

THE MYTH OF THE “DROUGHT EMERGENCY”

STATISTICAL REVIEW OF THE U.S. DROUGHT MONITOR

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What is the U.S. Drought Monitor (USDM)?

The USDM is a federally funded research project, producing a weekly assessment of drought conditions across the nation. Relied on by farmers, journalists, lawmakers and regulators, it exercises profound influence on public policy. Our analysis asks the following questions:

- How does USDM define and designate drought categories (and is this consistent with USDM’s own stated methodology)?
- Does California’s climate justify USDM’s drought declarations?
- Is water storage considered by the USDM?

Key Findings

Statistical review revealed the following:

- USDM drought categorizations are not statistically consistent with long-term climate patterns and not reproducible
- Independently sourced climate data suggests drought frequency has only marginally increased
- USDM only measures “dryness”, not water availability

“Drought Emergency”

Maroon:
Exceptional Drought

Red:
Extreme Drought

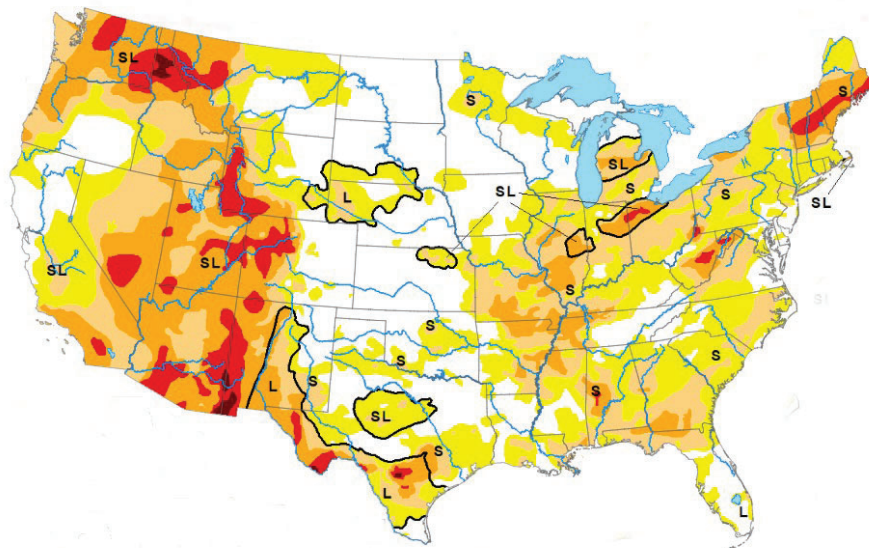
Orange:
Severe Drought

Peach:
Moderate Drought

Yellow:
Abnormally Dry

White:
Normal or Wet
Conditions

U.S. Drought Monitor

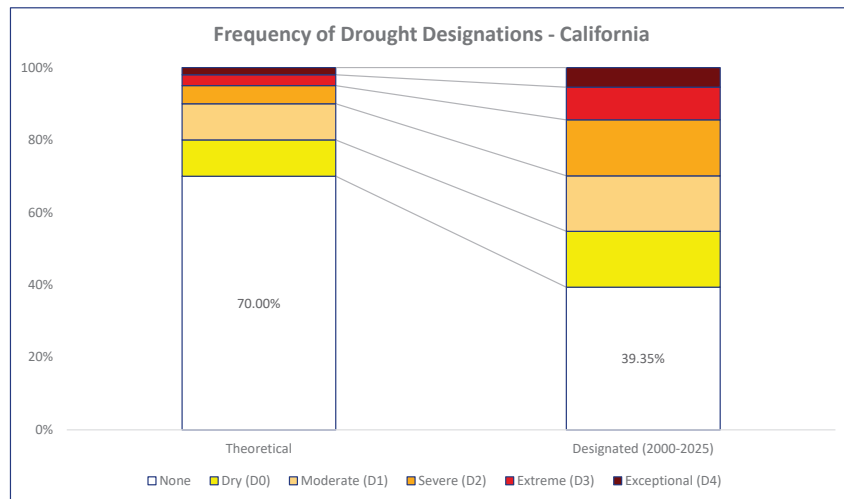


Droughts by USDM's Own Methods

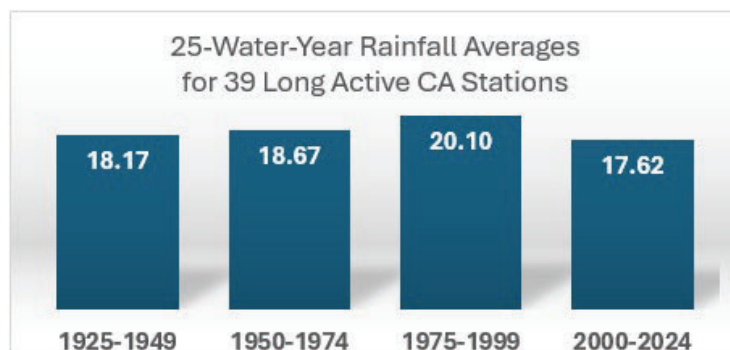
Theoretical (col 1)
based on historical 20th
century designations
(30%)

Gross disparity to:

Designated (col 2) by
USDM in 21st century
(60.65% = more than
2x as often as 30%)

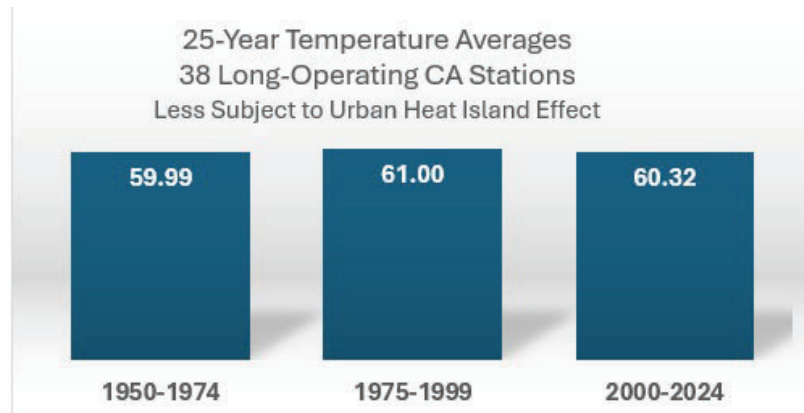


California Rainfall Trends Unchanged



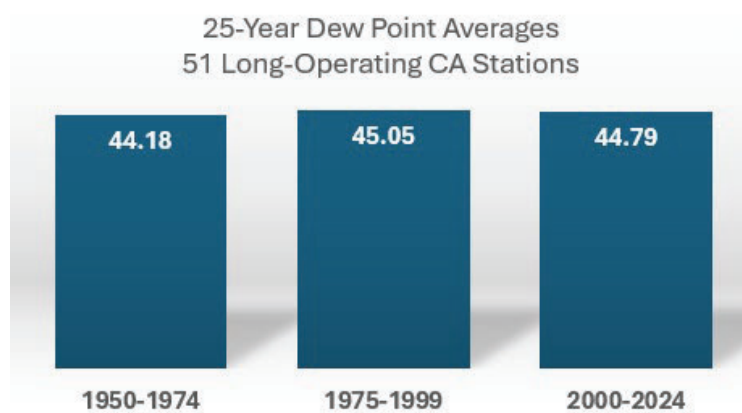
Most recent 25 years show average annual rainfall (in inches) almost identical to totals over 2 of preceding 3 quarter centuries

California Temperature Trends Unchanged



Temperatures as °F (for stations not subject to urban heat island effect) almost identical to totals over preceding 2 quarter centuries

California Dew Point Trends Unchanged



Dew Point (an absolute measure of atmospheric moisture) virtually identical to totals over preceding 2 quarter centuries

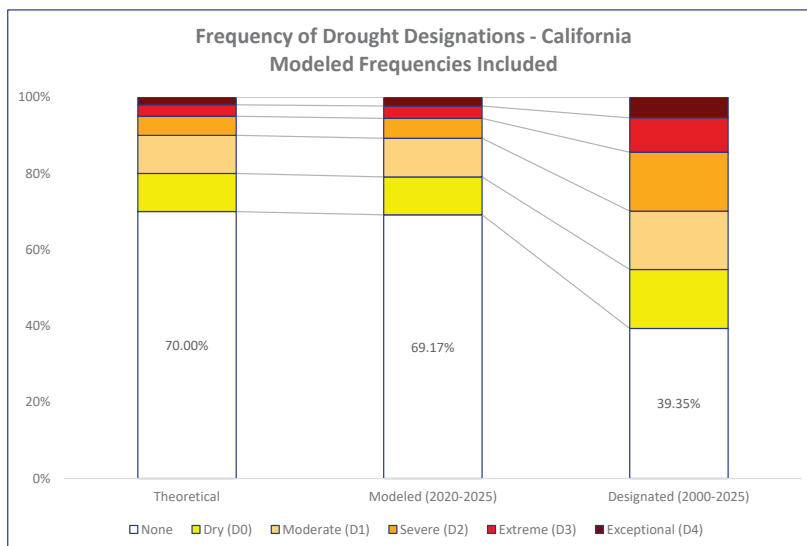
Droughts by: History, Data, USDM

Theoretical (col 1) based on **historical** 20th century designations

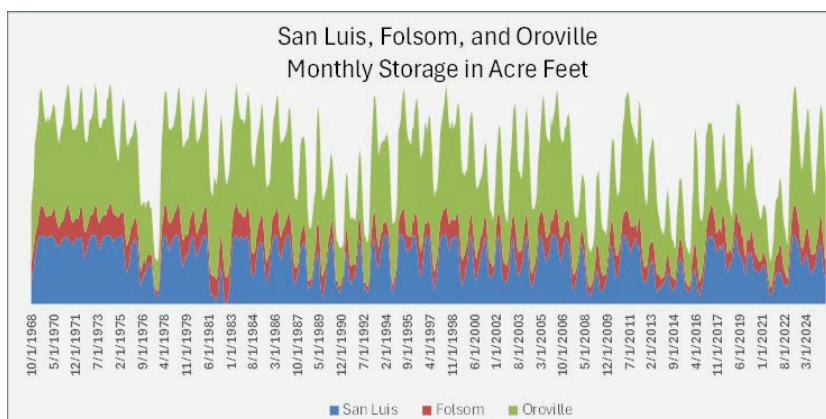
Modeled (col 2) based on 21st century station data (0.83% more than "Theoretical")

Gross disparity to:

Designated (col 3) by **USDM** in 21st century (30.65% more than "Theoretical")



California's Major Reservoir Storage Unchanged



Reservoir storage since 1968 does not show significant downward trend; policy shapes storage levels, not rainfall (which is unchanged)

Abundant Local Water Supply!

OC imports are lower this year (383 AF/day, Sept. 16-Oct. 15) than last year (470 AF/day, for same period)

OC's two main local reservoirs are 95% full (Diamond Valley) and 84% full (Lake Matthews)

This year, OC to add 200,000 acre feet to regional storage, which is currently at 4 *million* acre feet



October Water Supply Update

Current Supply Conditions



The USDM Misleads Policymakers

Our analysis finds the USDM drought designations to be inconsistent with their own stated methodology, as well as with historical climate data.

RECOMMENDATIONS:

- The USDM researchers should revisit their methods
- The USDM should be renamed as a "dryness" ratings
- California's climate trends don't justify declaring a "climate emergency"
- Water policy should be based on water availability, not USDM reports
- Climate adaptation should emphasize more water supply, not rationing





THANK YOU!