

CW3E Atmospheric River Outlook: 3 November 2025

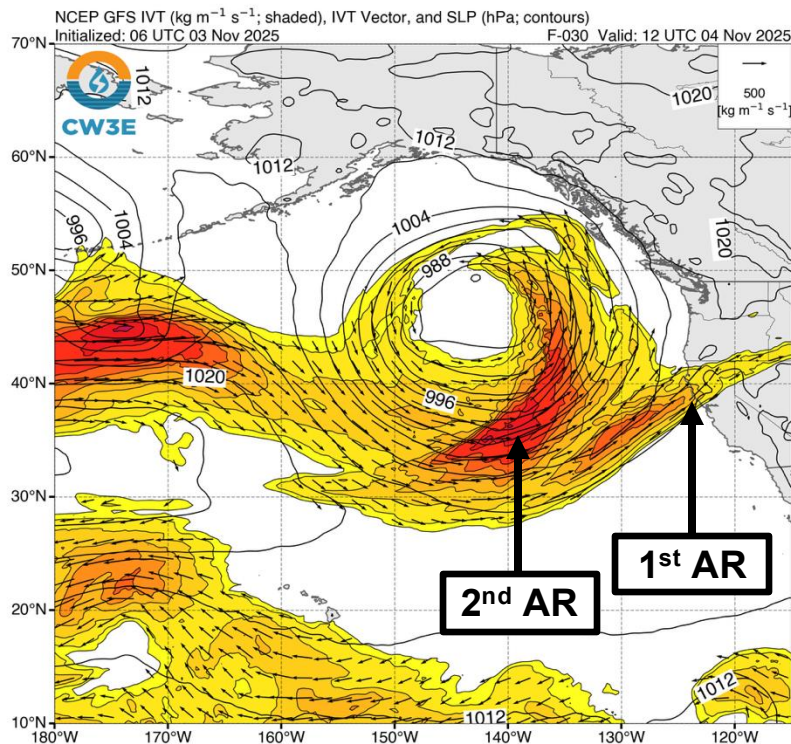
Multiple Atmospheric Rivers Forecast to Impact US West Coast This Week

- A weak atmospheric river (AR) made landfall over Oregon this morning and is forecast to stall over northern California tonight.
- A second AR is forecast to merge with the first AR tomorrow and bring strong AR conditions ($IVT > 750 \text{ kg m}^{-1} \text{ s}^{-1}$) and heavy rainfall to southern coastal Oregon and northern California.
- A third AR is forecast to make landfall over the Pacific Northwest and northern California Thu 6 Nov.
- GEFS is forecasting AR 3/AR 4 conditions (based on the Ralph et al. 2019 AR Scale) in association with the second AR over southern coastal Oregon and northern coastal California.
- The second AR is forecast to produce 2–5 inches of precipitation in the Northern California Coast Ranges, Klamath Mountains, southern Cascades, and Northern Sierra Nevada. **Marginal risk** excessive rainfall outlooks (EROs) have been issued for these areas from early Tue 4 Nov through early Thu 6 Nov.
- A **marginal risk** ERO has also been issued in portions of western Washington, western Oregon, and far northwestern California from early morning Thu 6 Nov through early morning Fri 7 Nov due to additional precipitation from the third AR.
- High freezing levels throughout the forecast period will substantially limit snowfall accumulations.
- Heavy rainfall over the next several days is expected to result in large increases in streamflow in western Washington, western Oregon, and northern California, but significant riverine flooding is not currently anticipated.
- These ARs will likely bring beneficial precipitation to areas that are currently experiencing moderate-to-severe drought in western Washington and northwestern Oregon.

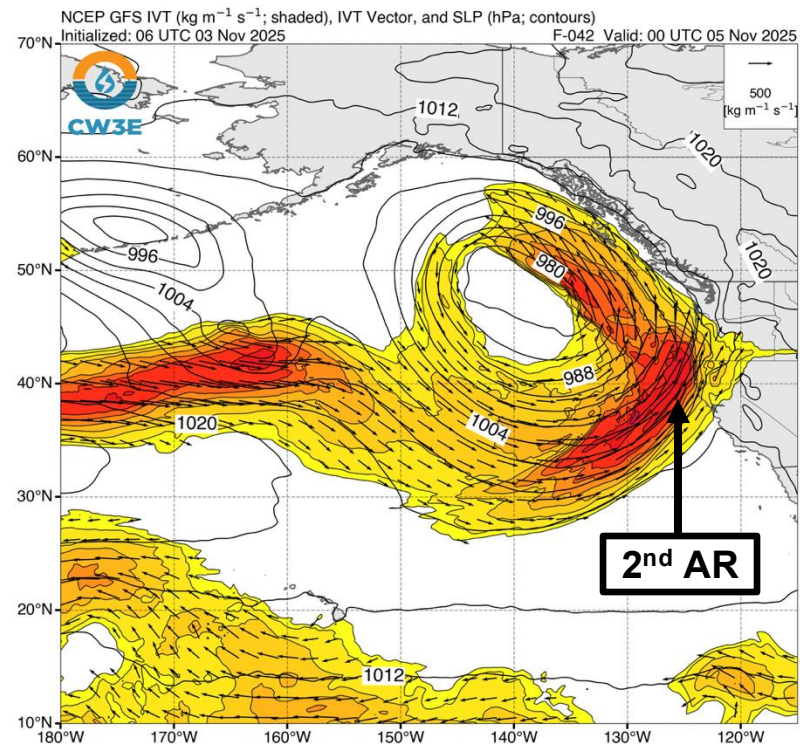
AR Outlook: 3 November 2025

GFS IVT & SLP Forecasts

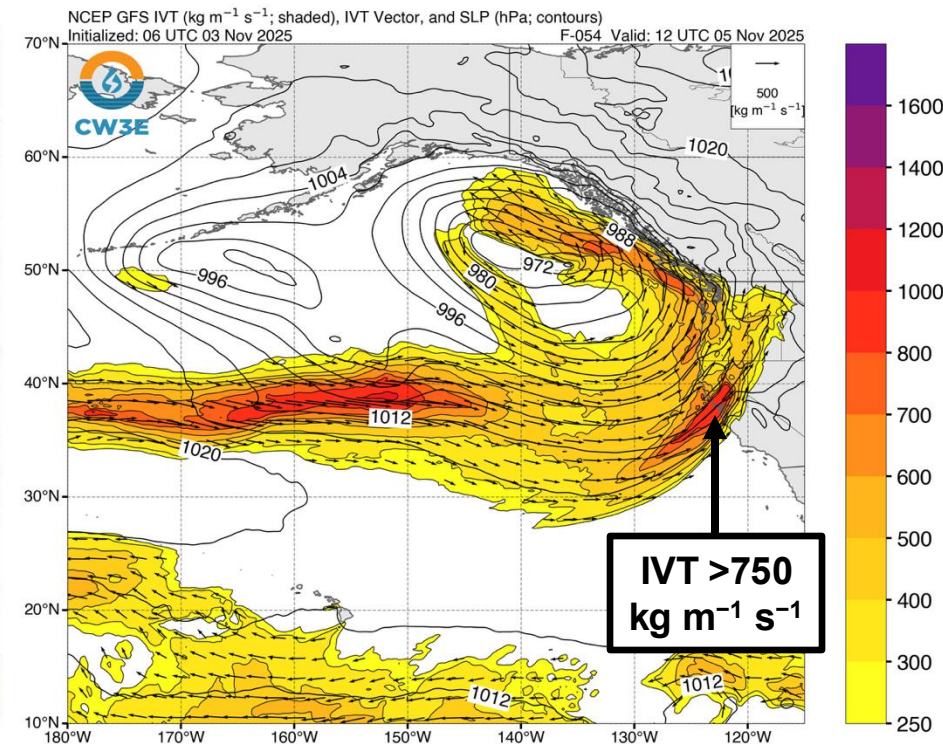
Valid: 4 AM PT 4 Nov (F-030)



Valid: 4 PM PT 4 Nov (F-042)



Valid: 4 AM PT 5 Nov (F-054)

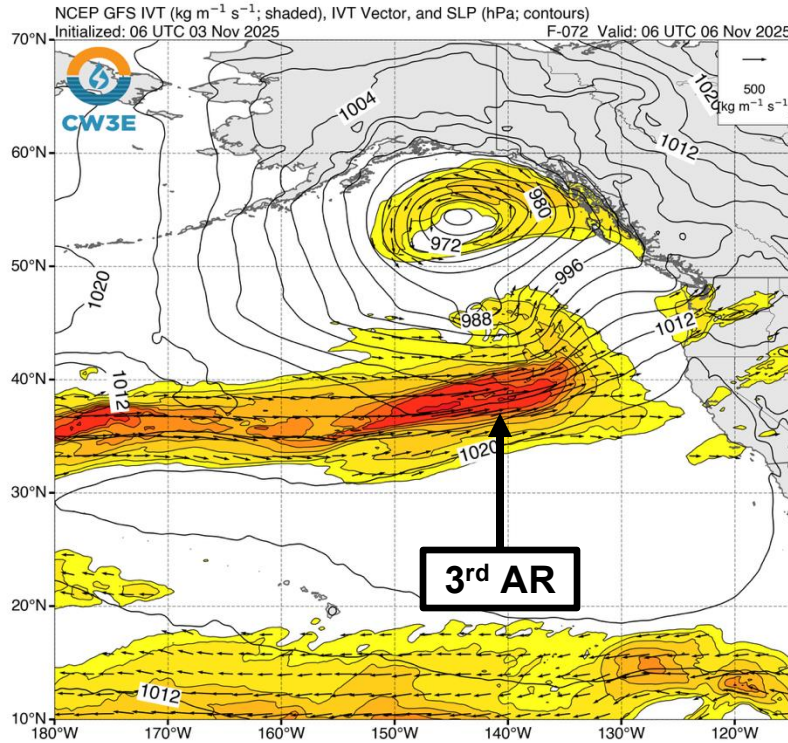


- A weak atmospheric river (AR) made landfall over Oregon this morning and will stall over northern California late tonight.
- A second, stronger AR associated with a large low-pressure system over the Northeast Pacific is forecast to propagate eastward toward the US West Coast and merge with the first AR tomorrow afternoon, bringing strong AR conditions ($\text{IVT} > 750 \text{ kg m}^{-1} \text{s}^{-1}$) to coastal Oregon and northern California.
- A brief period of strong AR conditions is forecast over the Bay Area and Sacramento Valley early Wed 5 Nov as the AR moves onshore.

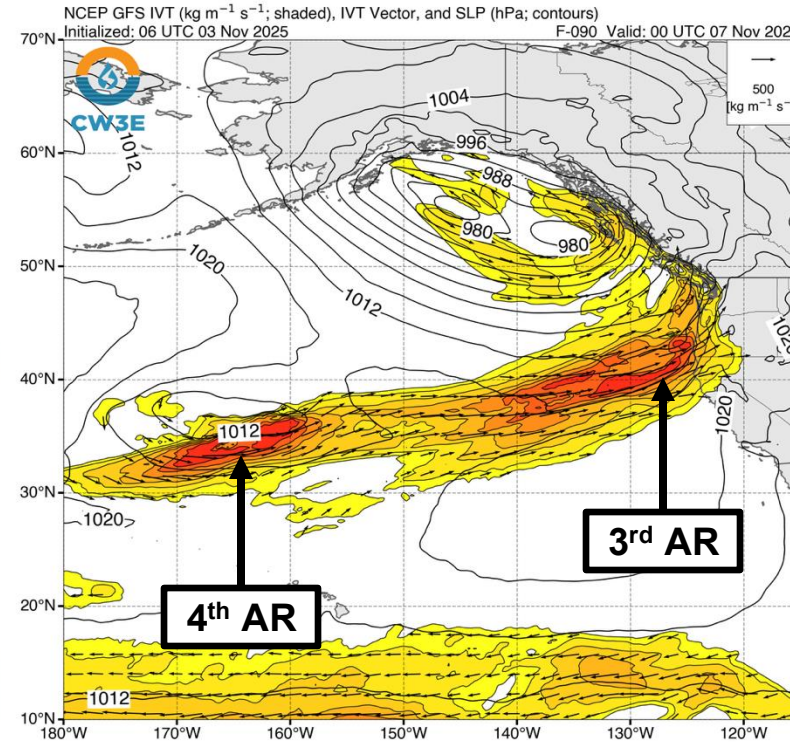
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GFS IVT & SLP Forecasts

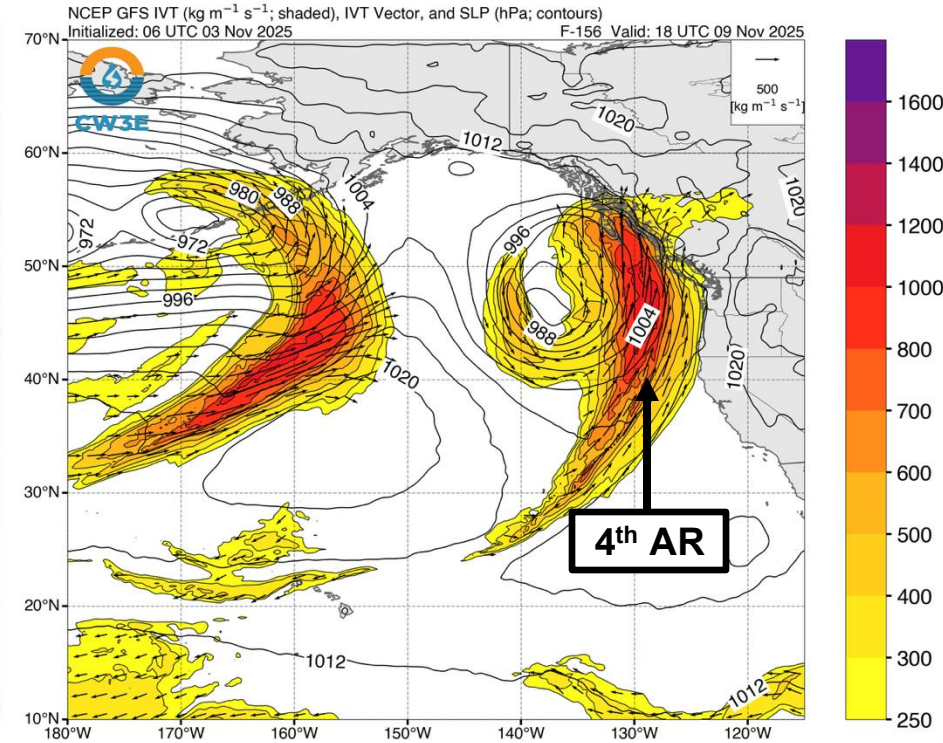
Valid: 10 PM PT 4 Nov (F-072)



Valid: 4 PM PT 6 Nov (F-90)



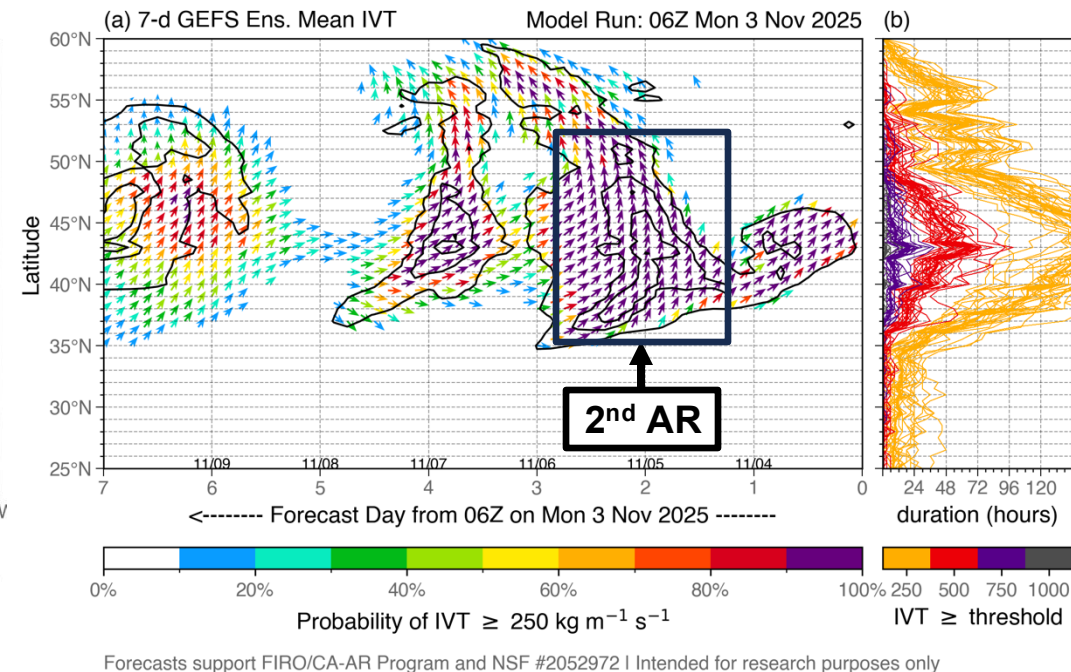
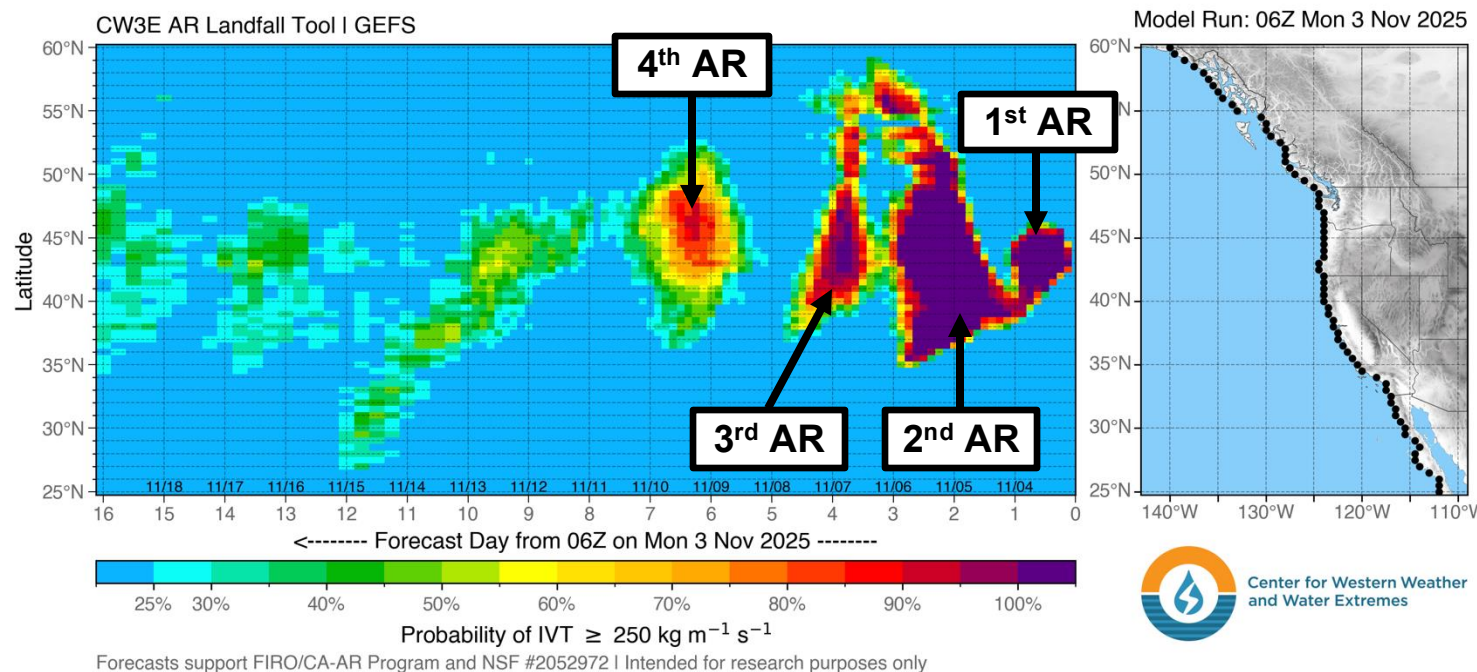
Valid: 11 AM PT 9 Nov (F-156)



- After the second AR begins to dissipate on Wed 5 Nov, a third AR is forecast to propagate across the Northeast Pacific and make landfall over the US West Coast on Thu 6 Nov, bringing moderate-to-strong AR conditions ($\text{IVT } 500\text{--}1000 \text{ kg m}^{-1} \text{s}^{-1}$) to coastal Oregon and far northwestern California.
- A fourth AR is forecast to develop north of Hawaii and track northeastward late next week, potentially making landfall over the Pacific Northwest on Sun 9 Nov.

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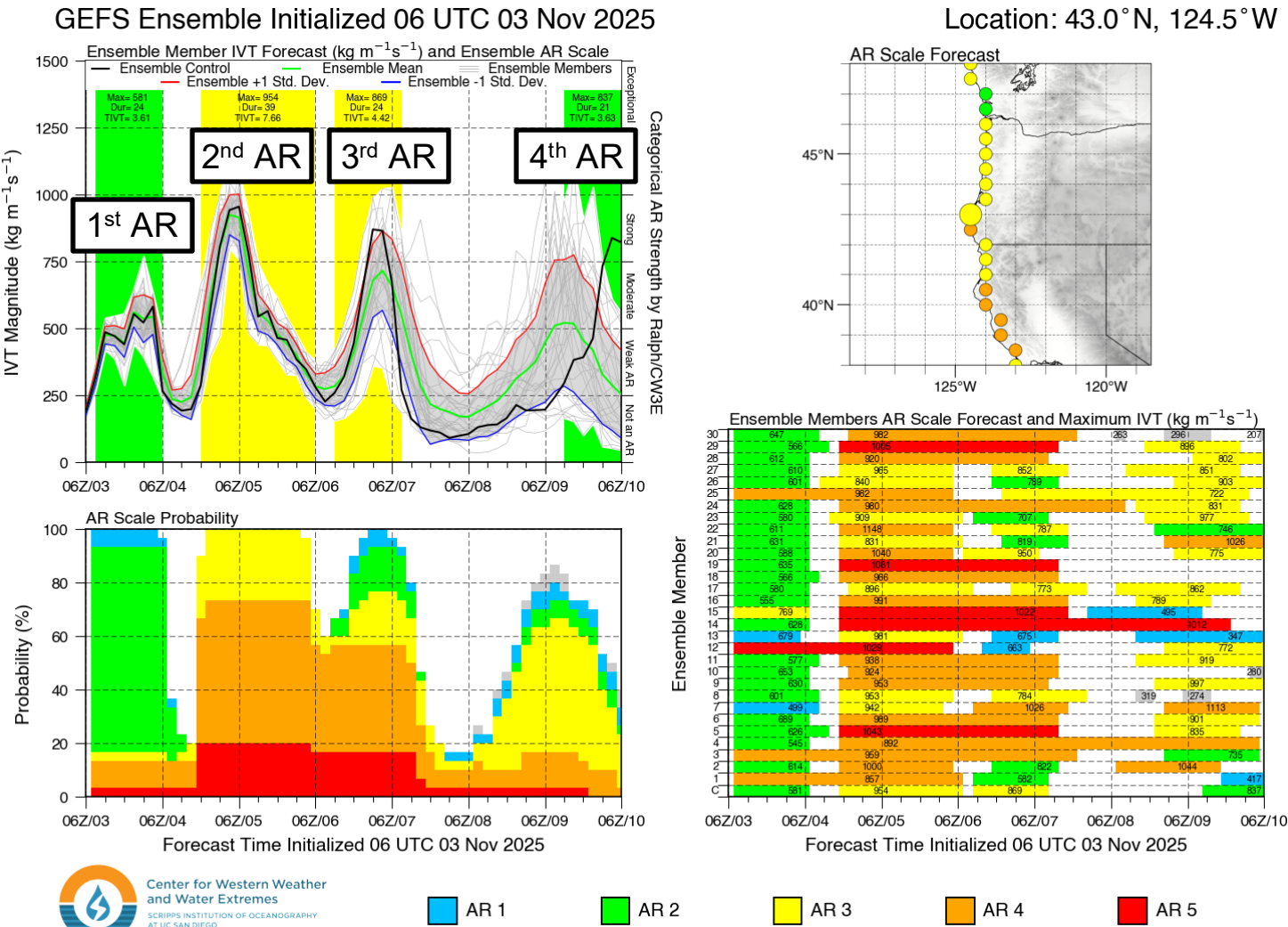
GEFS Coastal AR Landfall Tool



- CW3E's AR landfall tool based on GEFS is showing very high confidence ($>95\%$ probability) in AR conditions ($IVT \geq 250 \text{ kg m}^{-1} \text{ s}^{-1}$) in association with the first AR today (coastal Oregon and northern California), the second AR on 4–5 Nov (from the Olympic Peninsula and the Monterey Peninsula), and the third AR on 6 Nov (southern coastal Washington and coastal Oregon).
- GEFS is also showing a high likelihood ($>80\%$ probability) of a fourth landfalling AR over the Pacific Northwest on 9 Nov.
- Southwesterly to south-southwesterly moisture transport will likely support orographic precipitation enhancement over the Klamath Mountains and southern Cascades during the second AR.

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GEFS AR Scale and IVT Forecasts: Southern OR

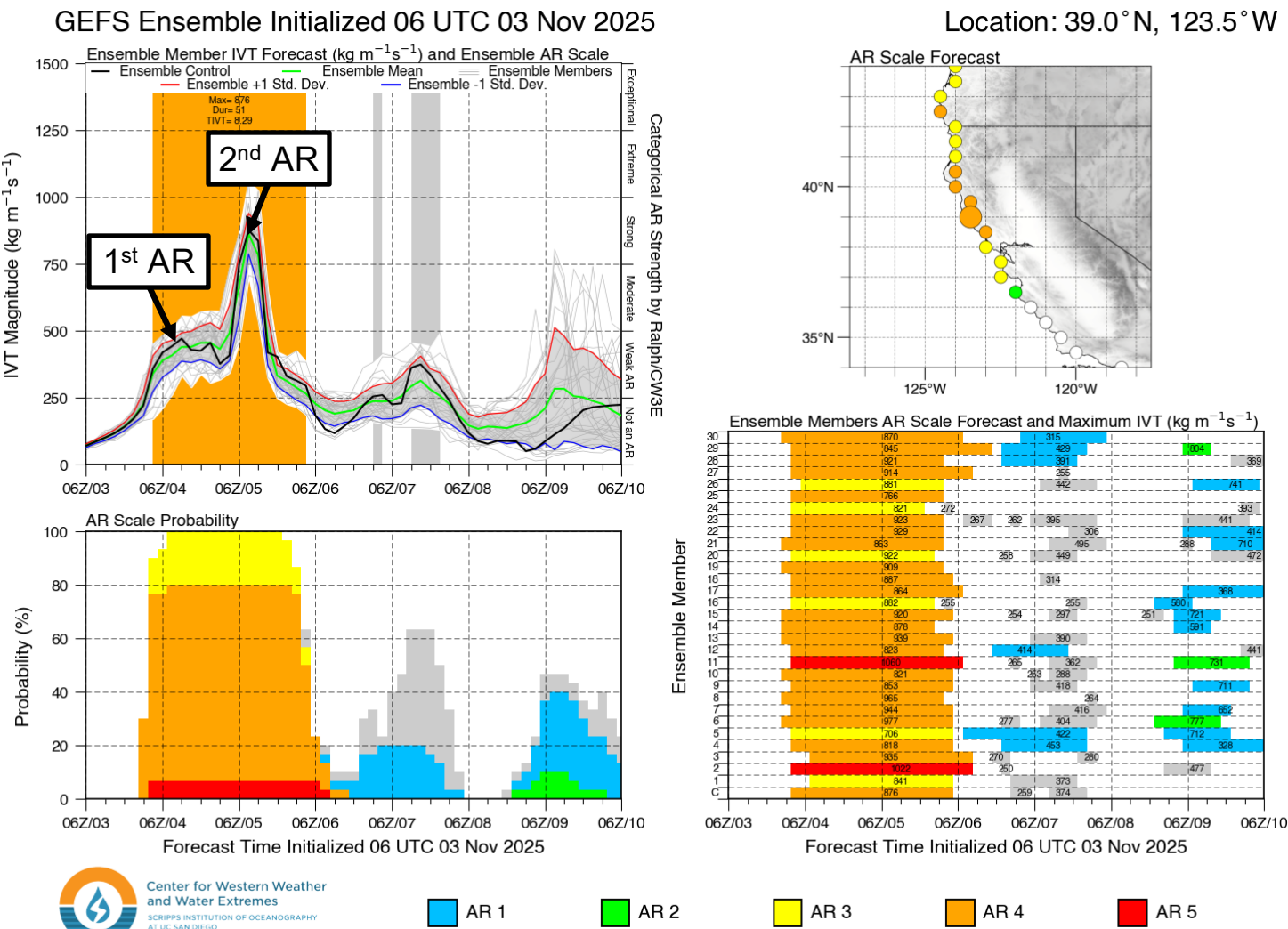


- In southern coastal Oregon, the GEFS control member is forecasting an AR 2 during the first AR, an AR 3/AR 4 during the second AR, and an AR 2/AR 3 during the third AR.
- 100% of GEFS ensemble members are forecasting at least an AR 3 at 43.0°N, 124.5°W during the second AR. All members are forecasting ≥ 24 hours of continuous AR conditions and a maximum IVT $> 750 \text{ kg m}^{-1} \text{s}^{-1}$ at this location.
- There is some uncertainty in the duration of the second AR and timing of the third AR, with $\sim 50\%$ of GEFS members forecasting no break in AR conditions between the two ARs.
- While there still considerable uncertainty in the timing and magnitude of the fourth AR, more than 60% of GEFS members are forecasting at least an AR 3 at this location.

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

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GEFS AR Scale and IVT Forecasts: Northern CA

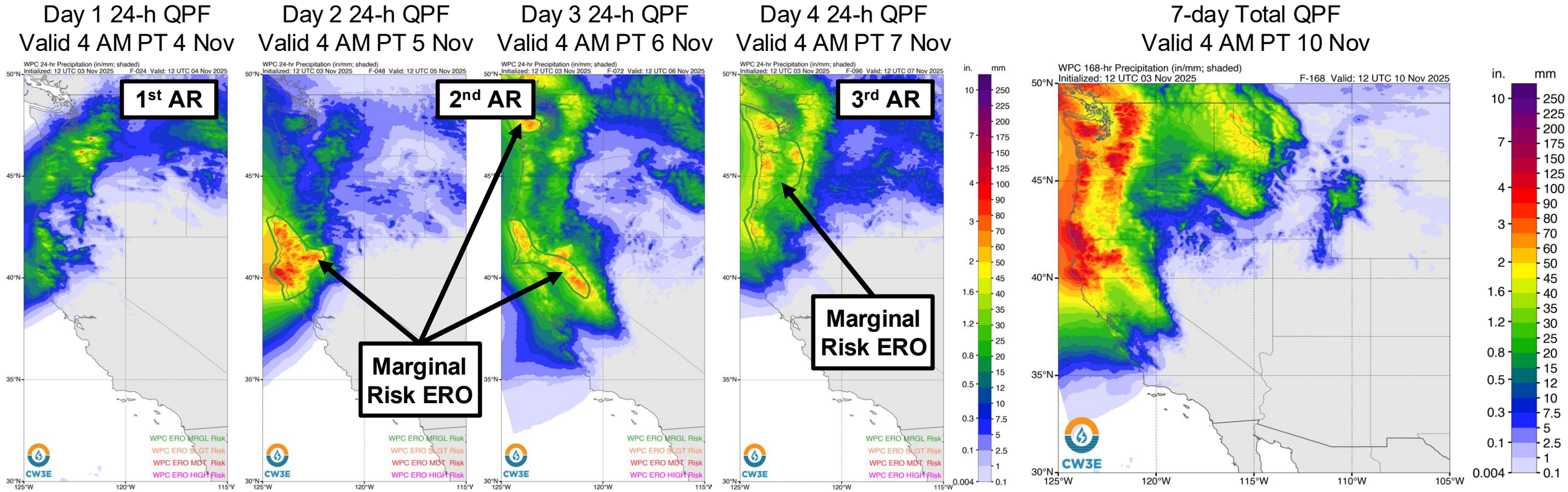


- The GEFS control member is forecasting an AR 3/AR 4 over northern coastal California during the first and second ARs.
- About 80% of GEFS members are forecasting at least an AR 4 at 39.0°N, 123.5°W (Mendocino County).
- While there is still some uncertainty in the IVT magnitude during the second AR, nearly all GEFS members are forecasting maximum IVT $>750 \text{ kg m}^{-1} \text{s}^{-1}$ at this location.
- There is relatively strong ensemble agreement in the timing of maximum IVT as well as the timing and duration of AR conditions. About 80% of GEFS members are forecasting ≥ 48 hours of continuous AR conditions.

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

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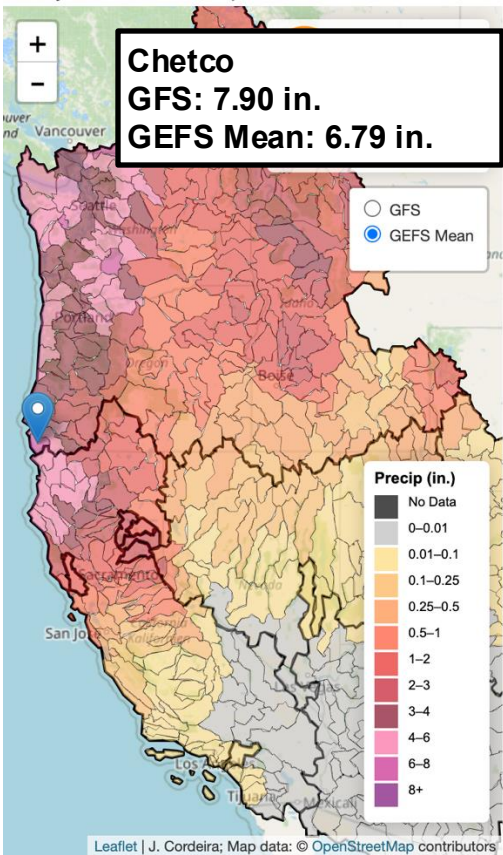
WPC Precipitation Forecasts



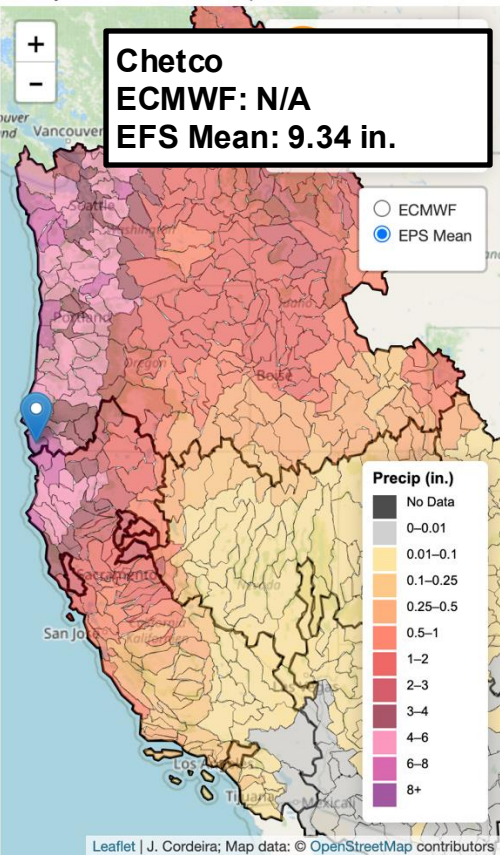
- The second AR is forecast to produce 2–5 inches of precipitation in portions of the Northern California Coast Ranges, Klamath Mountains, southern Cascades, and Northern Sierra Nevada. **Marginal risk** (level 1 of 4; $\geq 5\%$ probability of flooding) excessive rainfall outlooks (EROs) have been issued in these areas as well as the Olympic Peninsula from early morning Tue 4 Nov through early morning Thu 6 Nov.
- A **marginal risk** ERO has also been issued in portions of western Washington, western Oregon, and far northwestern California from early morning Thu 6 Nov through early morning Fri 7 Nov due to additional precipitation from the third AR.
- The NWS Weather Prediction Center (WPC) is forecasting at least 3–7 inches of total precipitation in the Olympic Peninsula, Washington Cascades, Oregon Coast Ranges, Klamath Mountains, Northern California Coast Ranges, and southern Cascades over the next 7 days.

Watershed Precipitation Forecasts

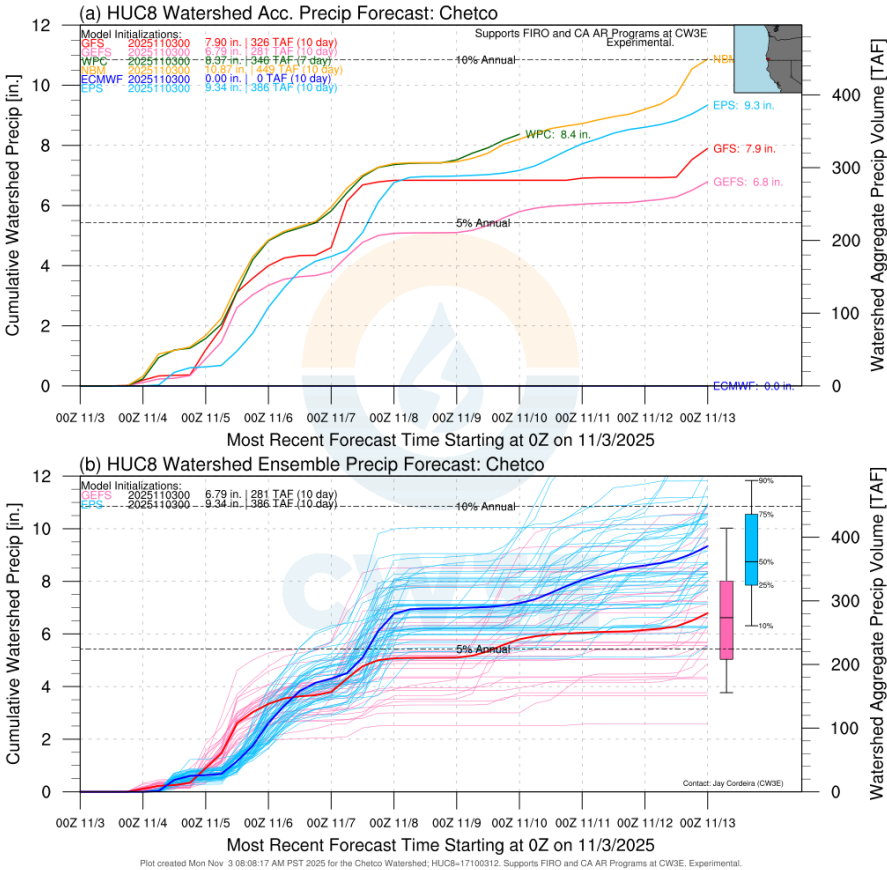
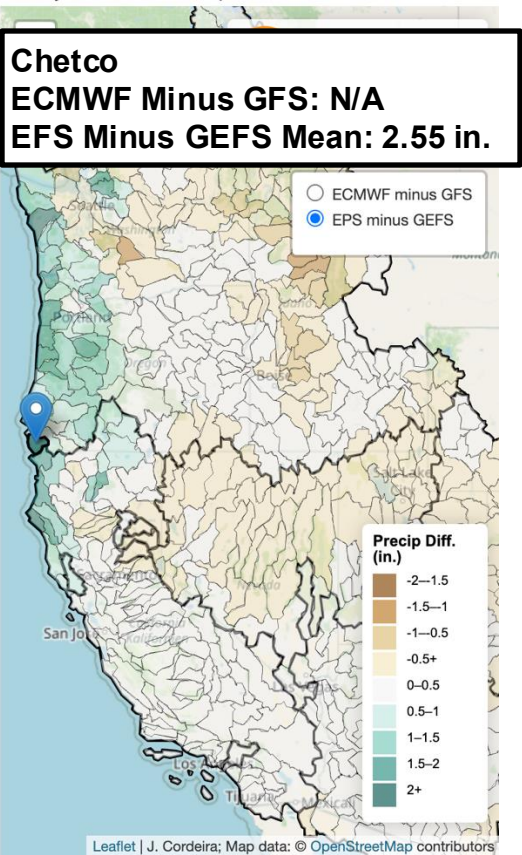
10-day GFS/GEFS Precipitation Forecasts



10-day ECMWF/EFS Precipitation Forecast



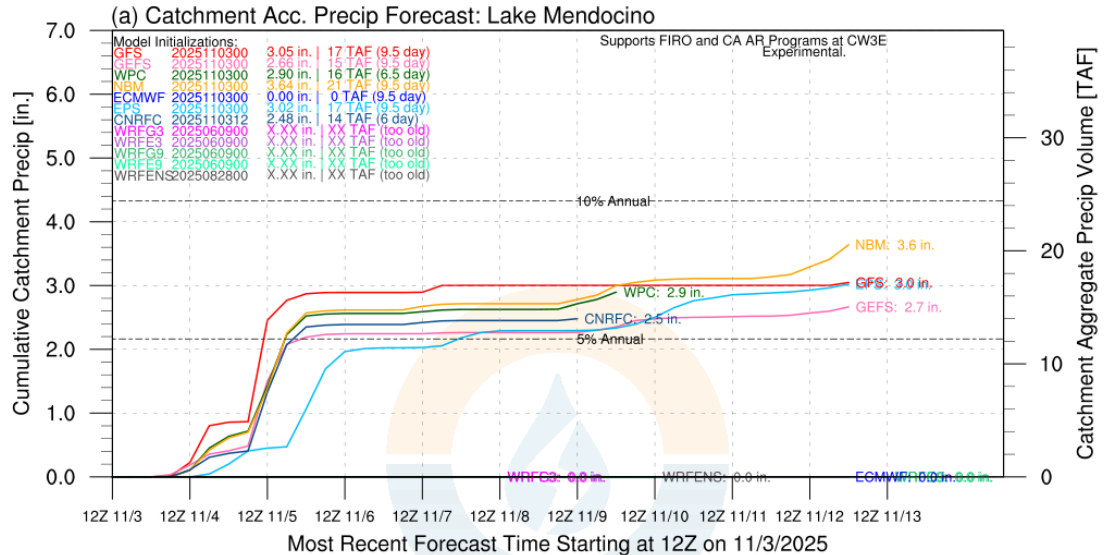
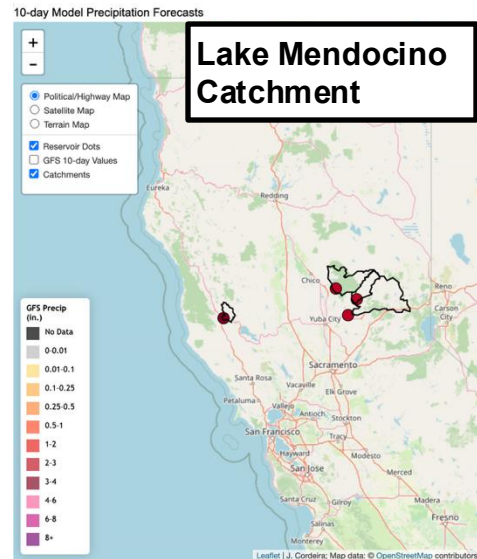
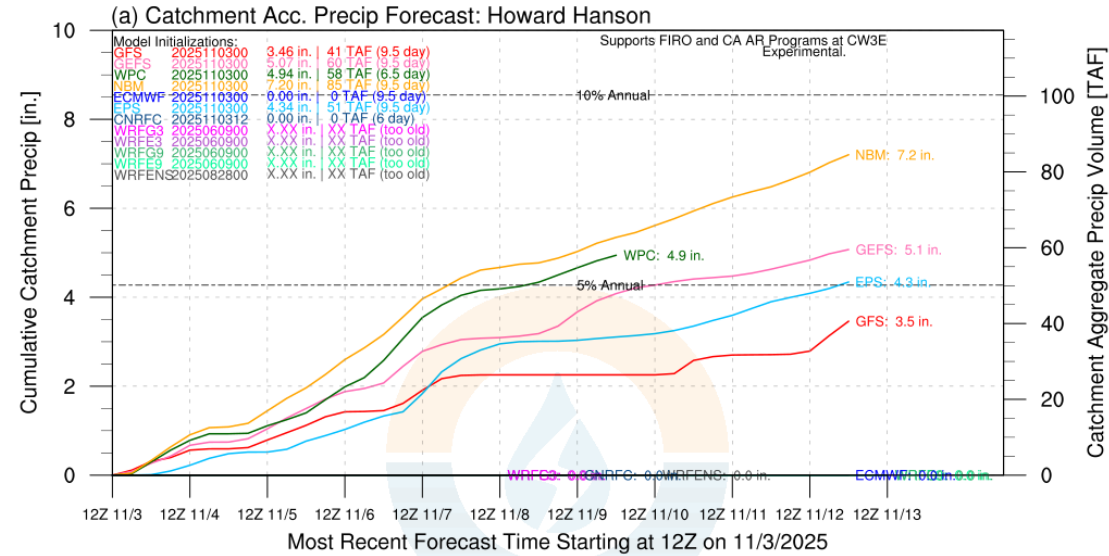
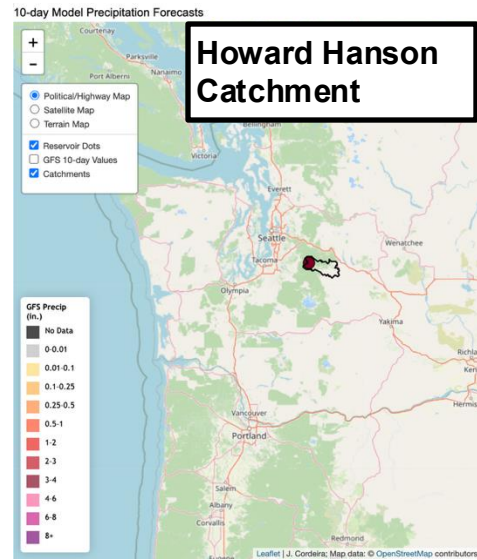
10-day Difference Precipitation Forecast



- The heaviest precipitation totals from these ARs are forecast over the Klamath Mountains near the Oregon/California border
- In the Chetco watershed, nearly 50% of GEFS ensemble members and >90% of ECWMF ensemble (EFS) members are forecasting >5% of annual normal precipitation (~5.45 inches) over the next 10 days. Several EFS members are forecasting >10% of annual normal precipitation (~10.9 inches).

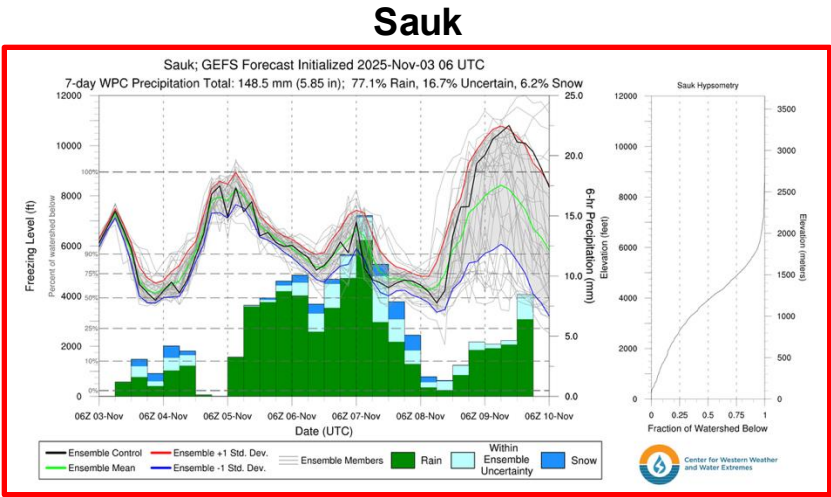
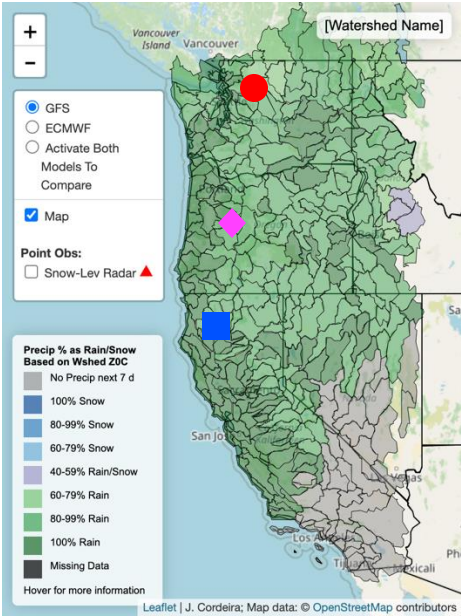
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Watershed Precipitation Forecasts: FIRO Catchments



- Over the next 7 days, the WPC is forecasting 4.94 inches of mean areal precipitation in the Howard Hanson catchment (58 TAF) and 2.90 inches of mean areal precipitation in the Lake Mendocino catchment (16 TAF).
- These amounts represent >5% of normal annual precipitation in both catchments.

Watershed Freezing Level Forecasts



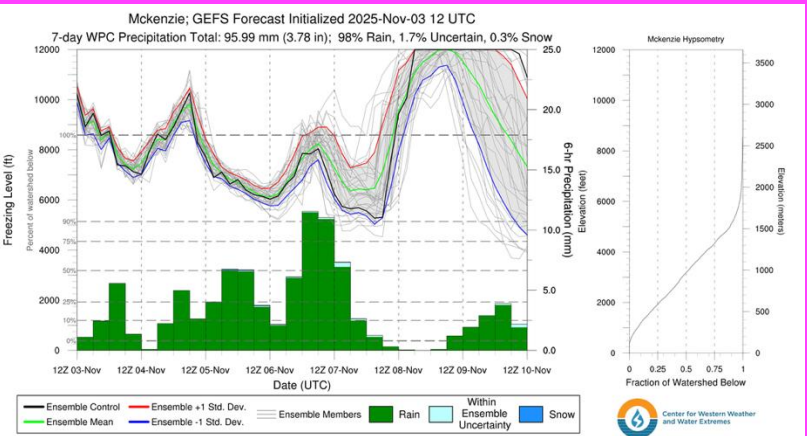
- Freezing levels in the Trinity watershed (Klamath Mountains) are forecast to remain above 7,000 feet during the first and second ARs

- Freezing levels in the Mckenzie watershed (Oregon Cascades) are forecast to remain above 6,000 feet during the first, second, and third ARs.

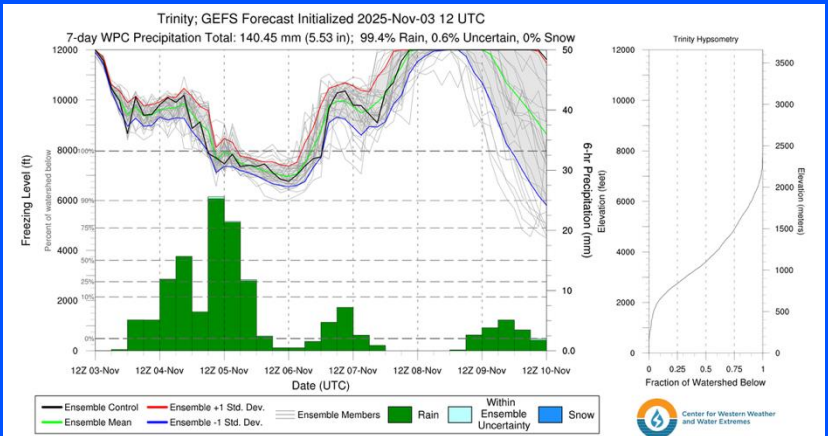
- Freezing levels in the Sauk watershed (North Cascades) are forecast to remain above 4,000 feet during the first AR and above 5,000 feet during the second and third ARs.

- Due to the elevated freezing levels, nearly all the precipitation from these ARs is forecast to fall as rain, except in the highest elevations of the North Cascades.

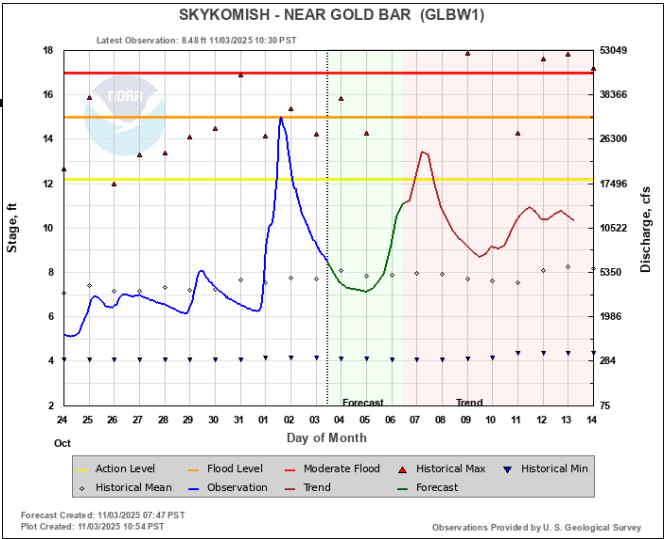
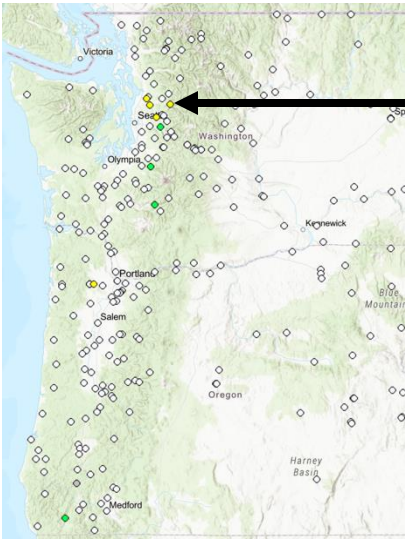
Mckenzie



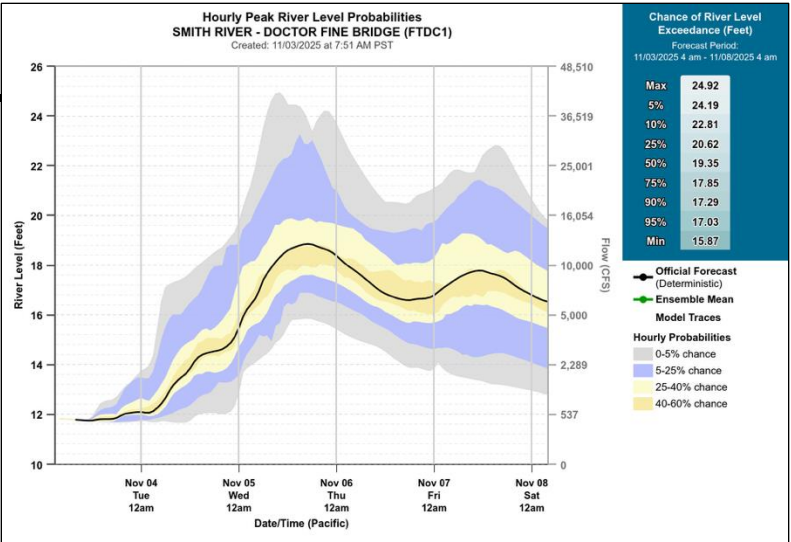
Trinity



Freezing Level and Hydrologic Forecasts



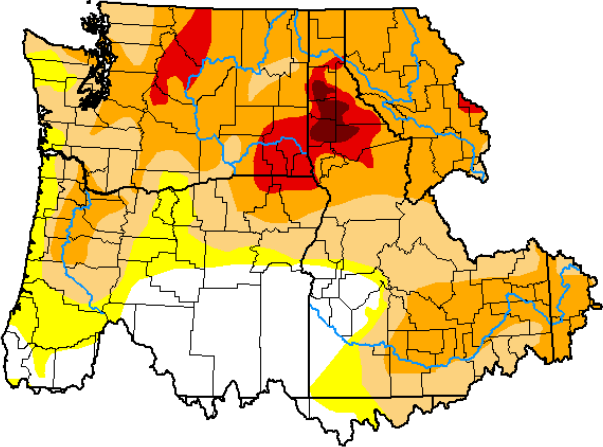
- Heavy rainfall over the next several days is forecast to result in large increases in streamflow over western Washington, western Oregon, and northwestern California.
- While marginal risk EROs have been issued for these areas, significant riverine flooding is not expected at this time.



- Four stream gages in Washington and Oregon are currently forecast to rise above action/monitor stage by Fri 7 Nov, including the Skykomish River near Gold Bar, WA.
- No stream gages in California are currently forecast to rise above action/monitor stage during the next 5 days.

Drought Conditions

U.S. Drought Monitor
Northwest RFC



October 28, 2025
(Released Thursday, Oct. 30, 2025)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	17.66	82.34	70.55	44.10	6.86	0.96
Last Week 10-21-2025	16.85	83.15	73.83	49.08	10.70	1.21
3 Months Ago 07-29-2025	0.00	100.00	82.32	49.03	12.98	0.59
Start of Calendar Year 01-07-2025	58.77	41.23	16.41	6.06	3.16	0.00
Start of Water Year 09-30-2025	10.05	89.95	80.78	53.71	15.24	1.28
One Year Ago 10-29-2024	11.43	88.57	58.30	12.35	2.84	0.49

Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

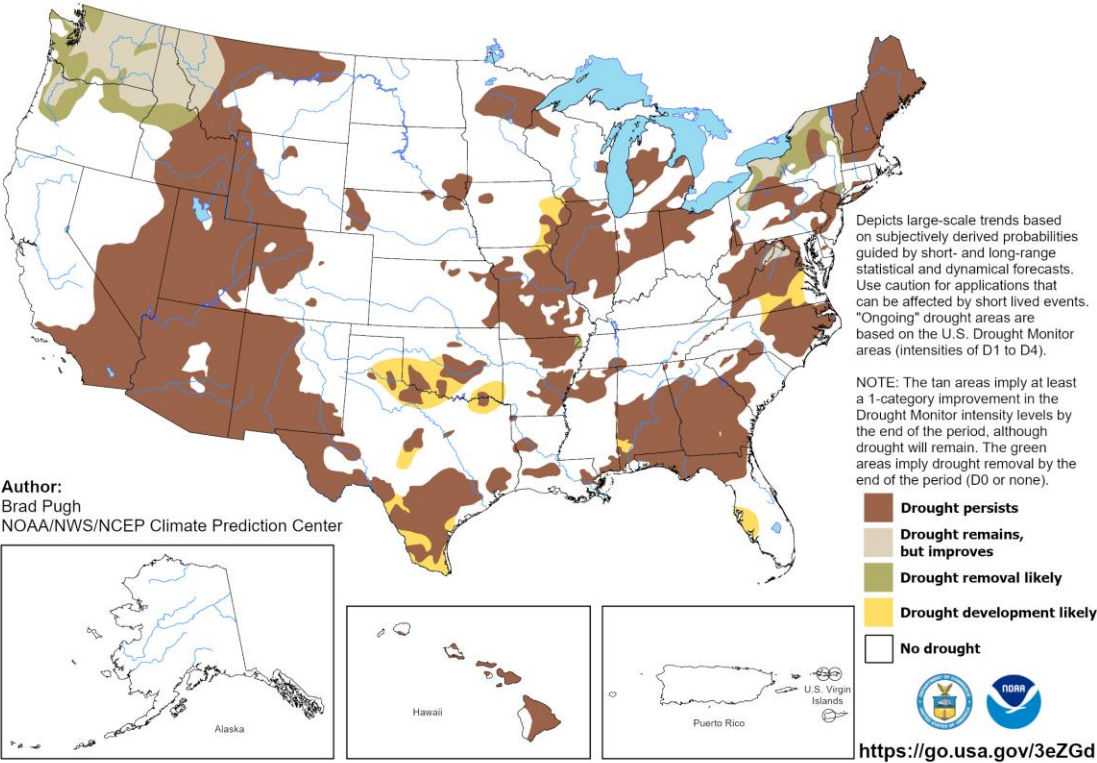
Author:
Richard Tinker
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu

U.S. Monthly Drought Outlook
Drought Tendency During the Valid Period

Valid for November 2025
Released October 31, 2025



- These ARs will likely bring beneficial precipitation to areas that are currently experiencing moderate-to-severe drought in western Washington and northwestern Oregon.
- The most recent monthly drought outlook from the NWS Climate Prediction Center (CPC) is forecasting drought improvement throughout Washington and portions of northern Oregon during November, with drought removal likely in some areas.