California’s New Normal: A Call for Action

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2009: Our new normal?

- Driest spring on record
- Reservoirs are at lowest levels since 1977
- Delta continues to decline
- Water quality and environmental laws are being relaxed
- Economic crisis, State budget crisis
- TIME FOR NEW THINKING, OPPORTUNITY FOR CHANGE
“For California water managers, the future is now. Climate change is already having a profound impact on water resources as evidenced by changes in snowpack, river flows and sea levels.” — Lester Snow, Director Department of Water Resources Oct 08
According to the Department of Water Resources California could lose 25–40% of the Sierra snowpack by 2050.

Sierra snowpack supplies up to 65% of CA’s water.
“Or to put it another way, though wet years will still occur, on average they will be drier than prior wet years while the dry years will be drier than prior dry years.”

— DR Richard Seager
Columbia University
The analysis shows that annual SWP deliveries would decrease virtually every year in the future (93% of future years).

These reductions would amount to a 20% reduction from current levels about one-fourth of the time, and greater than 30% in one-sixth of future years.

Lake Oroville 2008

2007 SWP Delivery Reliability Report (DWR)
Study: 50-50 chance of dry Lake Mead in 2021
Study cites warming, water use and growing Colorado River deficit

What are the chances that Lake Mead, a key source of water for more than 22 million people in the Southwest, would ever go dry? A new study says it's 50 percent by 2021 if warming continues and water use is not curtailed.
The Bay Delta Watershed Crisis

- Largest estuary on the west coast of North America
- 80% of California’s salmon rely on the watershed of the Bay Delta

- Due to over pumping, invasive species & declining water quality:
  - Native Delta species are at historic lows
  - The 2008 West Coast commercial and recreational salmon fishing season was CANCELED
“I don’t think the American public has gripped in its gut what could happen. We’re looking at a scenario where there’s no more agriculture in California. I don’t actually see how they can keep their cities going either.”

– Steven Chu, U.S. Secretary of Energy
California's population may nearly DOUBLE to 59 million by 2050, an increase of 23 million people (CA Dept. of Finance)

Currently the State Water Project (dependent on snowpack) supplies water to 24 million people
A Growing State

- At a per capita use of 184 gallons per capita per day* the increase in population will result in the annual use of **4.74 million acre feet**.
- That’s equivalent to California's share of the Colorado River. Where will we find another Colorado River?

*(20% less than the current California average of 230 gallons per capita/day)*
Facing the New Normal

- Must serve more people with less water
- Must re-operate the system to allow for efficiency under our new hydrology
- Aggressively develop climate-resilient water supplies
- Reform our water governance to better balance the ecosystem and the need for clean, reliable water supplies
- Sustainable funding
Where will we find the water?

Look for the greatest potential

2005 California State Water Plan, Department of Water Resources
Water Conservation Tools

- Water neutral development
- Reduced per capita water use standard
- Retrofit on resale
- Remove barriers to low water using landscapes
Water Neutral Development

- Encourage developers to incorporate water efficiency in new development
- Allow for water offset—offsite water conservation within the service area—that results in zero net demand within the service area.
- Target offsets for disadvantaged communities to ensure those communities will not be left behind.
Retrofit on Resale

- Water agencies taking the lead
- Ensures existing housing will be efficient
- Some discussion about when to implement the retrofits
- Will need strong support to pass

20% reduction in per capita

- Spot bill introduced AB 49
- Baseline is still a challenge
- New approach may emerge
Recycled Water

- Orange County has targeted reuse of 49% of water that would have been discharged by 2030.
- Statewide, a similar goal would produce around 2 million-acre feet—around the historical average delivery from the SWP.
- Legislators support recycled water.
Reform Delta Governance

- Create governance that will better balance co-equal goals of ecosystem health and water supply reliability.
- Sustainable funding
- Adaptability must be integrated into the new system for ecosystem & water supply.
- Ensure expectation of water is consistent with available supply
End unsustainable water use

- Retiring 600,000 acres of drainage impaired lands would:
  - Return about 1 maf to the Delta
  - Increase reliability for other Delta users
  - Increase storage to maintain cold water
  - Stop ag drainage pollution
  - Allow for viable ag to continue
Questions?
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