

Quick Look at Atmospheric Rivers Forecast to Impact the US West Coast

Updated: 26 September 2025

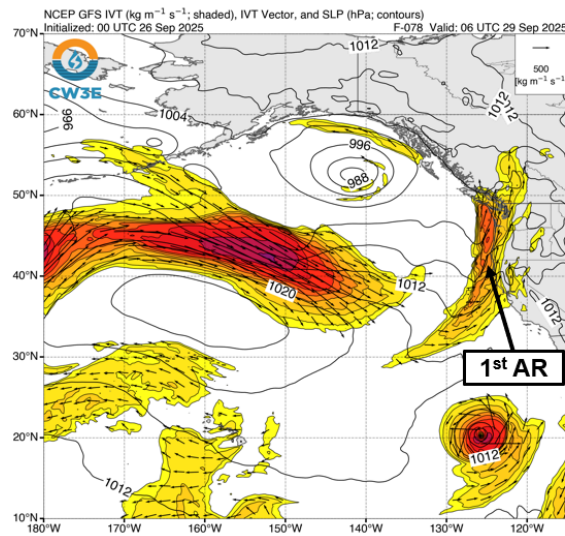
An active weather pattern is expected to return to the US West Coast later this weekend, with the potential for multiple atmospheric river (ARs) landfalls through late next week.

Forecast Highlights:

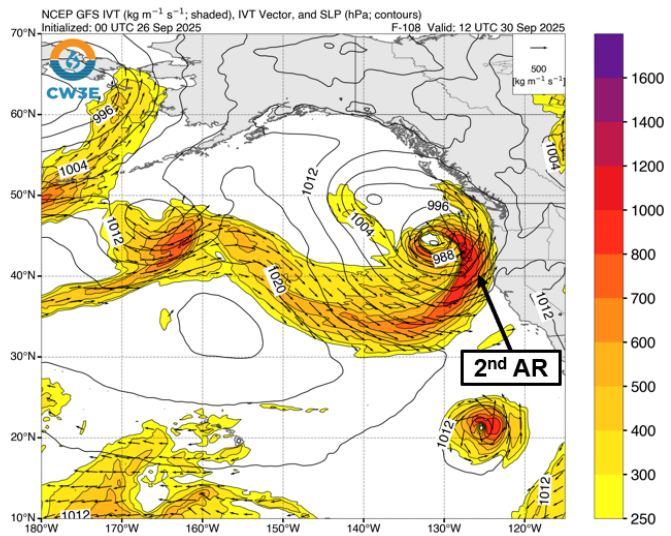
- An AR currently making landfall over British Columbia is forecast to initially weaken, then re-intensify near the US West Coast on Sun 28 Sep, bringing a brief period of moderate AR conditions ($\text{IVT} \geq 500 \text{ kg m}^{-1} \text{ s}^{-1}$) to coastal Washington, Oregon, and Northern California .
- After the first AR moves onshore, a second AR associated with a strong low-pressure system is forecast to make landfall between Washington and Northern California on Tue 30 Sep.
- Compared to the deterministic ECMWF, the deterministic GFS initialized at 00 UTC 26 Sep is forecasting the second AR to be stronger and make landfall earlier. In addition, the GFS is forecasting the low-pressure system to be deeper, track farther south, and stall off the Washington coast through early Thu 2 Oct, whereas the ECMWF is forecasting the low to dissipate earlier and give way to a third landfalling AR by late Wed 1 Oct.
- CW3E's AR Landfall Tool based on GEFS and EPS (not shown) forecasts initialized at 00 UTC 26 Sep is showing a very high likelihood (>90% probability) of AR conditions between Washington and Northern California in association with the first AR, and a moderate-to-high likelihood (50–90% probability; highest over southern Oregon) of AR conditions over the same areas in association with the second AR.
- Both GEFS and EPS are also showing elevated probabilities (>50%) of AR conditions continuing over southern Washington and Oregon through Thu 2 Oct in association with a third potential AR landfall.
- The NWS Weather Prediction Center (WPC) is forecasting 2–5 inches of total precipitation in the Northern California Coast Ranges, the Northern Sierra Nevada, the Oregon Coast Ranges, and the Cascades during the next 7 days, with higher amounts (5–10 inches) forecast over the Olympic Peninsula.
- The WPC has issued a **marginal risk** (level 1 of 4; 5% probability) excessive rainfall outlook (ERO) for much of Northern California and far southwestern Oregon for the 24-hour periods ending 5 am PDT Mon 30 Sep and 5 am PDT Tue 1 Oct.
- Model differences in the forecast of the second AR and low-pressure system are contributing to differences in forecast precipitation over interior Northern California. For example, the deterministic GFS initialized at 00 UTC 26 Sep is forecasting heavier precipitation in the Upper Yuba watershed compared to the deterministic ECMWF (1.8 inches vs 0.6 inches of mean areal precipitation over the next 7 days).

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

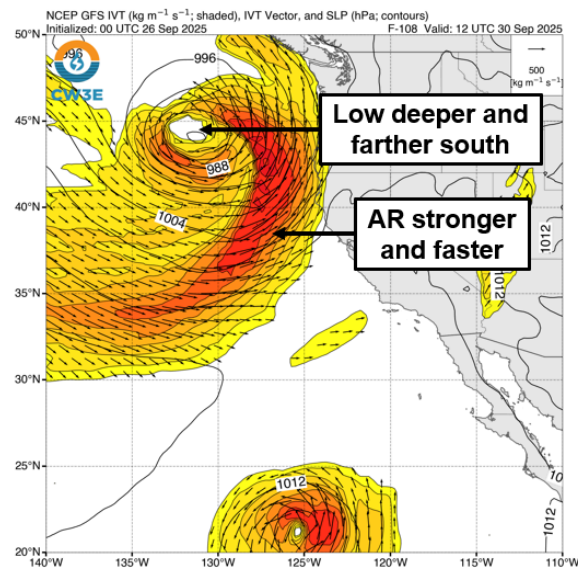
GFS IVT & SLP Forecasts Valid: 11 PM PT 28 Sep



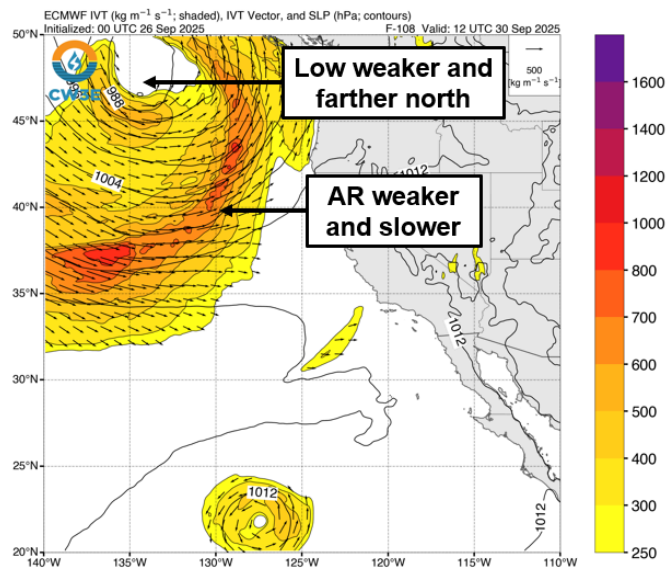
GFS IVT & SLP Forecasts Valid: 4 AM PT 30 Sep



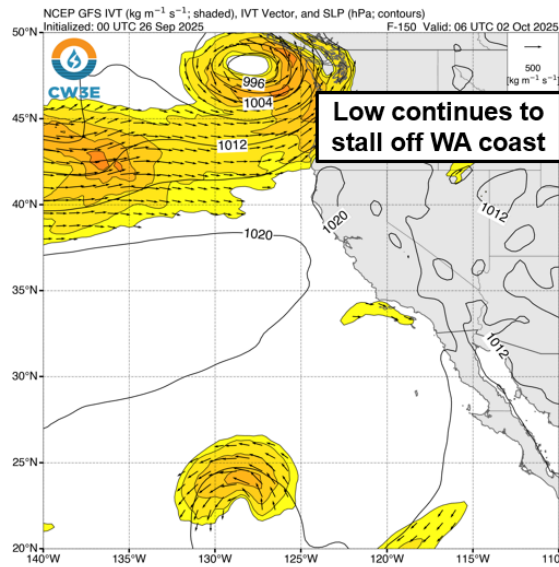
GFS IVT & SLP Forecasts Valid: 4 AM PT 30 Sep



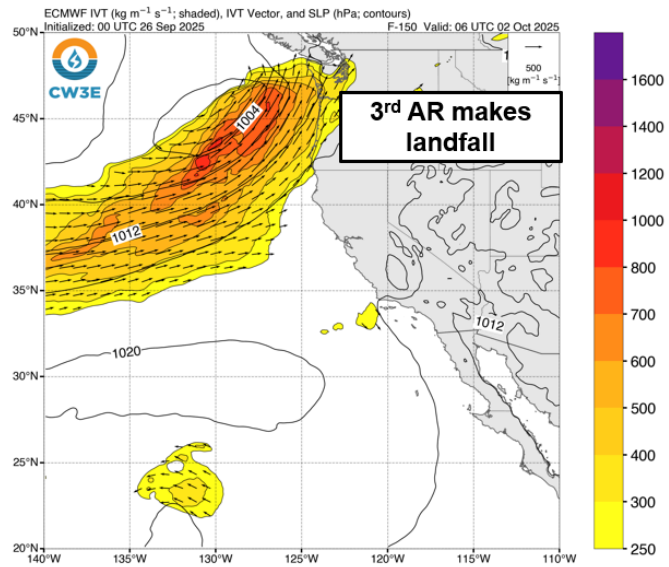
ECMWF IVT & SLP Forecasts Valid: 4 AM PT 30 Sep



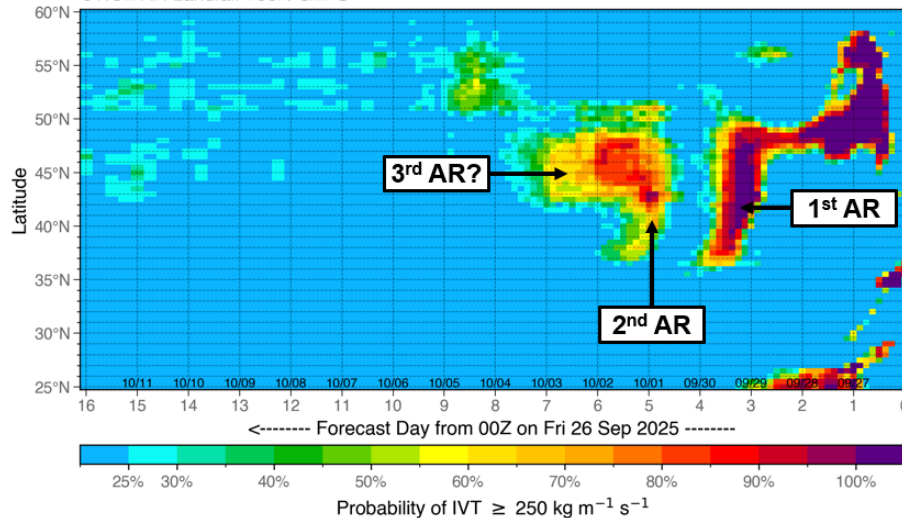
GFS IVT & SLP Forecasts Valid: 10 PM PT 1 Oct



ECMWF IVT & SLP Forecasts Valid: 10 PM PT 1 Oct

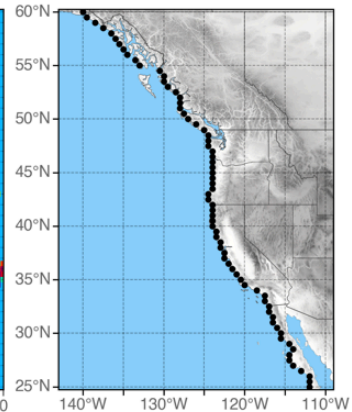


CW3E AR Landfall Tool | GEFS

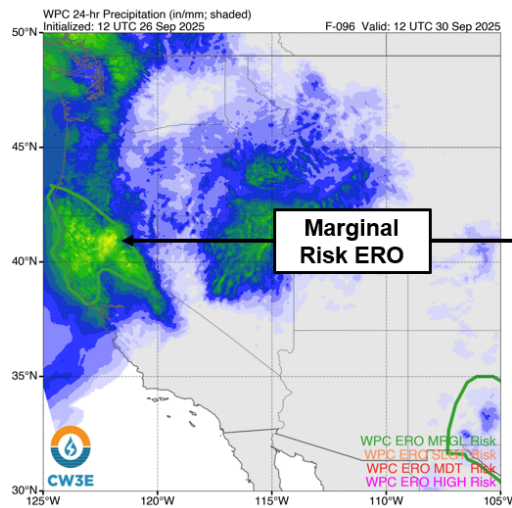


Forecasts support FIRO/CA-AR Program and NSF #2052972 | Intended for research purposes only

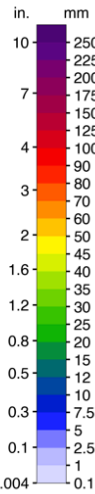
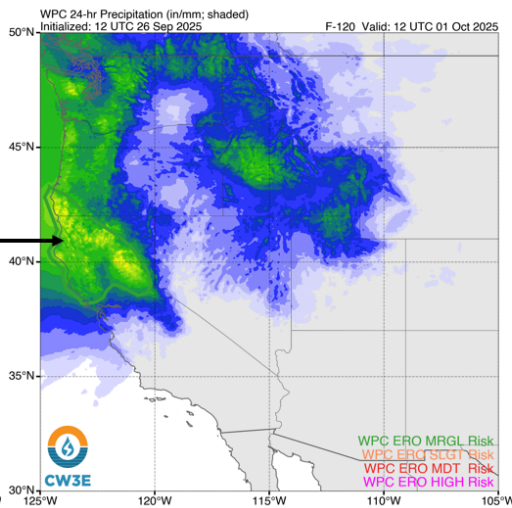
Model Run: 00Z Fri 26 Sep 2025



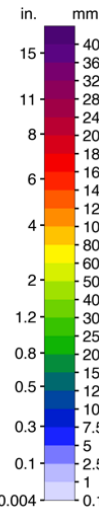
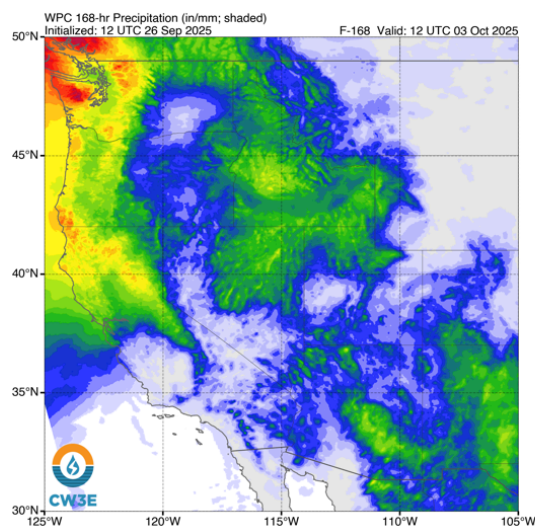
WPC Day 4 24-h QPF
Valid: 4 AM PT 30 Sep



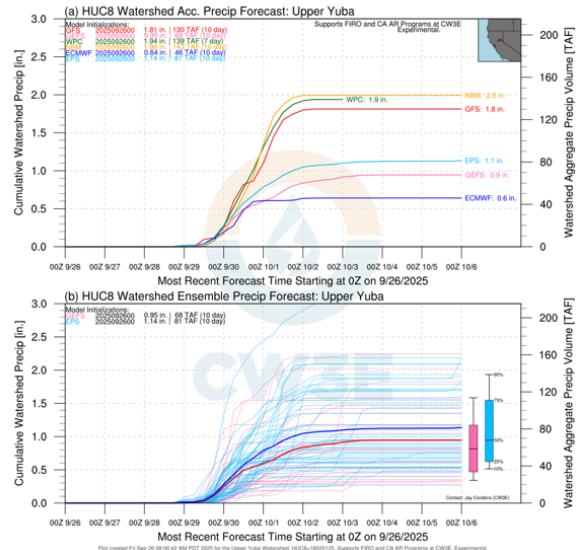
WPC Day 5 24-h QPF
Valid: 4 AM PT 1 Oct



WPC 7-day Total QPF
Valid: 4 AM PT 3 Oct



10-day Watershed QPF: Upper Yuba



Additional Considerations:

- Visit cnrfc.noaa.gov/ and nwrfc.noaa.gov/ for specific river and stream forecasts and 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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