

Latest Update on Strong AR Forecast Over Pacific Northwest

Updated: 31 May 2024

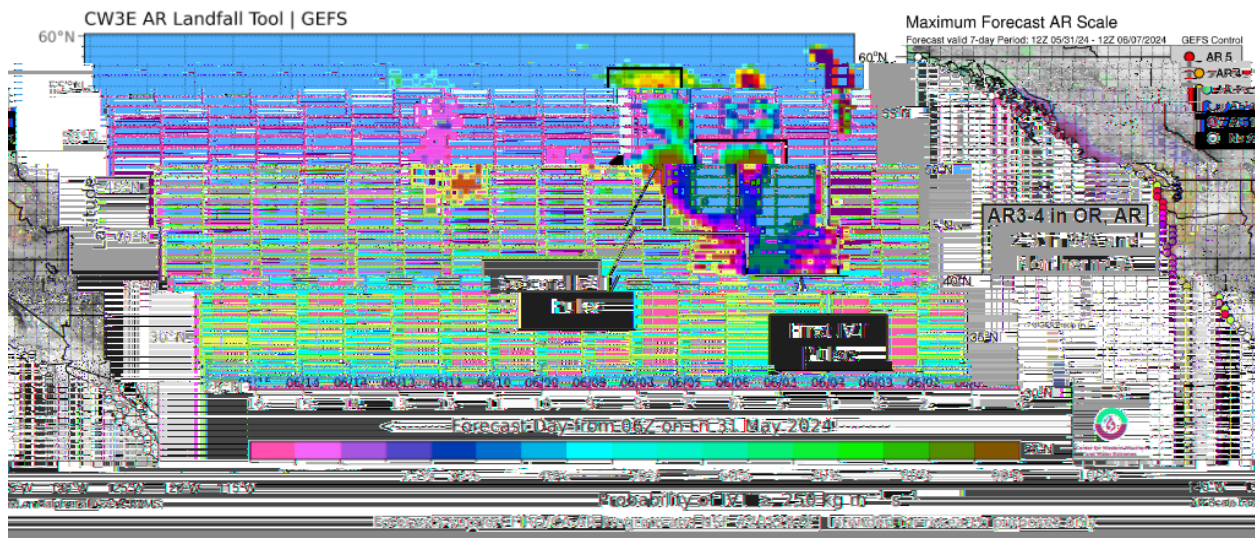
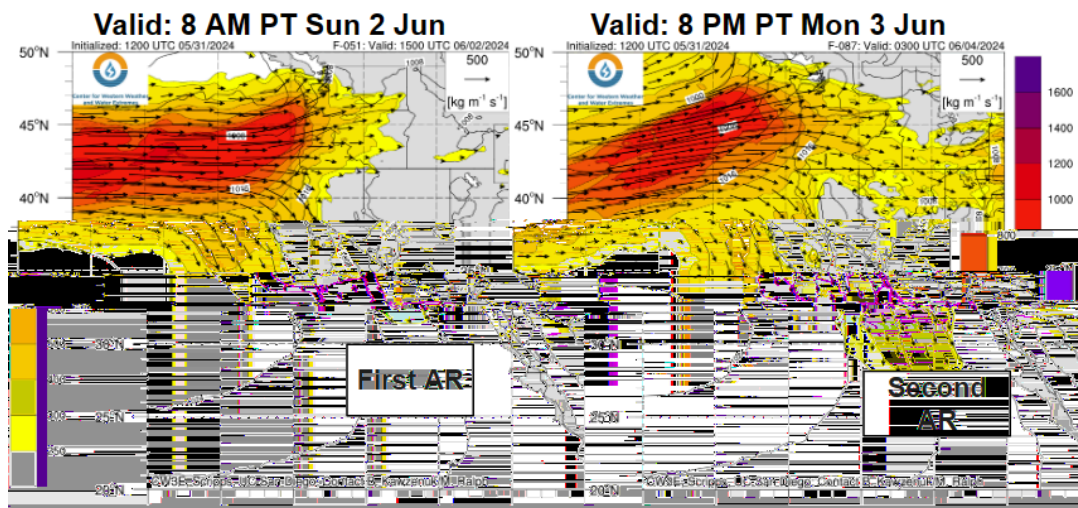
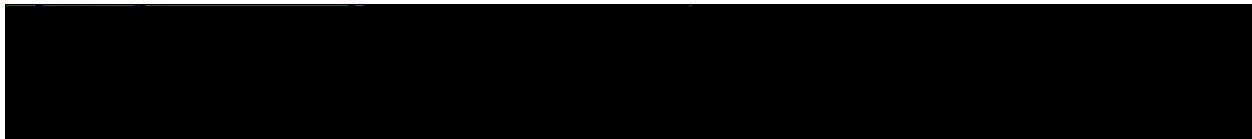
A strong atmospheric river is forecast to make landfall over the Pacific Northwest and bring heavy rainfall and potential for flooding to the region.

Forecast Highlights:

- CW3E's atmospheric river (AR) landfall tool is showing a very high likelihood (near 100% probability) of landfalling AR activity over the Pacific Northwest and Northern California beginning Sun 2 Jun and continuing through early next week.
- This AR family is forecast to develop in the Central Pacific alongside a pair of surface cyclones and mid-level shortwaves and progress over the Northeast Pacific toward the US West Coast over the next several days alongside high levels of Integrated Water Vapor (40+ mm).
- The Global Ensemble Forecast System (GEFS) is forecasting AR3-4 conditions over coastal Oregon and AR2-3 conditions over coastal Washington and coastal Northern California. A majority of GEFS members are forecasting Integrated Vapor Transport magnitudes to remain above 250 UNITs through both AR landfalls in coastal central Oregon, resulting in a long-duration AR event (> 48 hours) and a higher ranking on the AR Scale.
- A climatology of ARs (1959-2023) indicates there are typically 1-2 landfalling ARs per year during June in central Oregon (45°N, 124°W). Should the forecast AR4 verify, it would be only the **fifth** AR4+ at this location **since 1959**.
- The Weather Prediction Center (WPC) is forecasting at least 2 to 5 inches of precipitation over the Olympic Peninsula, Washington/Oregon coasts and Cascades for the 72-hour period ending 5 AM Wednesday 5 Jun.
- WPC has issued a marginal risk (level 1 of 4) for flooding in the Excessive Rainfall Outlook (ERO) over western Washington and portions of western Oregon for the 24-hour periods ending 5 AM PT Mon 3 Jun and 5 AM PT Tue 4 Jun.
- The greatest hydrologic impacts are expected on the western side of the Washington Cascades. The NWRFC is currently forecasting one station above minor flood stage (along the Snoqualmie) and 8 stations above action/bankfull stage (all in Washington) as a result of the precipitation forecast with this event.
- Given that freezing levels are forecast to remain elevated throughout the duration of the event, it is likely that all the precipitation associated with the atmospheric river will fall as rain. This presents the opportunity for greater amounts of runoff and in turn increases the risk of flooding.

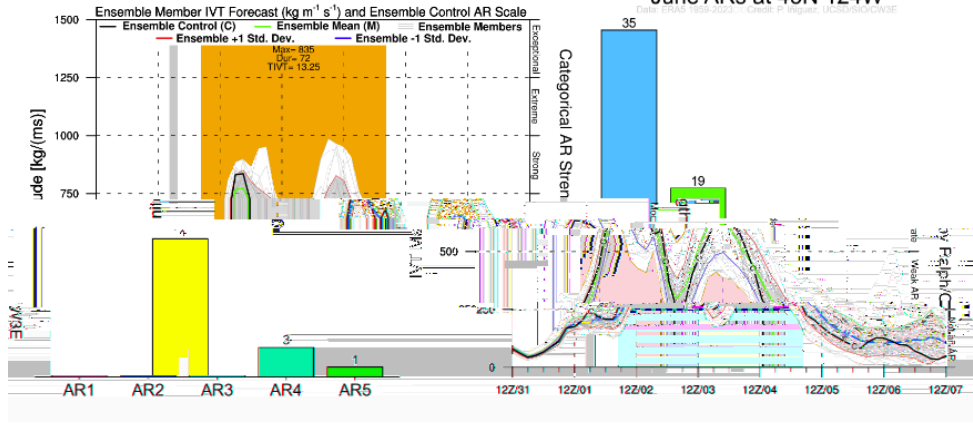
Stay alert to official NWS forecasts, watches, and warnings at [weather.gov](https://www.weather.gov) and follow guidance from local emergency management officials

Stay tuned to the CW3E webpage for a full AR Update

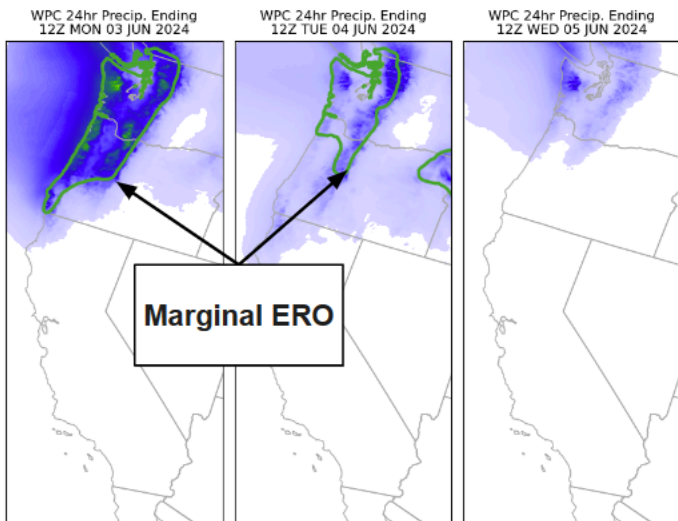


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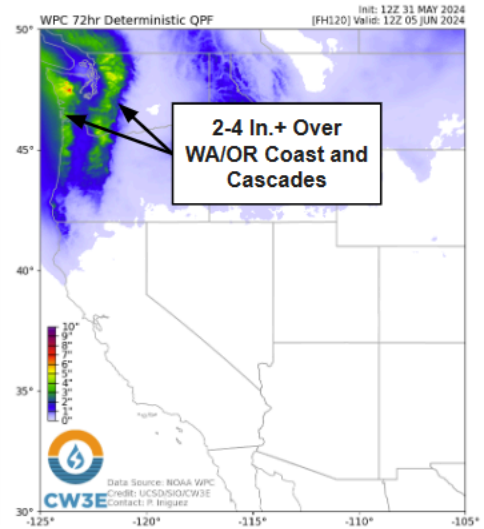
GFS Ensemble Initialized: 12Z Fri 05/31/24



WPC Days 3-5 QPF: Periods Ending 5 AM PT 3-5 Jun

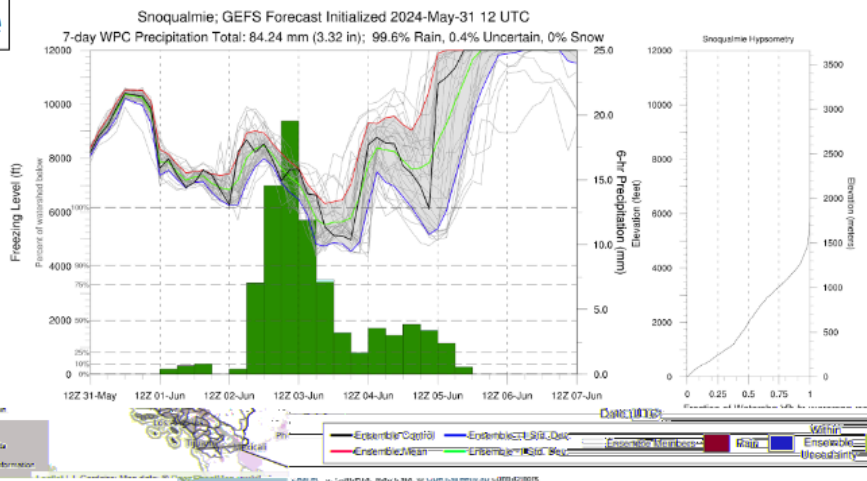
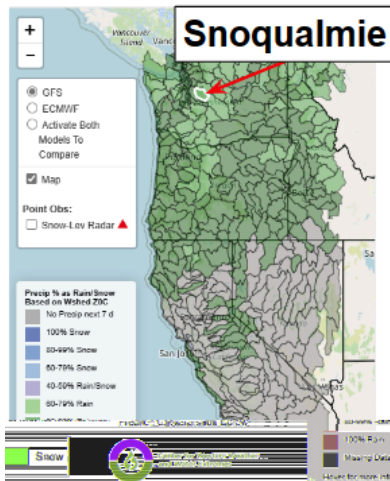
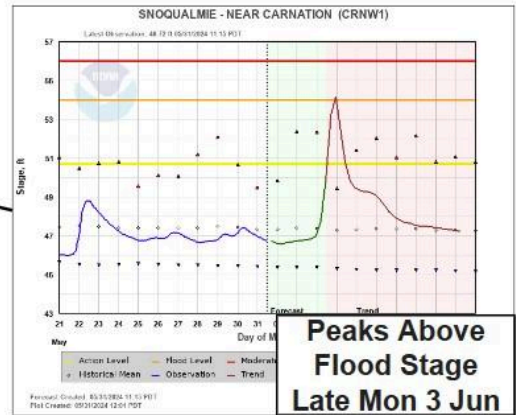
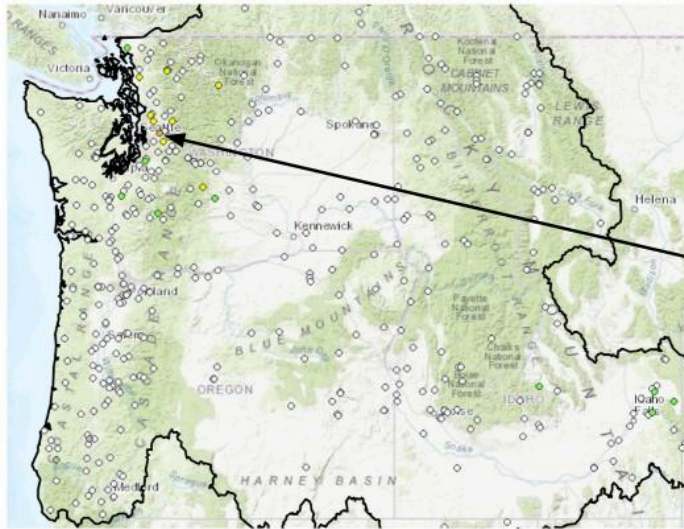


WPC 3-Day QPF: Period Ending 5 AM PT Wed 5 Jun



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NWRFC Forecast River Forecast River Stage



Additional Considerations:

- Visit <https://www.nwrfc.noaa.gov/> and <https://cnrfc.noaa.gov/> for specific river and stream forecasts and <https://www.weather.gov/> for point specific watches, warnings, and forecasts.

In-depth AR forecasts products can be found here:

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

Update by M. Steen

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