

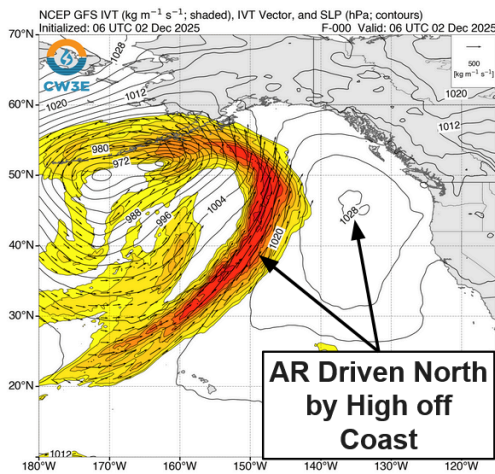
Quick Summary of the 3–6 Dec Atmospheric River that Impacted the Pacific Northwest *Updated: 9 December 2025*

- A mid-level ridge and strong surface high-pressure system developed off the US West Coast Mon 1 Dec through Tue 2 Dec, setting up a flow pattern that would drive moisture transport north and east toward the Pacific Northwest (PNW).
- The atmospheric river (AR) developed in the western Pacific and propagated toward the US West Coast through Mon 1 Dec. As the ridge and surface high strengthened, the AR extended northeastward within a broad region of anticyclonic flow.
- The first pulse of moisture transport in the AR extended north of the high pressure to the PNW coast by midday Wed 3 Dec. As the initial pulse reached the coast, a second moisture transport pulse strengthened at the tail of the AR west of the ridge.
- The first moisture transport pulse impacted the PNW into early Fri 5 Dec, at which point the second, stronger pulse moved onshore between Southern Washington and Central Oregon, extending AR conditions ($\text{IVT} \geq 250 \text{ kg m}^{-1} \text{ s}^{-1}$) through early Sat 6 Dec.
- In total, 60–84 hours of AR conditions were observed over the Washington and Oregon coasts between Wed 3 Dec and Sat 6 Dec. The AR registered as an AR 3 (based on the Ralph et al. 2019 AR Scale) for coastal locations from Central Washington to Central Oregon and an AR 2 in northern Washington and southern Oregon.
- GEFS analysis showed an IVT maximum of $715 \text{ kg m}^{-1} \text{ s}^{-1}$ over coastal Lincoln County, Oregon, during the second pulse on Fri 5 Dec.
- This storm produced 2–5 in. of precipitation over the Olympic Mountains, Oregon Coast Ranges and Cascades in the 72-hour period ending 4 PM PST Sat 6 Dec.
- Heavy snowfall was limited to the northern Washington Cascades due to higher freezing levels across Oregon. An estimated 12–36 in. fell across much of the northern Washington Cascades, with snowfall totals exceeding 36 in. over the highest peaks.
- Despite the heavy precipitation across the region, hydrologic impacts were limited primarily to increased moisture in the soils, providing more efficient runoff for subsequent events.



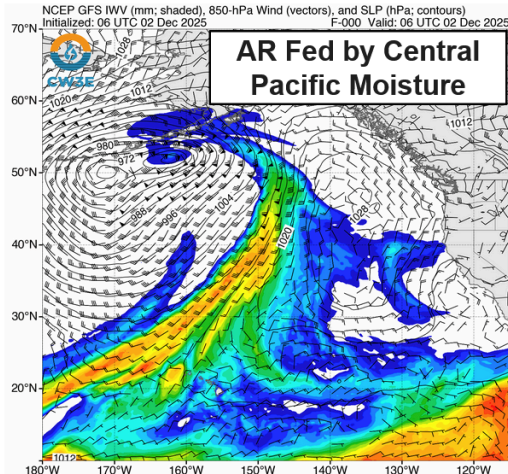
GFS IVT

Valid: 10 PM PT Mon 1 Dec



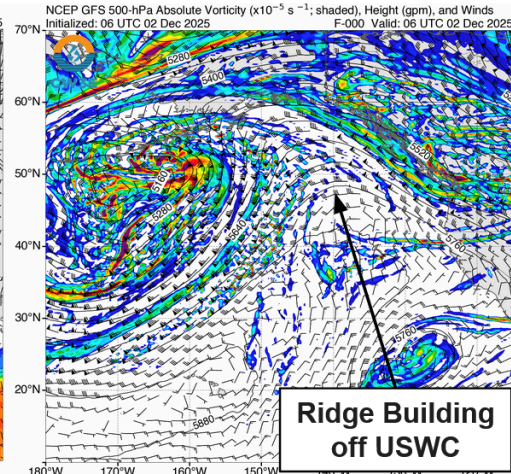
GFS IWV

Valid: 10 PM PT Mon 1 Dec

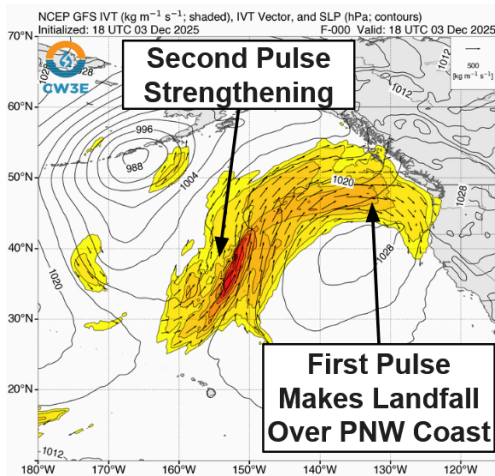


GFS 500 hPa Heights and Vorticity

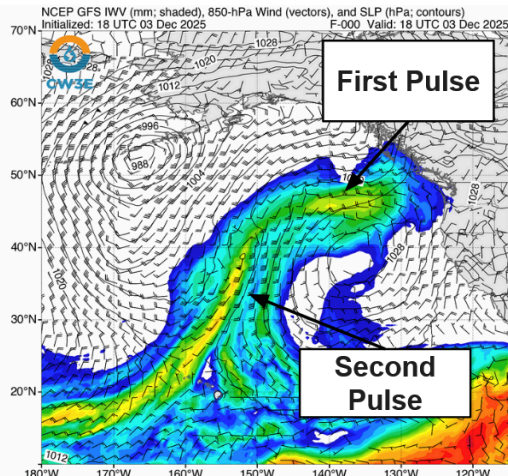
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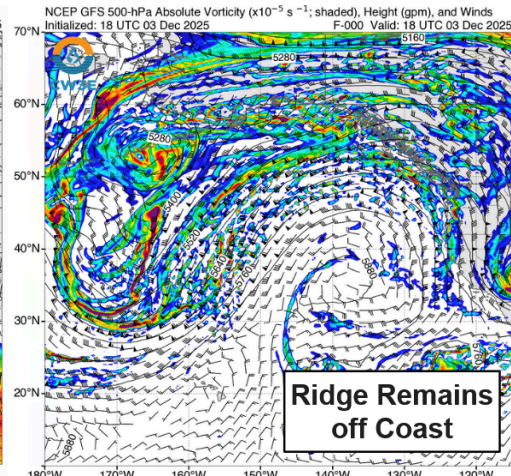
Valid: 10 AM PST Wed 3 Dec



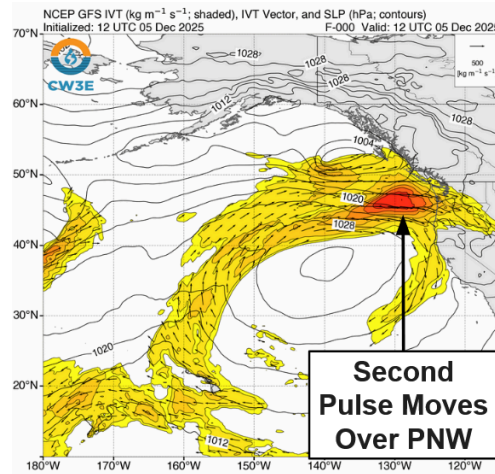
Valid: 10 AM PST Wed 3 Dec



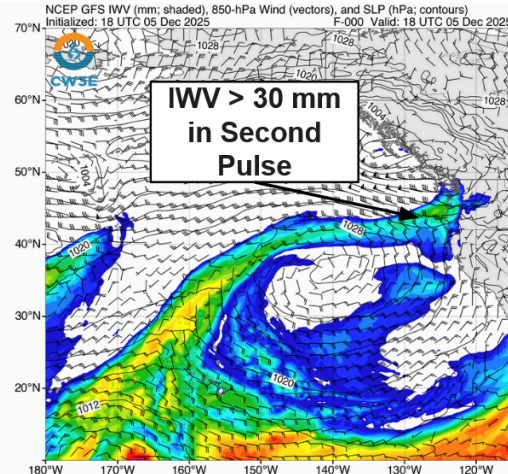
Valid: 10 AM PST Wed 3 Dec



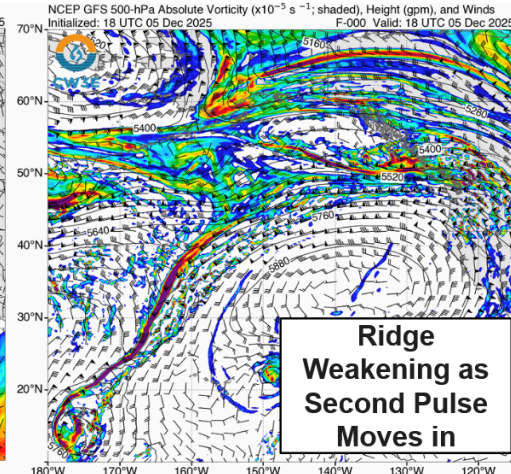
Valid: 4 AM PST Fri 5 Dec



Valid: 4 AM PST Fri 5 Dec



Valid: 4 AM PST Fri 5 Dec



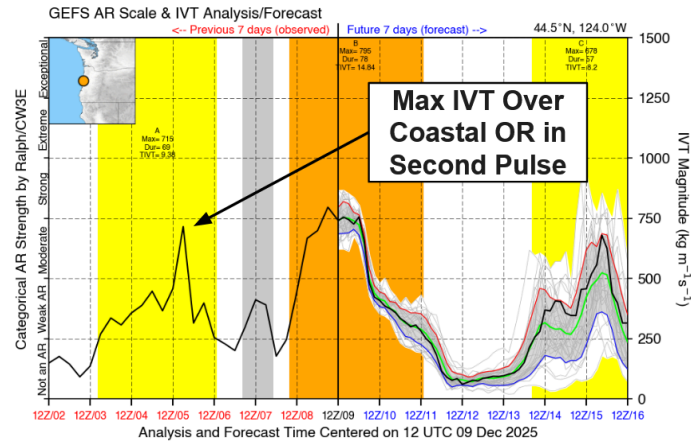


Image created 17 UTC 09 Dec 2025

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

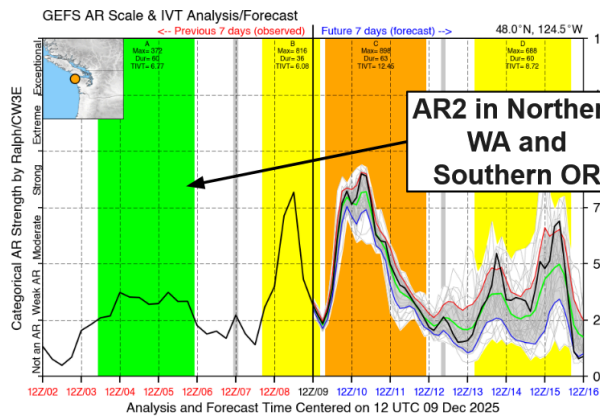


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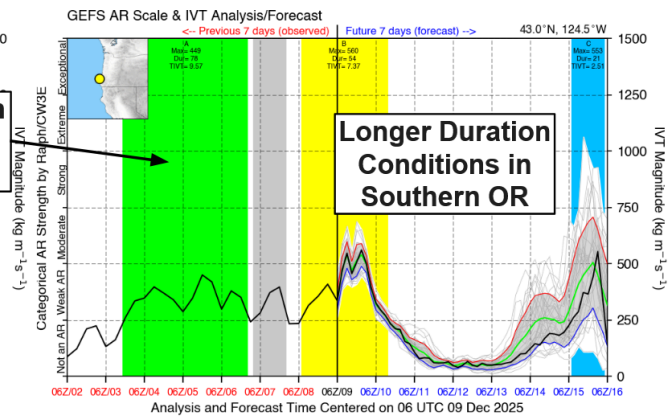
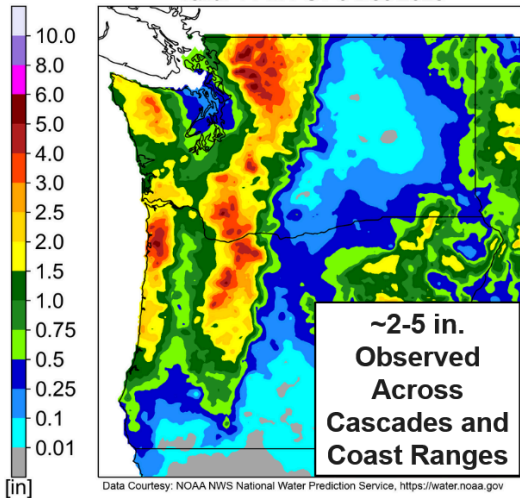


Image created 11 UTC 09 Dec 2025

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

NWS Stage IV 72-h QPE

Valid: 4 PM PST 6 Dec 2025



NWS 72-h Snowfall Analysis

Valid: 4 PM PST 6 Dec 2025

