

## Quick Look at Storms Forecast to Impact California This Week

*Updated: 3 March 2025*

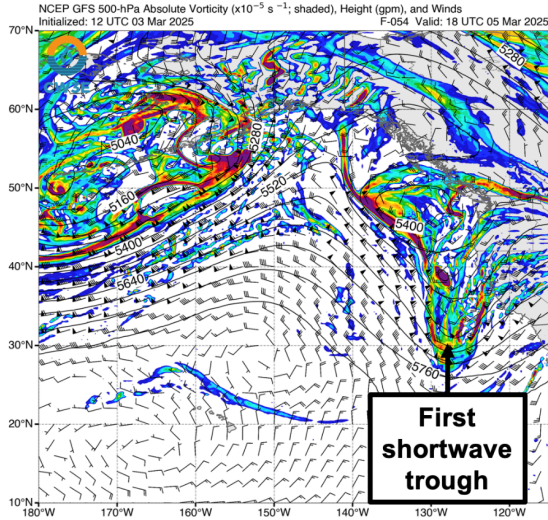
Multiple mid-level shortwave troughs are forecast to bring rain and mountain snow to Central and Southern California this week.

### Forecast Highlights:

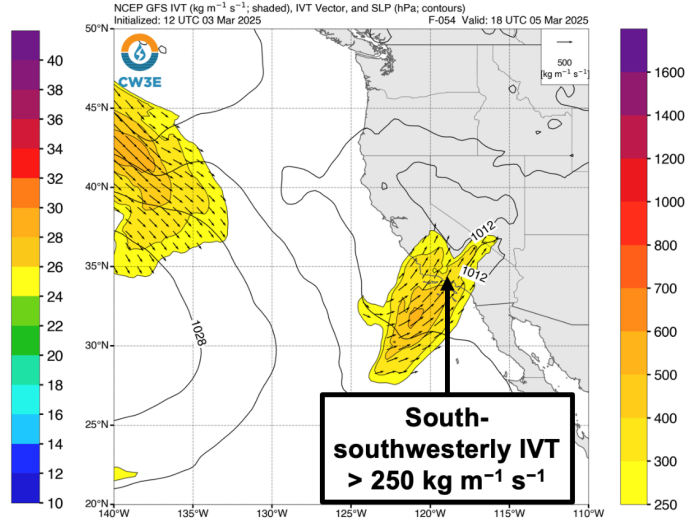
- The first shortwave trough is forecast to propagate across the Northeast Pacific and approach the Southern California coast on Wed 5 Mar.
- As the trough amplifies offshore, it will interact with remnant moisture from a dissipating atmospheric river (AR), resulting in a brief period of AR conditions ( $IVT \geq 250 \text{ kg m}^{-1} \text{ s}^{-1}$ ) over Southern California. CW3E's AR Landfall Tool based on GEFS is indicating a high likelihood ( $>70\%$  probability) of AR conditions over much of coastal Southern California.
- Although IVT magnitudes are expected to be relatively weak ( $<500 \text{ kg m}^{-1} \text{ s}^{-1}$ ), the south-southwesterly orientation of moisture transport will likely support orographic enhancement of precipitation over the Transverse Ranges.
- A second shortwave trough is forecast to propagate down the US West Coast behind the first trough and bring additional precipitation to the region late Thu 6 Mar into early Fri 7 Mar.
- While moisture will be more limited during the second storm, west-southwesterly moisture transport may support orographic enhancement of precipitation over the Peninsular Ranges.
- The NWS Weather Prediction Center is forecasting 1–2 inches of total precipitation in the Central Sierra Nevada and much of coastal Central and Southern California. Higher amounts (2–3 inches) are forecast in the Southern Sierra Nevada and eastern Transverse Ranges.
- Given the anomalously dry soil conditions, rainfall intensities  $>0.25$  inches/hour could cause concern for localized flash flooding, particularly in recent burn scar areas.
- The WPC has issued a **marginal risk ( $\geq 5\%$ ; level 1 of 4)** excessive rainfall outlook (ERO) over the Southern Sierra Nevada foothills, Central California Coast Ranges, Transverse Ranges and Peninsular Ranges for Wed 5 Mar into early Thu 6 Mar. A marginal risk ERO has also been issued over the Transverse Ranges and Peninsular Ranges for Thu 6 Mar into early Fri 7 Mar.
- Lower freezing levels during the first storm will support significant snowfall accumulations ( $>12$  inches) over much of the Central and Southern Sierra Nevada. Major winter storm impacts are expected in the Southern Sierra Nevada, where as much as 24 inches are possible by early Thu 6 Mar.

**Stay alert to official NWS forecasts, watches, and warnings at [weather.gov](https://www.weather.gov) and follow guidance from local emergency management officials**

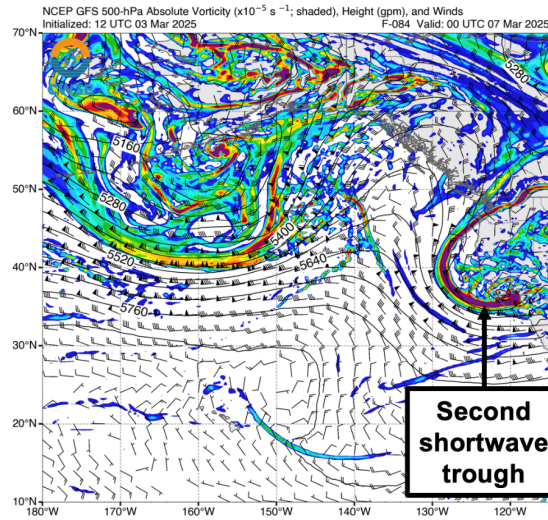
### GFS 500-hPa Vorticity & Geopotential Height Valid 10 AM PST 5 Mar (F-054)



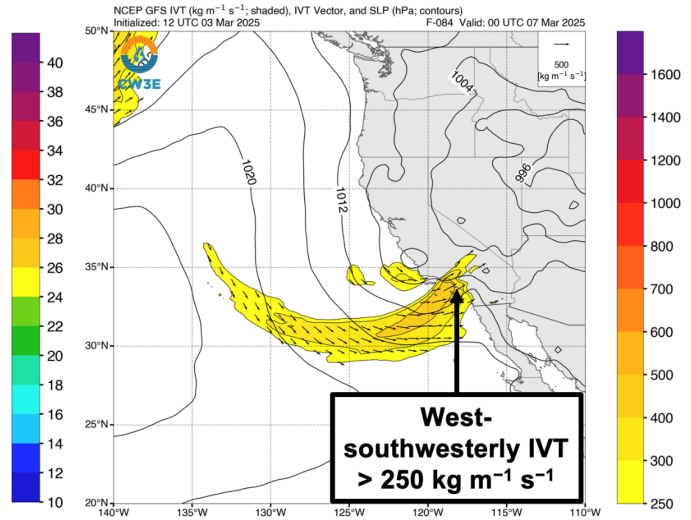
### GFS IVT & SLP Valid 10 AM PST 5 Mar (F-054)



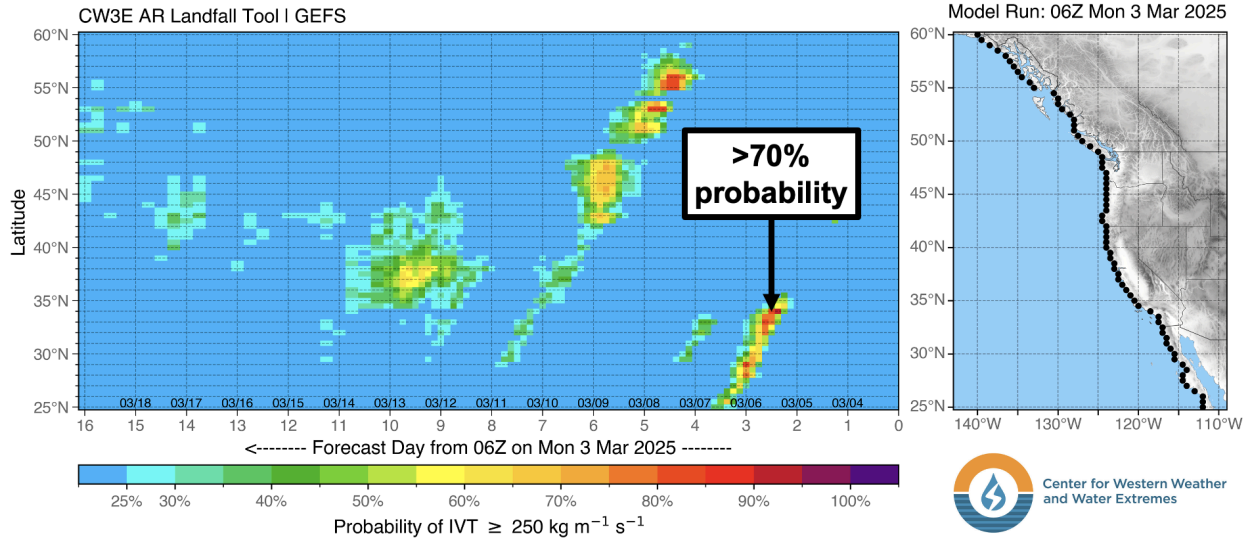
### GFS 500-hPa Vorticity & Geopotential Height Valid 4 PM PST 6 Mar (F-084)



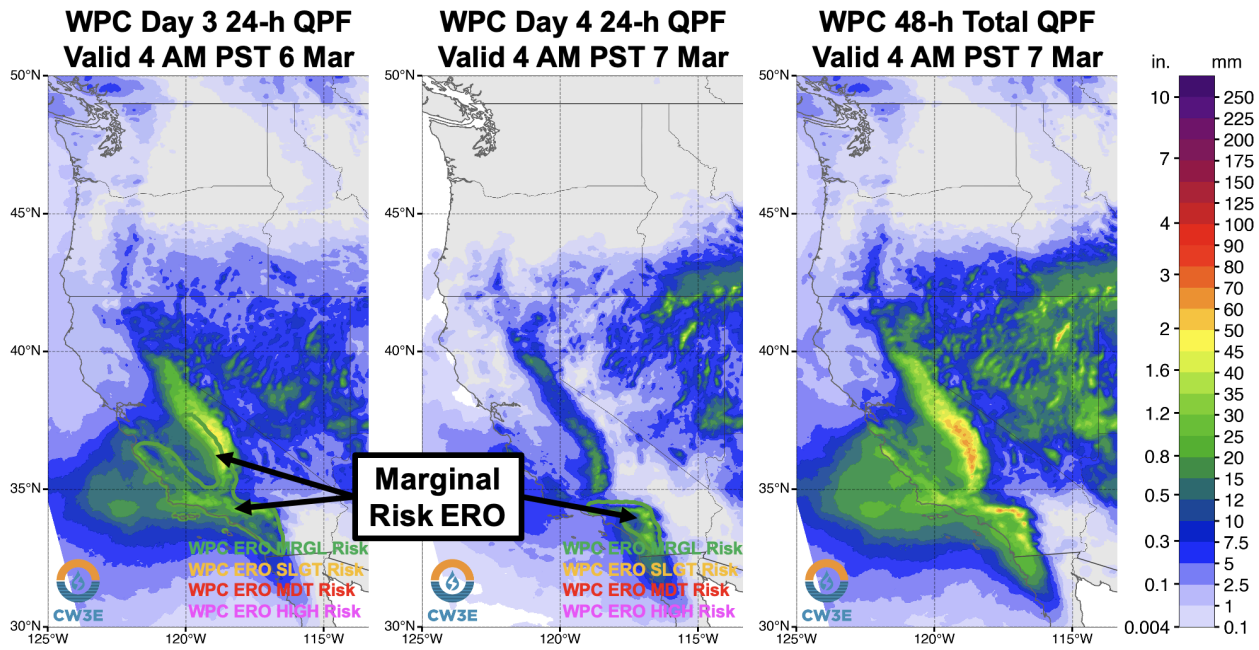
### GFS IVT & SLP Valid 4 PM PST 6 Mar (F-084)



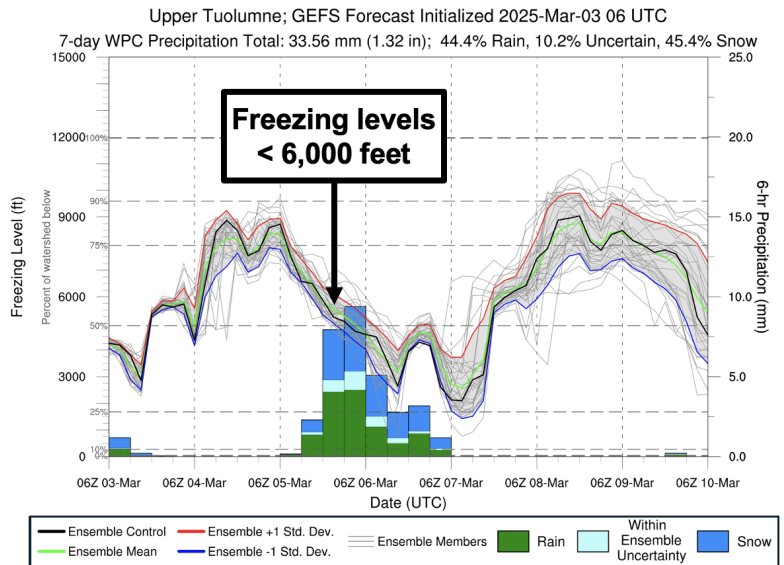
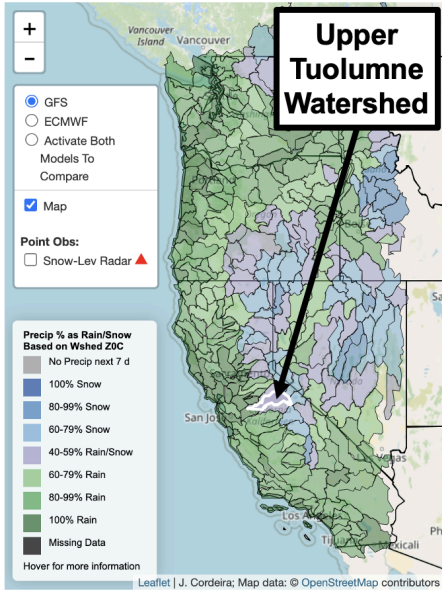
### GEFS AR Landfall Tool Probability of AR Conditions Along the Coast



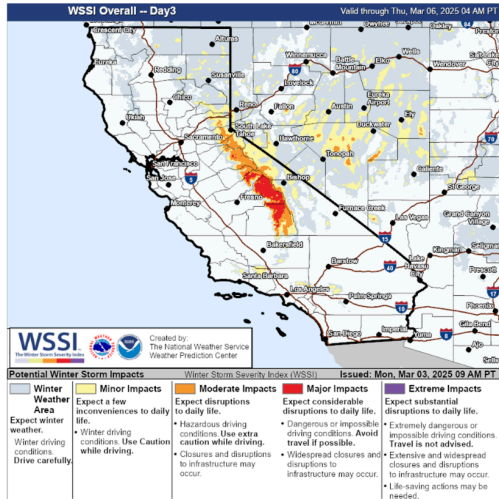
Forecasts support FIRO/CA-AR Program and NSF #2052972 | Intended for research purposes only



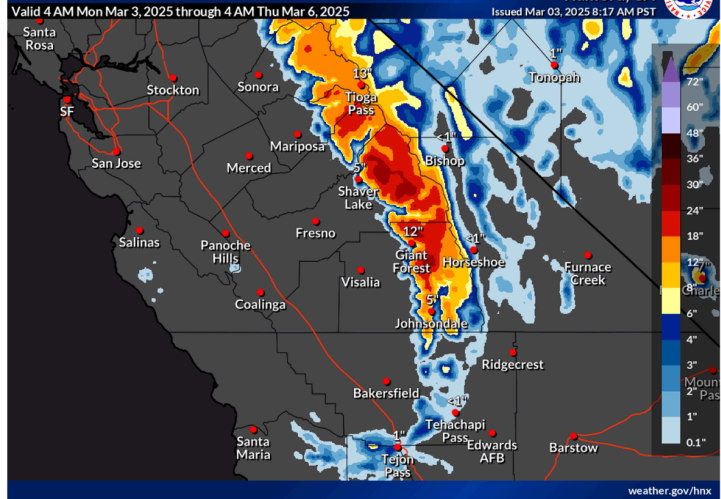




**WPC Day 3 Winter Storm Severity Index Valid through 4 AM PST 6 Mar**



**Total Snowfall: Valid through 4 AM PST 6 Mar**



Additional Considerations:

- Visit [cnrfc.noaa.gov/](https://cnrfc.noaa.gov/) for specific river and stream forecasts and [weather.gov/](https://weather.gov/) for point specific watches, warnings, and forecasts.

In-depth AR forecasts products can be found here:  
<https://cw3e.ucsd.edu/iwv-and-ivt-forecasts/>

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