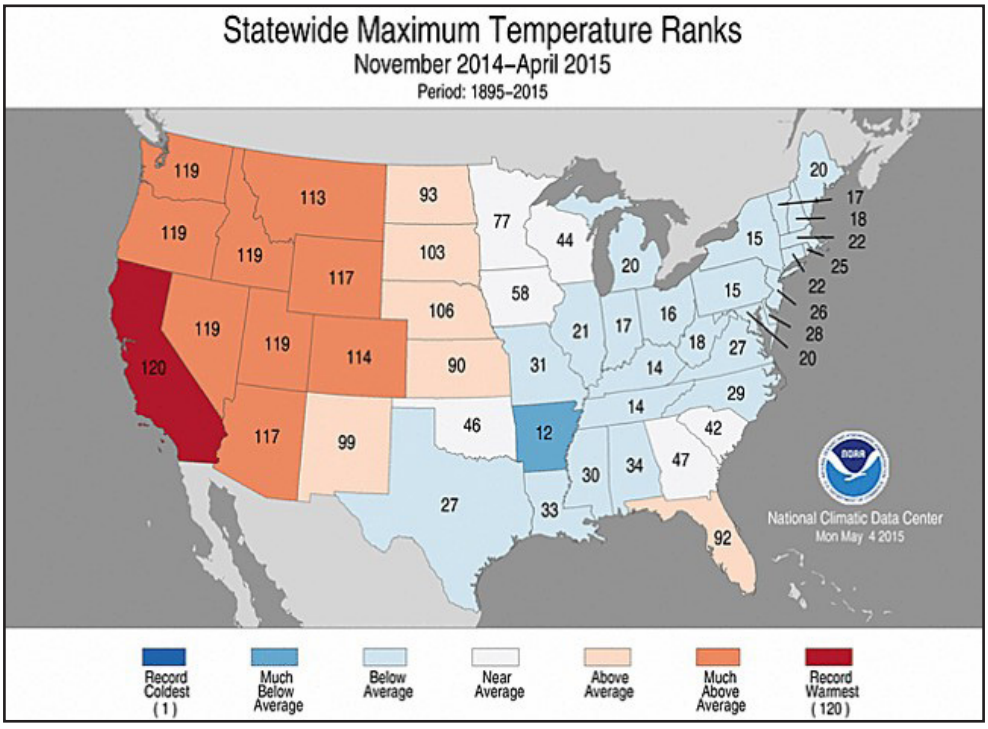

Figure 8. Maximum temperature rankings across the U.S.

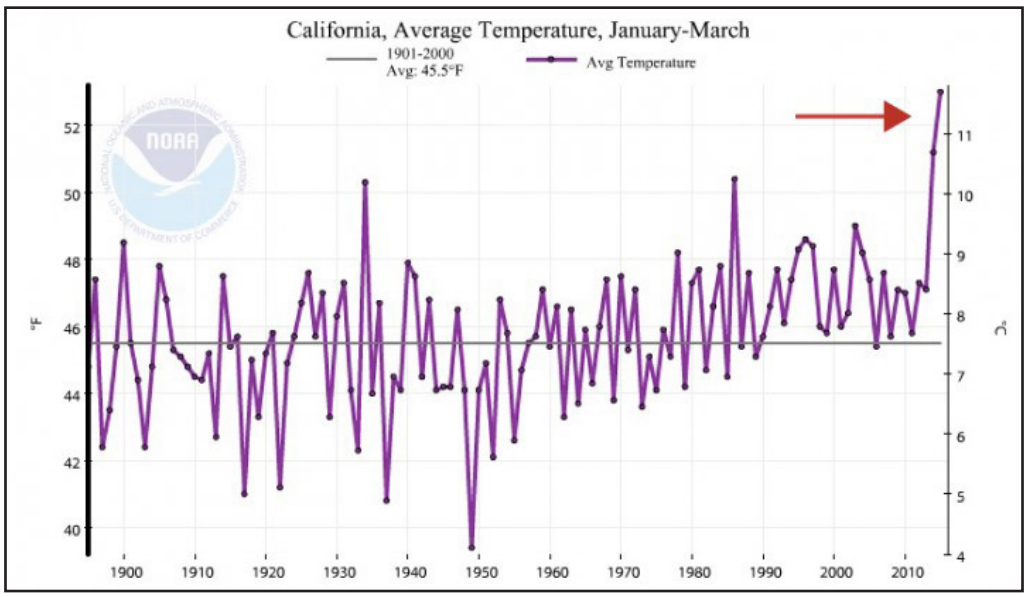

Figure 9. Average temperature from January-March in California from 1901-2000.

Figure 10. Impacts of drought.

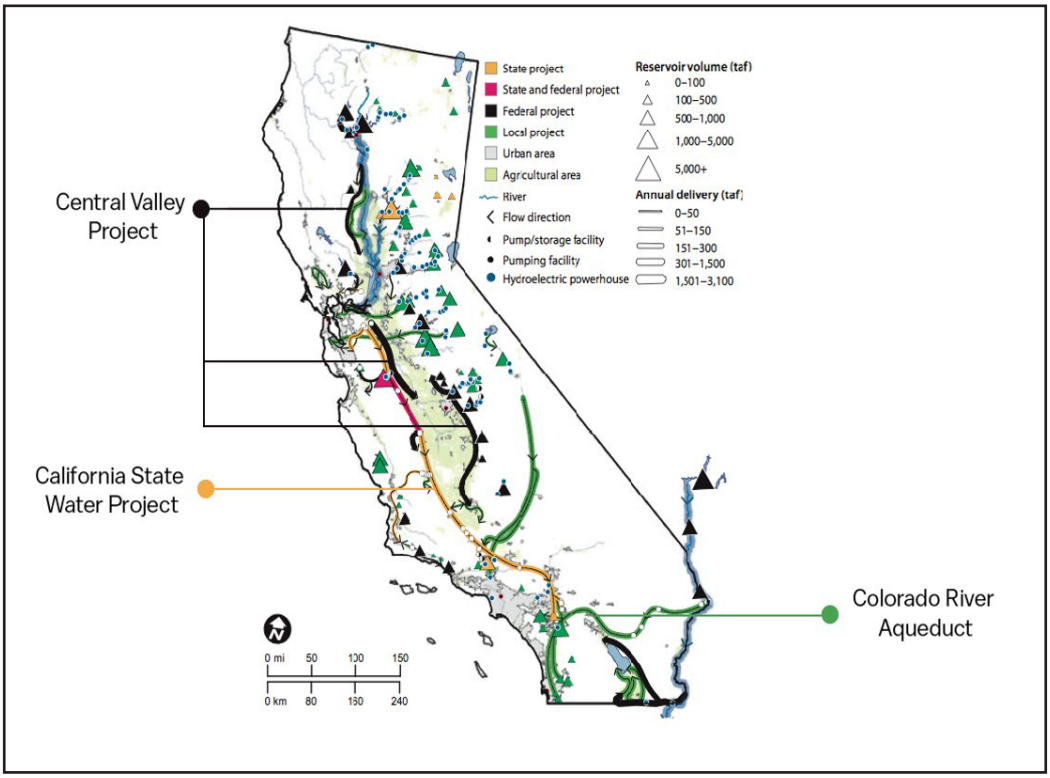

Figure 11. California's water supply sources.

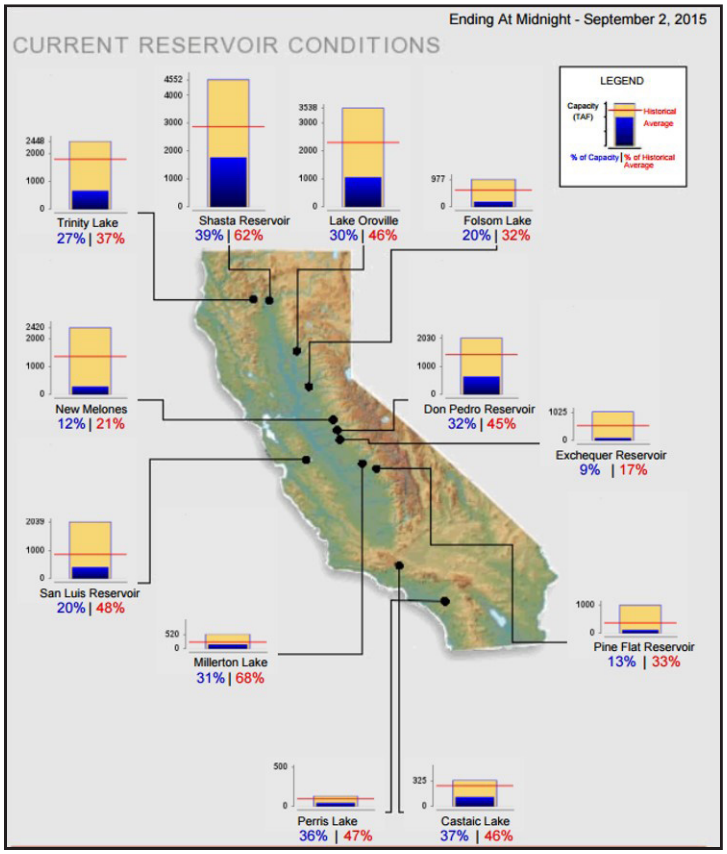

Figure 12. California's water supply conditions. State reservoirs are all below average capacity. The results for the 2013 SWP showed surface water allocations reduced by 35%. The results for the 2014 SWP showed surface water allocations reduced by 0-5%. The results for the 2015 SWP showed surface water allocations reduced by 20%. Results showed increase use of groundwater and decreased water levels. Also, a reduction in hydropower generation resulting in $1.4 billion for current drought (34 million MWh).

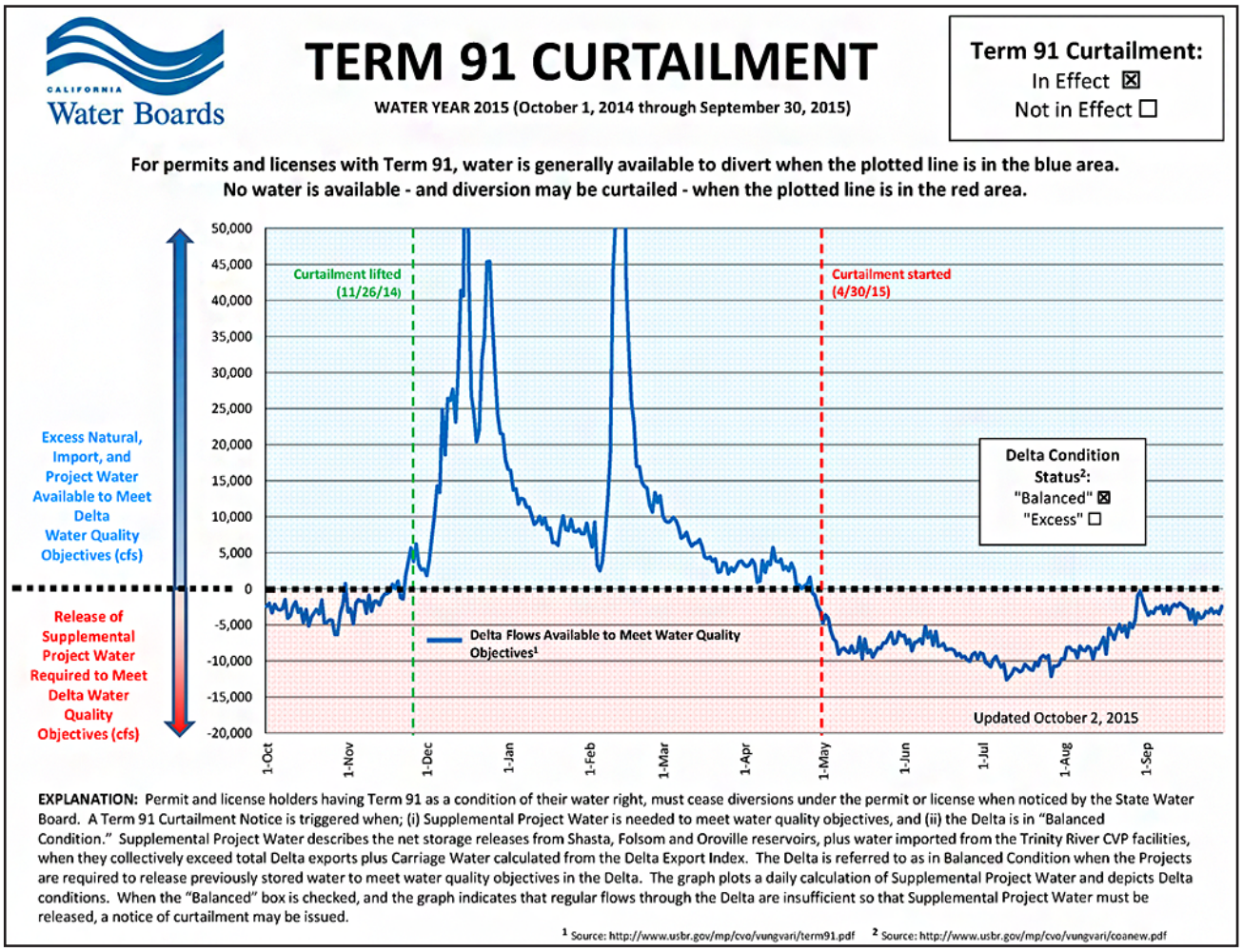

Figure 13. State Water Boards curtail water rights in Sacramento River and Delta on April 30, 2015.

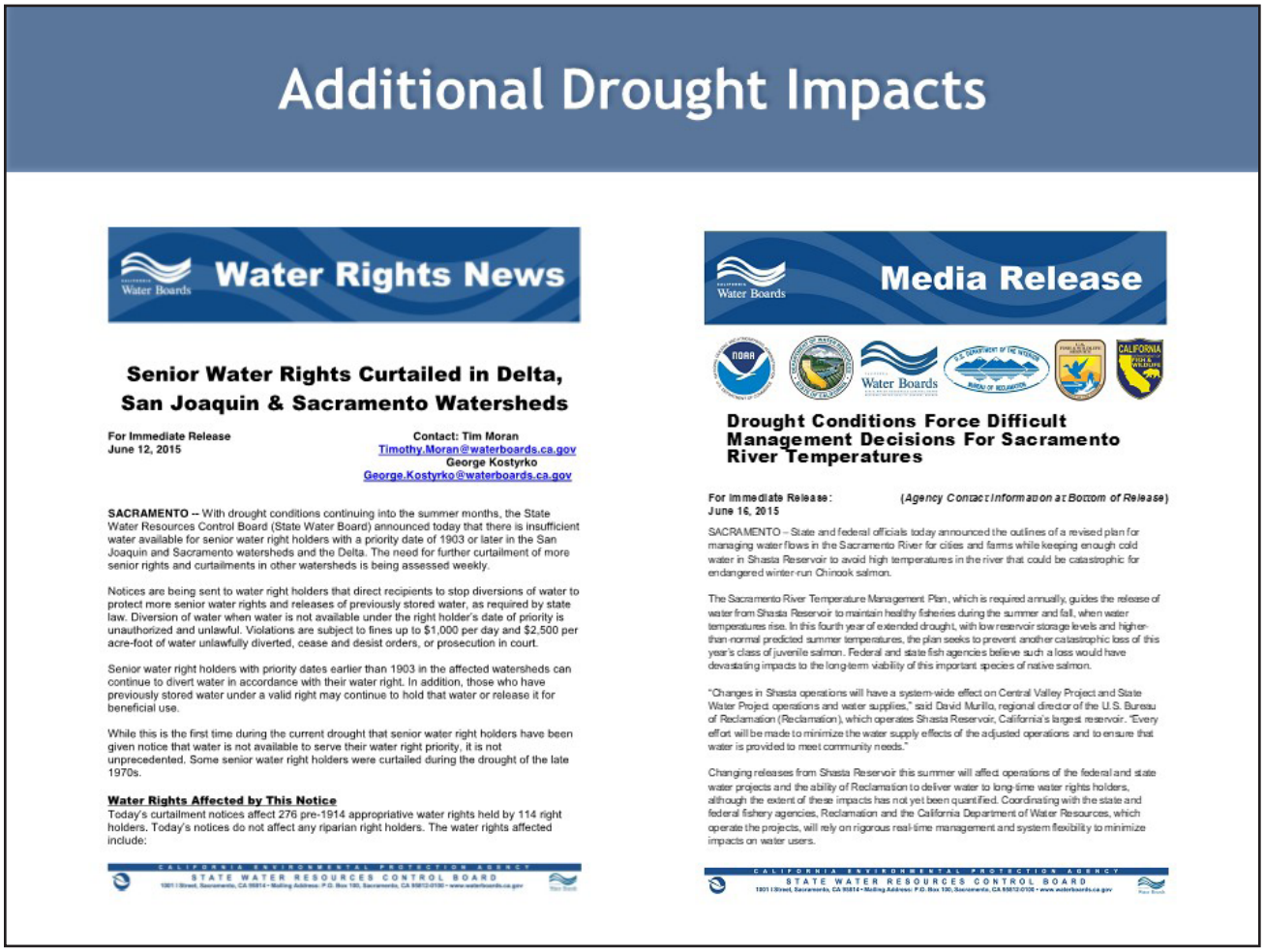

Figure 14. Additional drought impacts media announcements.

Figure 15. Additional drought impacts.

Figure 16. Drought impacts on fire.

Figure 17. State drought response timeline of major actions.

Figure 18. State drought response timeline of major actions (cont.).

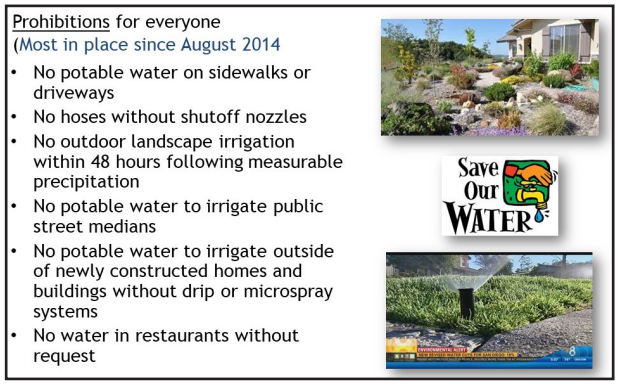

Figure 19. State Water Board's actions to implement April 1 executive order.

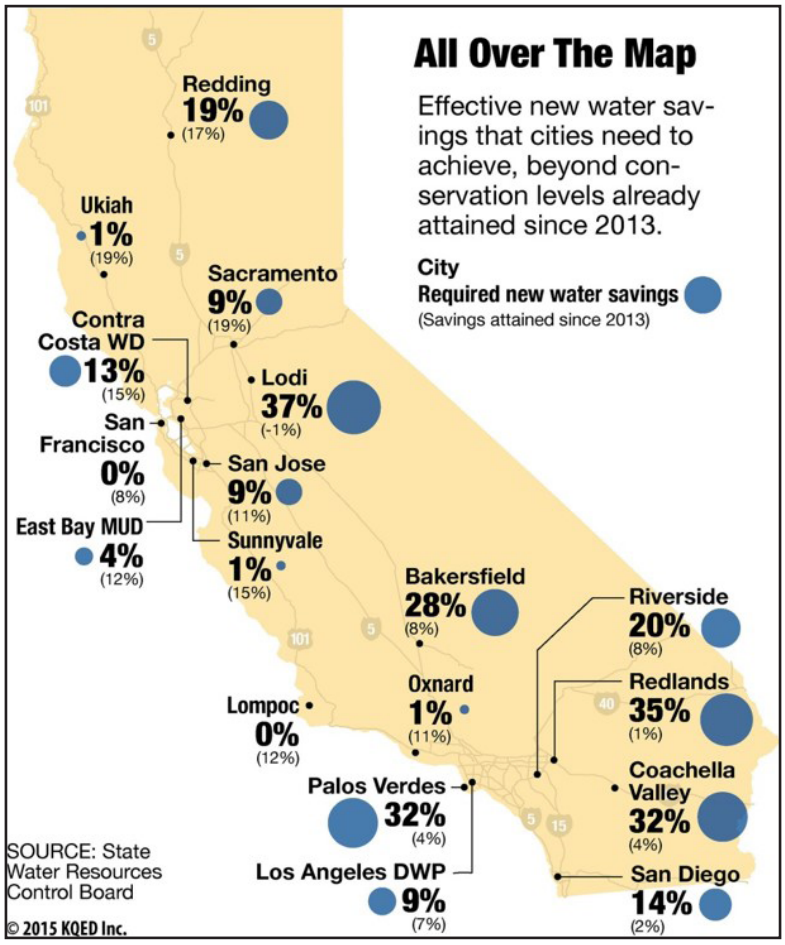

Figure 20. Save our water. Water supply reductions 25% statewide.

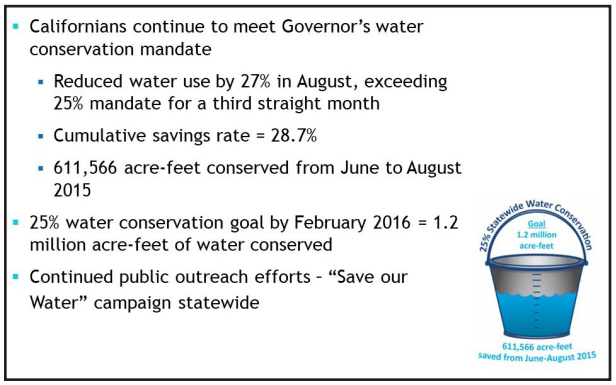

Figure 21. State drought response progress.

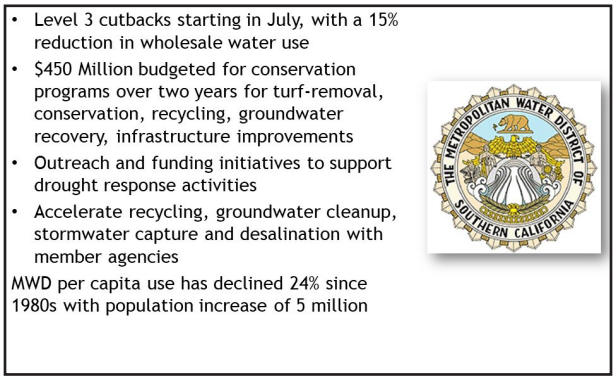

Figure 22. Local drought response for the Metropolitan Water District.

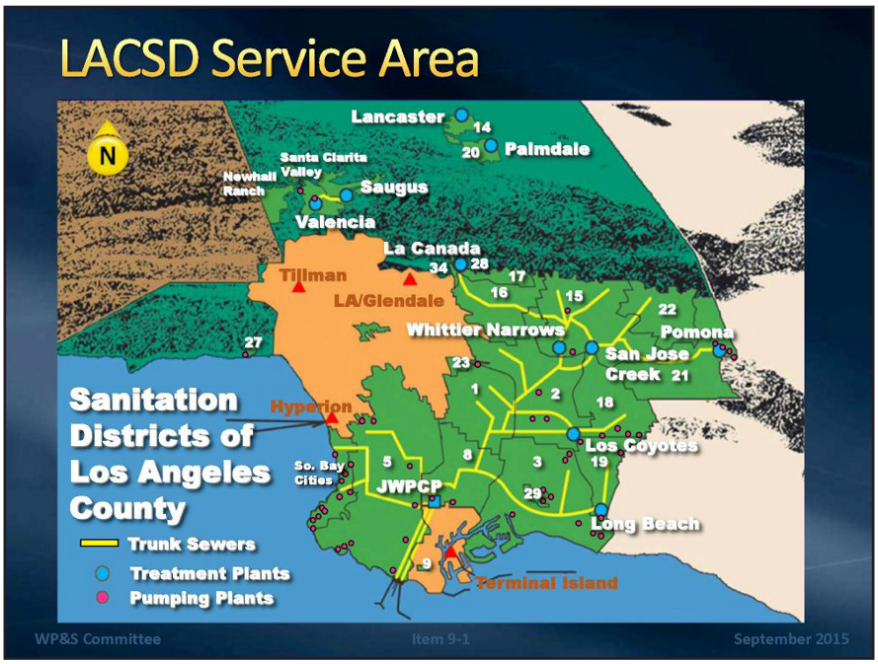

Figure 23. Local drought response for the Metropolitan Water District. Potential recycled water supply program propose purifying and reusing treated waste water within LA County to recharge groundwater basins and augment water supplies in Southern California.

- Water Conservation Response Unit
  - 8-minute watering cycle 2 times/wk
  - No irrigation between 9 - 4
  - Community patrols and conservation education
- Rebates for water conservation devices
  - washers and toilets
  - faucet aerators, showerheads
- California Friendly Landscape Incentive Program
  - Turf replacement rebate program and landscape improvements within the right-of-way

Figure 24. Local drought response from Los Angeles Department of Water and Power.

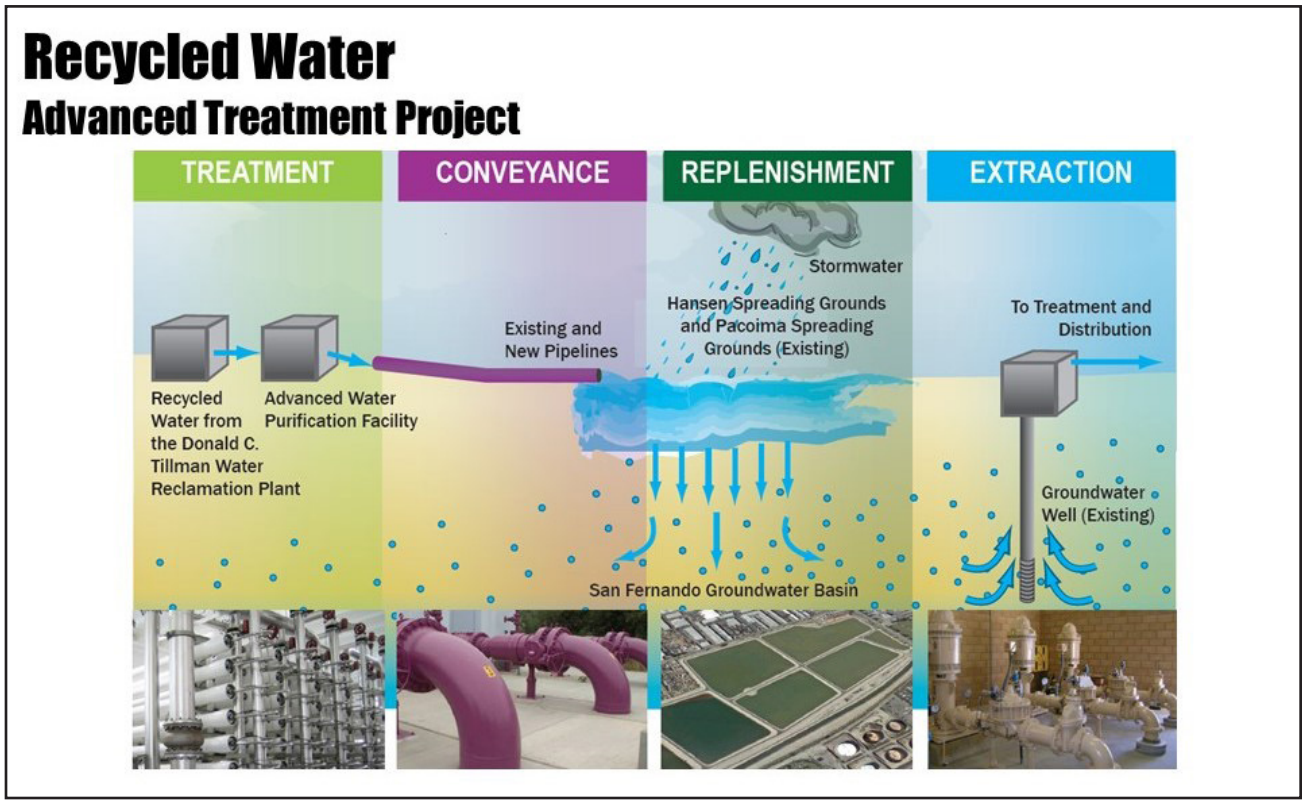

Figure 25. Local drought response from Los Angeles Department of Water and Power (cont.).

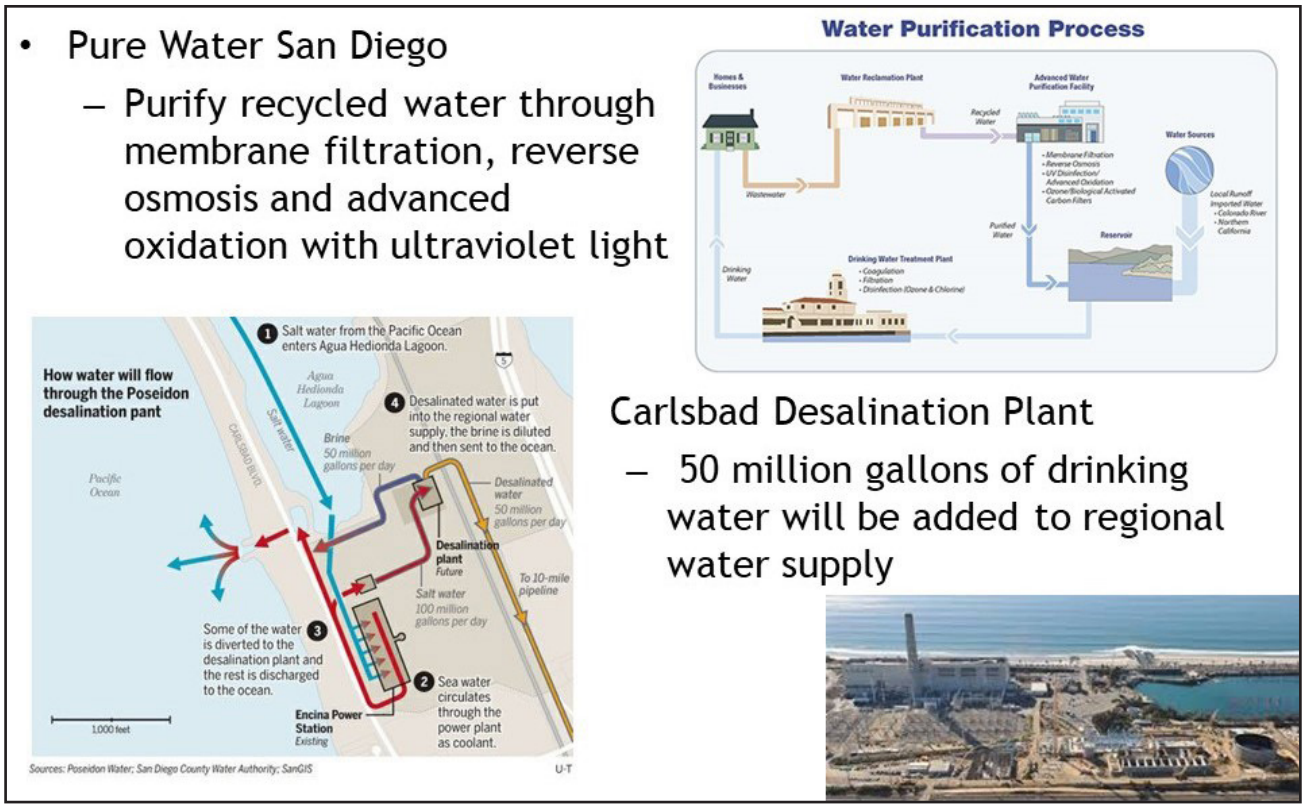

Figure 26. Local drought response in San Diego.

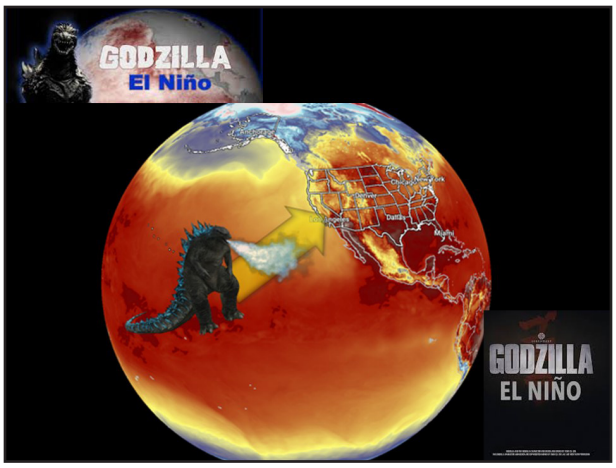

Figure 27. El Nino.

Figure 28. Website for California drought monitoring.

Table 1. Drought funding from state and federal sources (millions of dollars)

	State	Federal
Emergency community assistance	$200	$358
Impacted communities, workers (food, housing, training)	$102	$78
Safe drinking water systems	$90	$17
Technical guidance and planning	$8	$14
Feed subsidies for livestock producers*	$0	$250
Emergency ecosystem support	$66	$67
Emergency fire protection	$131	$4
Water system investments**	$2,609	$104
Total	**$3,006**	**$534**

SOURCES: Legislative Analyst's Office and White House fact sheets.
NOTES: The table includes funding from fiscal years 2013–14, 2014–15, and 2015–16. For details, see technical appendix tables A2 and A3.
*In 2015, more than $1 billion was announced to support livestock producers in all western states. We assume California's share will be equal to its 2014 allocation ($125 million).
**Most state water system investment support comes from voter-approved state bond funds. Many of these investments will take some time to implement.

Figure 29. State and federal funding in response to the state drought.