

Making the Most of a Wet Year

April 27, 2023

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Supported with funding from the S.D. Bechtel, Jr. Foundation



PPIC

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PPIC WATER POLICY CENTER

Floods and droughts go hand in hand in California

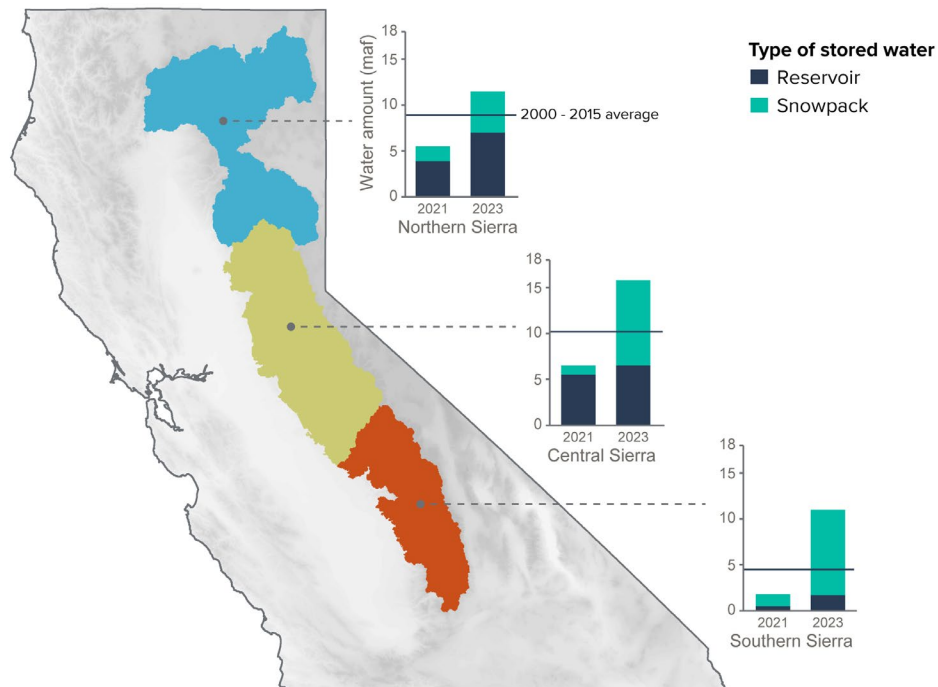
- Just a year ago we were in a record drought
- Increasing drought intensity makes wet year management even more important
- We routinely fail to store enough water during wet periods
- But we should not lose sight of California's greatest natural disaster risk: floods



What a difference a year makes!

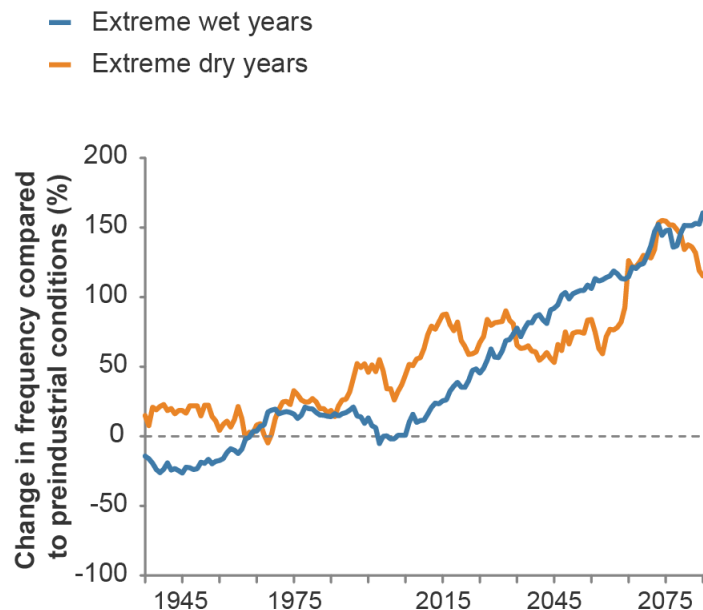
- April 1st combination of reservoir storage plus snowpack the best indicator of water supply conditions
- April 1st 2021 one of the lowest
- April 1st 2023 nearly the highest

April 1st Reservoir Storage + Snowpack



Data Source: M. Dettinger

Precipitation volatility is expected to increase further in coming decades



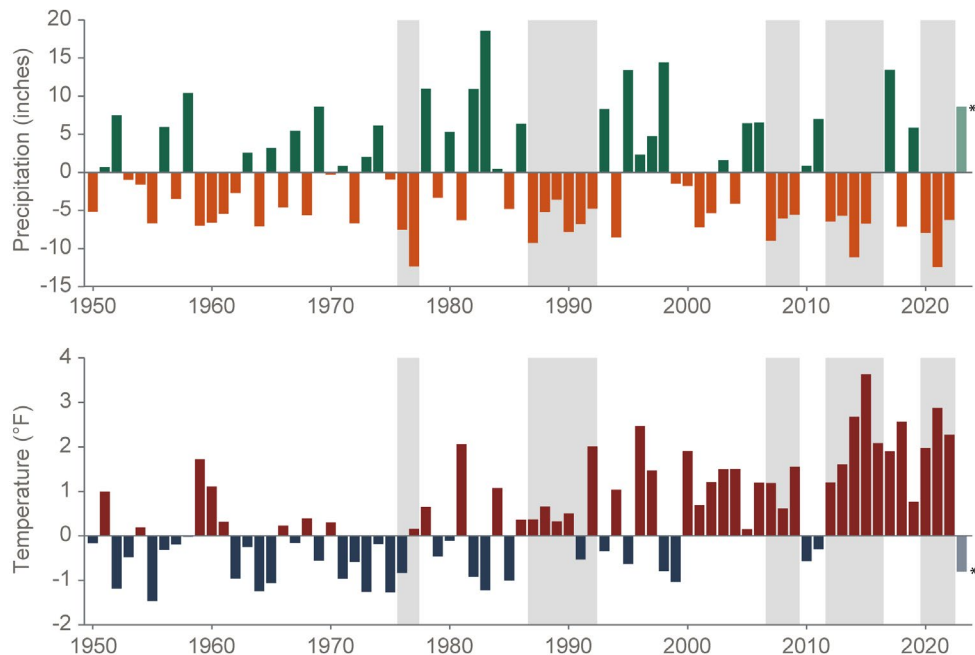
Mount et al. (2018). *Managing Drought in a Changing Climate* (PPIC) using data from Swain et al. (2018)

Lake Oroville



We remain in the era of the hot drought

Departure from 1950–2000 Baseline



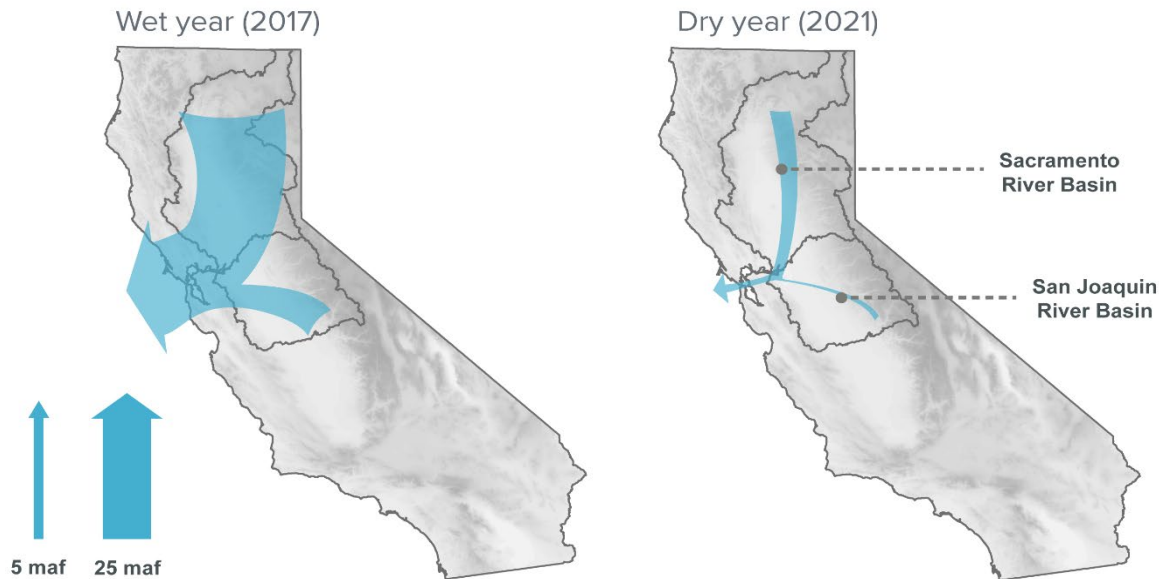
- Increasing drought intensity
- Growing atmospheric thirst
- Reduced runoff
- Rapid shifts in conditions

** as of April 1, 2023*

Source: Climate Tracker, Western Regional Climate Center

To cope with more intense droughts, we have to store more water in wet years

Water sources and outflow from the Delta



Source: Gartrell, Mount, and Hanak. 2022. *Tracking Where Water Goes in a Changing Sacramento–San Joaquin Delta* (PPIC).

But wetter wets also increase flood risk, already high in California

- 1-in-5 Californians at some risk of flooding
- \$5–7 billion in estimated economic damages this year so far*
- Estimates of \$1 trillion in damages for an increasingly likely statewide flood**
- Flood risk, like drought risk, is an important social justice issue

*Moody's RMS Estimates

**ARKStorm damages in today's dollars

Tulare Lake



Today's Panel: Making the Most of a Wet Year

