

Quick Look at the ARs Forecast to Impact California This Week

Updated: 23 December 2025

Two atmospheric rivers (AR) are forecast to bring heavy precipitation and snowfall to California with the risk for flooding in southern California in the next five days.

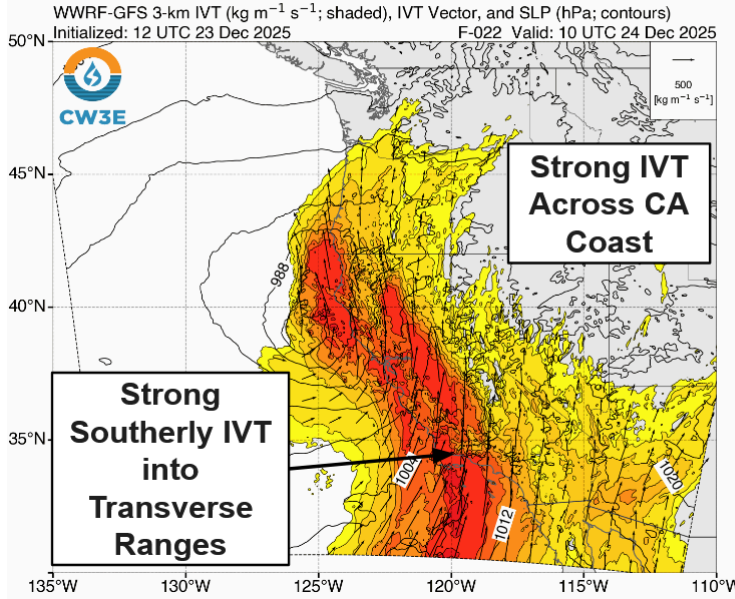
Forecast Highlights:

- The first of two ARs is forecast to make landfall across the California coast later today from the south, bringing strong AR conditions ($IVT \geq 750 \text{ kg m}^{-1} \text{ s}^{-1}$) to the region.
 - The south-southwesterly IVT direction is optimal for precipitation enhancement in the Transverse Ranges, further elevating the risk of flooding and landslides in the vicinity of the burn scars in the region.
- A secondary low is forecast to form off the California coast tomorrow afternoon and bring a second, weaker round of AR conditions to central and southern California.
 - Limited atmospheric moisture is forecast in the vicinity of the AR but the slow-moving nature of the storm is likely to provide the necessary forcing for potentially heavy precipitation across the region into early Sat 27 Dec.
- The majority of West-WRF ensemble members forecast at least AR3 conditions for coastal locations from the Bay Area to San Diego County with the first AR. Additionally, the majority of members forecast no break in AR conditions between the ARs in central and southern California, leading to 60+ hours of AR conditions.
- The National Blend of Models (NBM) 5-day precipitation forecast (period ending 10 PM PT Sat 27 Dec) shows totals >7 inches across the Transverse Ranges and Sierra Nevada, with the potential for localized totals >10 inches over the Transverse Ranges.
- 90% of West-WRF ensemble members in the Pyramid Lake catchment and 50% in the Seven Oaks Dam catchment are forecasting totals >30% normal annual precipitation by 10 PM PT Sat 27 Dec.
- West-WRF is showing the potential development of a narrow cold-frontal rainband (NCFR) in the core of the first AR, which could produce short-duration high-intensity rain in southern California early Wed 24 Dec.
- The Weather Prediction Center (WPC) has issued **high risk** (level 4 of 4) over the Transverse Ranges and **moderate risk** (level 3 of 4) Excessive Rainfall Outlooks (EROs) across coastal Southern California for the 24-hr periods ending 4 AM PT **25 Dec** and **26 Dec**.
- Freezing levels are forecast to steadily decline across the Sierra Nevada during the duration of this event, leading to potential for widespread snowfall during the second AR.
- The NWS is forecasting snowfall totals of 48–72+ inches across the central and southern Sierra Nevada for the 66-hour period ending 4 AM PT Fri 26 Dec.
- Three river gauges are currently forecast to exceed minor flood stage in the next five days. ~40% of HEFS members are forecasting the gauge along the Ventura River at Foster Park to exceed major flood stage with precipitation from the first AR.
- As these storms unfold, it is recommended to pay close attention to the DWR/CNRFC for changes in river forecasts and local NWS Offices for local flood/flash flood guidance.

West-WRF IVT

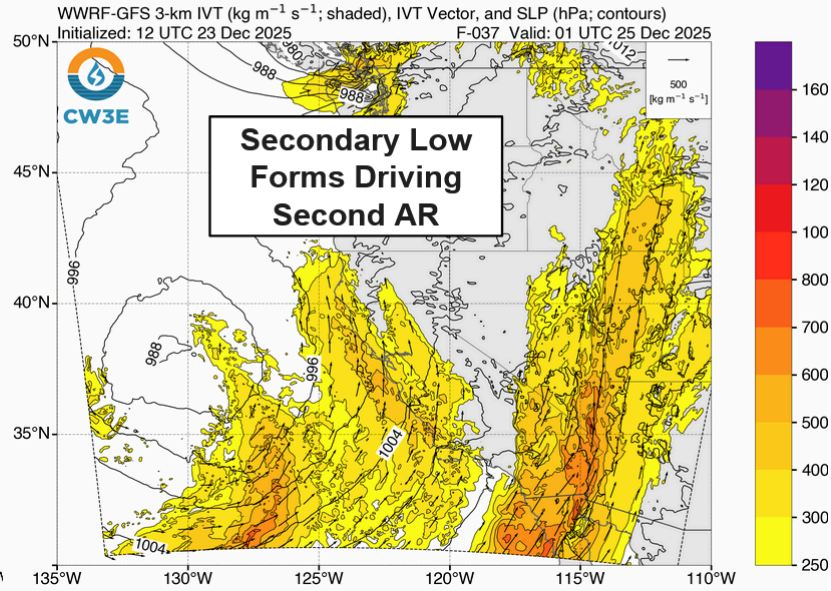
First AR IVT

Valid: 2 AM PT Wed 24 Dec



Second AR IVT

Valid: 5 PM PT Wed 24 Dec



West-WRF Ensemble AR Scale Forecasts

Bay Area

West-WRF Ensemble Initialized: 00Z Tue 12/23/25

Location: 37.5°N 122.5°W

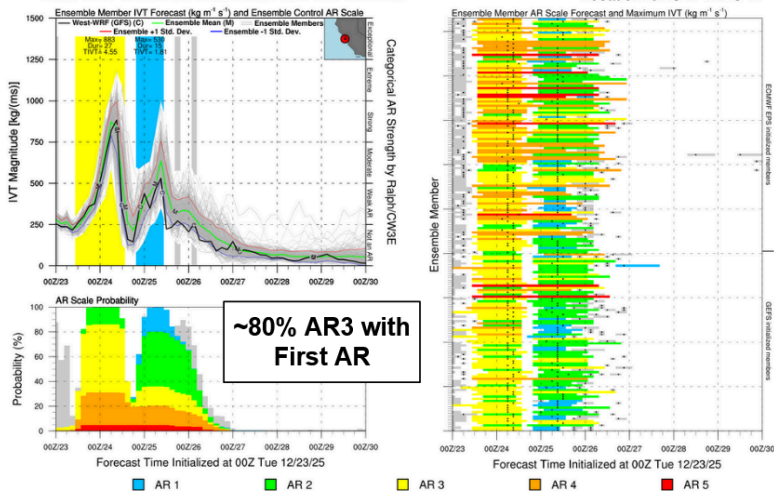


Image created: 15 UTC 12/23/2025 (185/200 members completed)

More information: <http://cw3e.ucsd.edu> AR Scale based on Ralph et al. (2019; BAMS), contact M. Ralph

Coastal Southern CA

West-WRF Ensemble Initialized: 00Z Tue 12/23/25

Location: 35°N 120.5°W

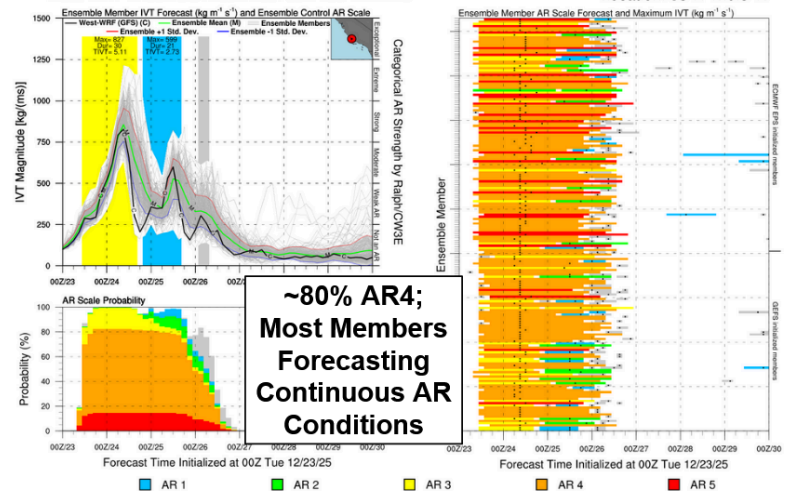
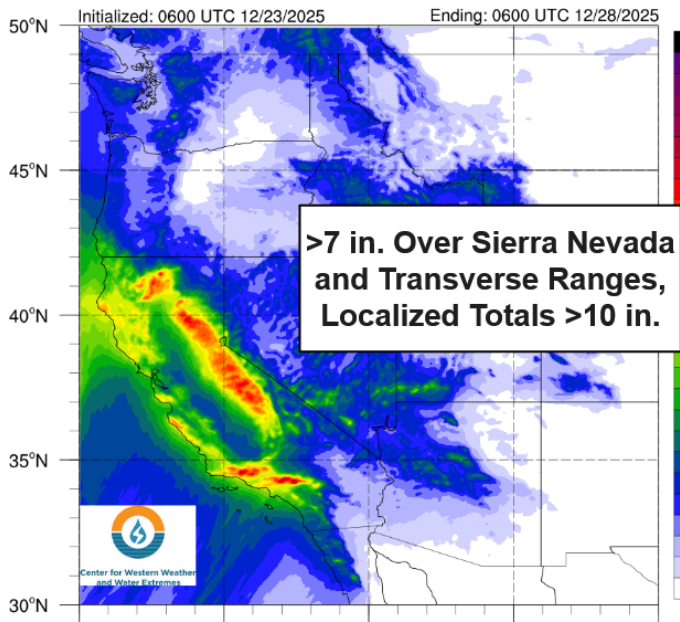


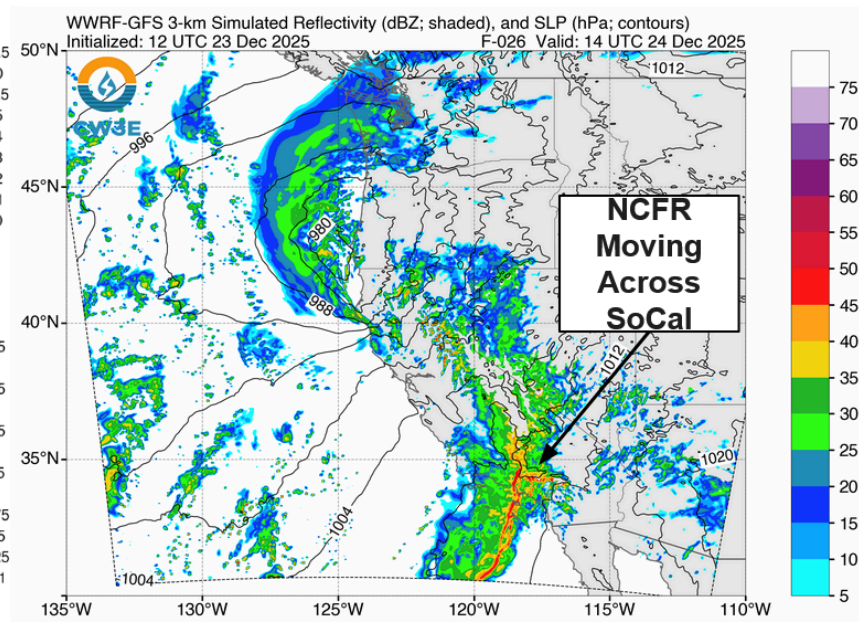
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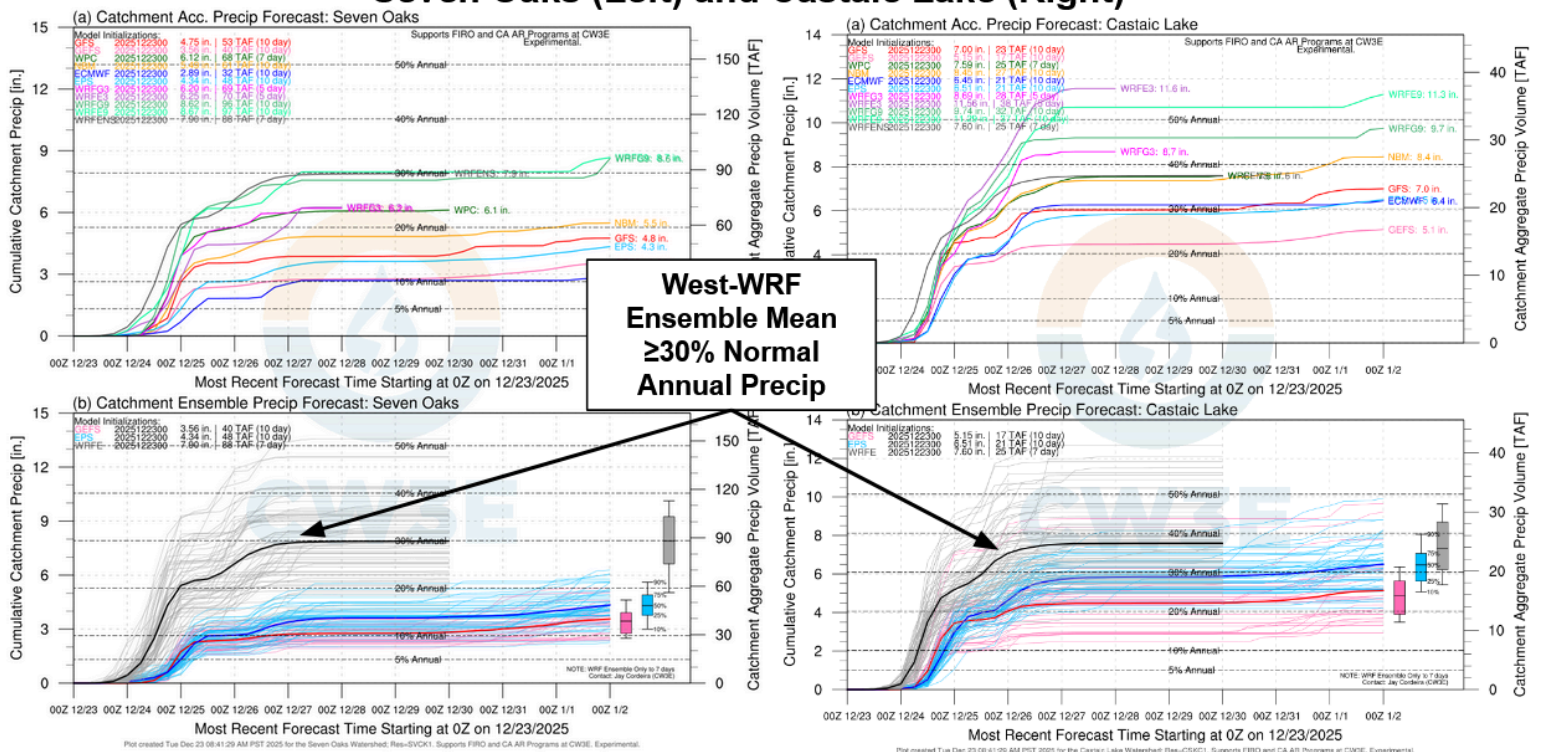
NBM 5-Day Precipitation Forecast Period Ending 10 PM Sat 27 Dec



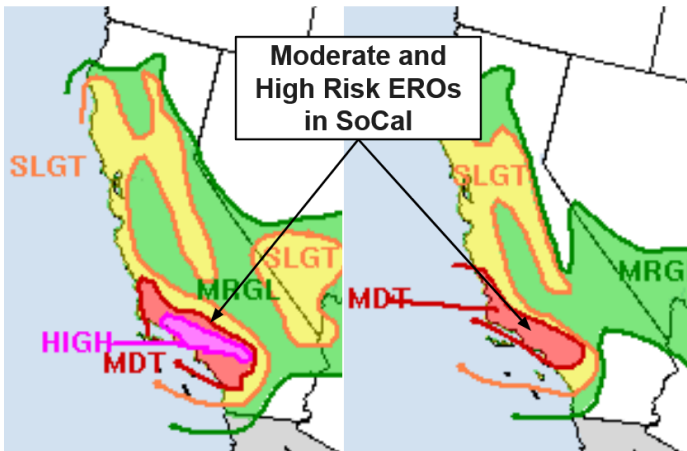
West-WRF Simulated Reflectivity Valid: 6 AM Wed 24 Dec



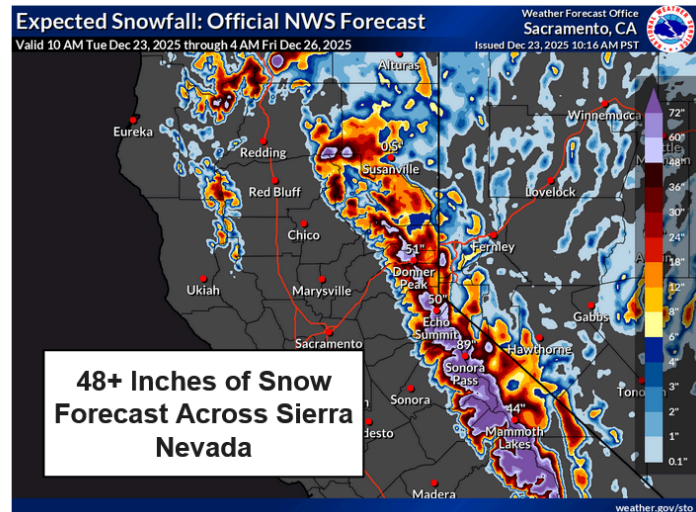
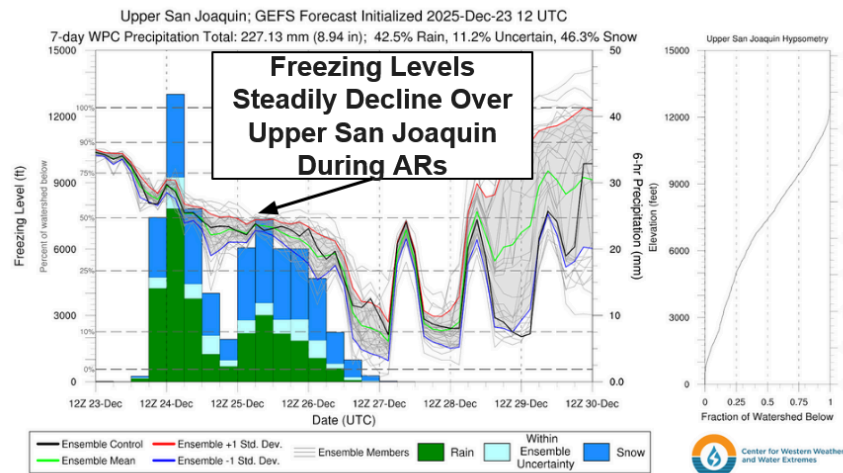
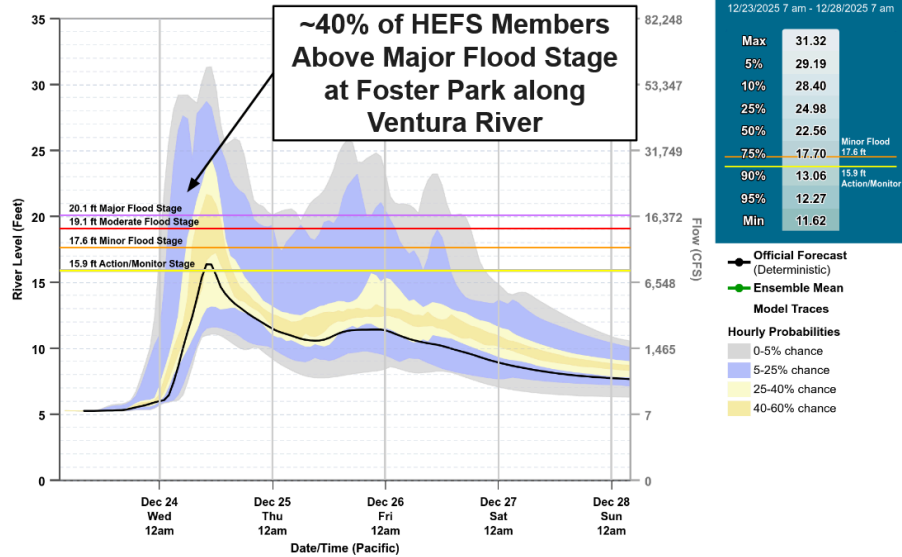
Model Watershed Forecasts: Seven Oaks (Left) and Castaic Lake (Right)



WPC Excessive Rainfall Outlooks Valid for Periods Ending: 4 AM PT 25 (Left) and 26 Dec (Right)



Hourly Peak River Level Probabilities VENTURA RIVER - FOSTER PARK (VRVC1)



Additional Considerations:

Visit <https://www.weather.gov/cnrfc/> for specific river and stream forecasts and <https://www.weather.gov/> for point specific forecasts.

In-depth AR forecasts products can be found here:

<http://cw3e.ucsd.edu/iwv-and-ivt-forecasts/>

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