



## **Latest Update on Atmospheric Rivers Forecast to Impact the U.S. West Coast**

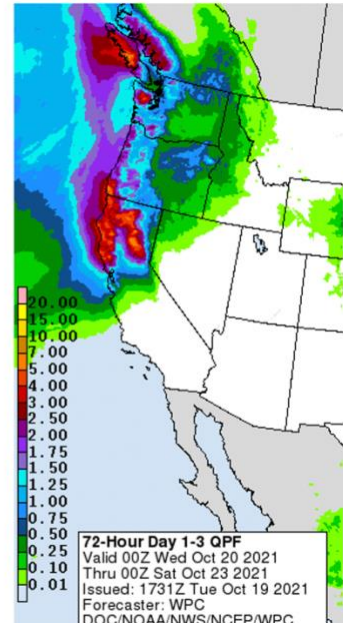
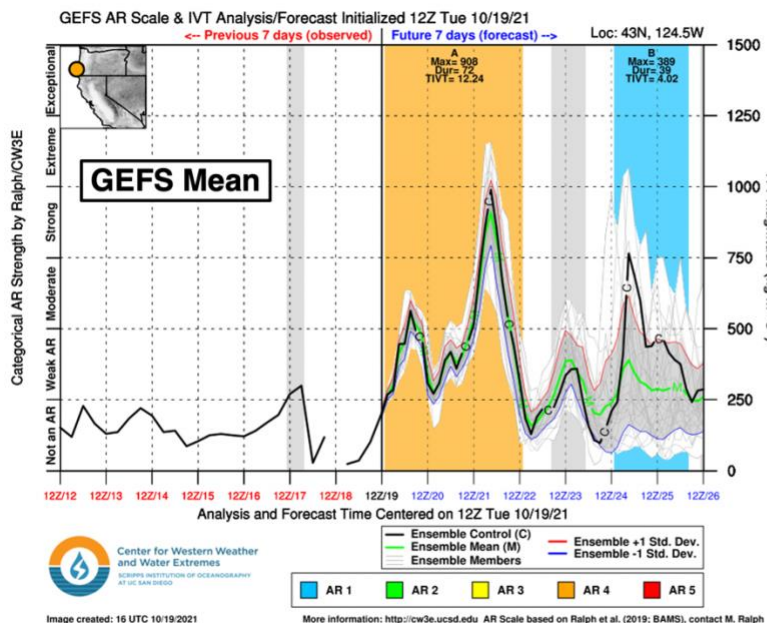
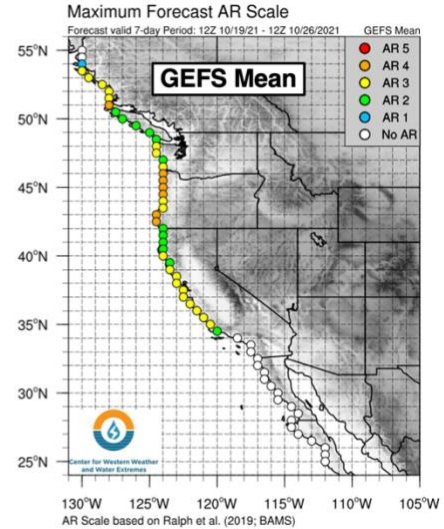
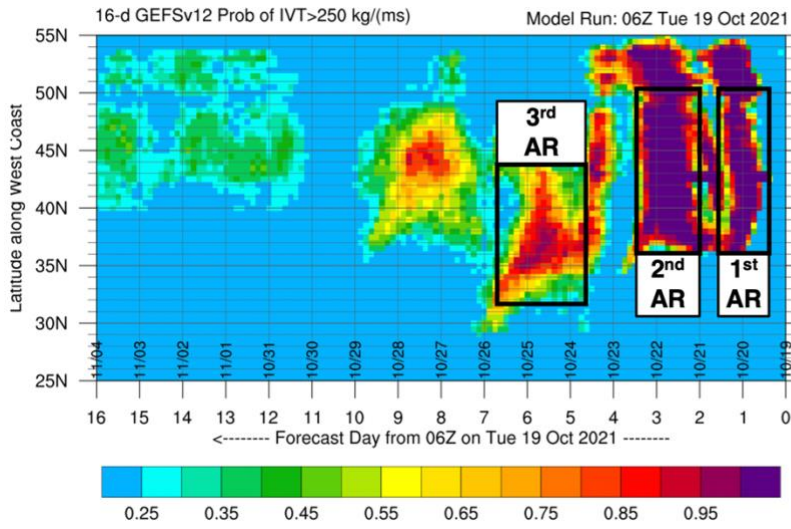
*Updated: 19 October 2021*

A quick look at the atmospheric rivers that are forecast to impact the U.S. West Coast this week.

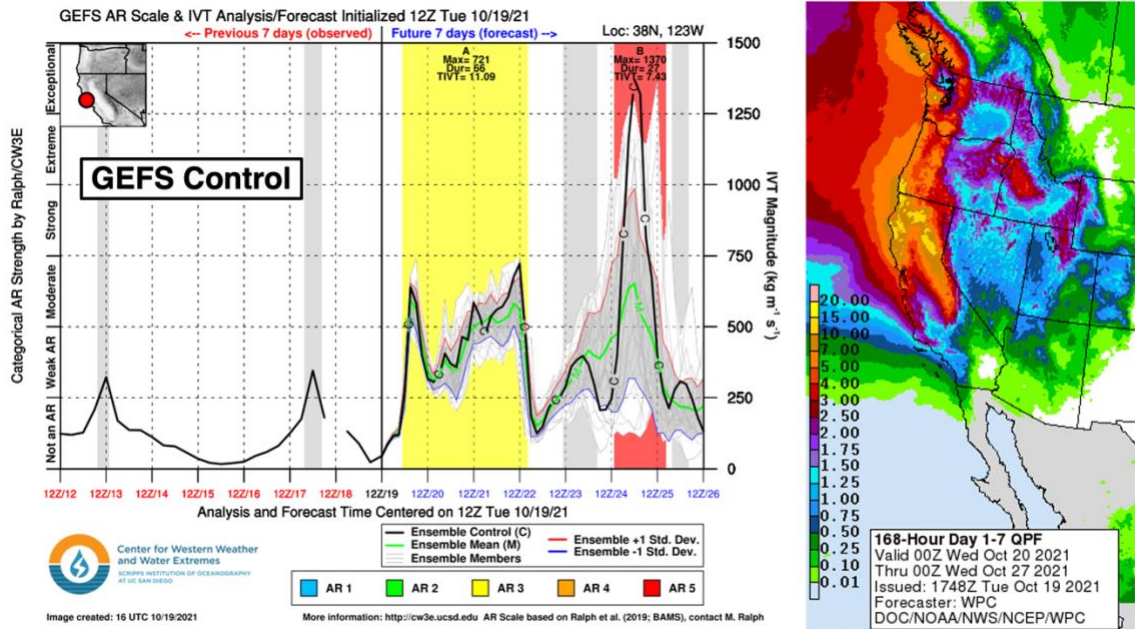
### Forecast Highlights:

- Current forecast models are indicating that multiple strong ARs will make landfall along the U.S. West Coast over the next 7 days.
- The Global Ensemble Forecast System (GEFS) is showing very high probabilities (> 95%) of AR conditions ( $IVT \geq 250 \text{ kg m}^{-1} \text{ s}^{-1}$ ) between Central California and Washington in association with the first two ARs.
- Some locations in coastal Oregon and coastal Northern California may not experience a break in AR conditions between the first and second ARs.
- The 12Z GEFS control and ensemble mean are both forecasting AR4 conditions (based on the Ralph et al. 2019 AR Scale) at  $43^\circ\text{N}$ ,  $124.5^\circ\text{W}$  (southwestern Oregon) due to the combination of maximum IVT magnitude ( $> 750 \text{ kg m}^{-1} \text{ s}^{-1}$ ) and AR duration ( $> 48$  hours).
- AR 2/AR 3 conditions are expected elsewhere between the San Francisco Bay Area and the Olympic Peninsula.
- The first two ARs are forecasted to produce at least 2–5 inches of precipitation in the Northern California and Southern Oregon Coast Ranges, the Klamath Mountains, and the Northern Sierra Nevada.
- There is increasing forecast confidence in the likelihood of a major AR impacting much of California during 23–25 Oct.
- The 12Z GEFS control run is predicting an AR 5 in the vicinity of the San Francisco Bay Area in association with the third AR, but there is considerable uncertainty in the maximum IVT magnitude and duration of AR conditions.
- As much as 10–15 inches of total precipitation are possible over the next 7 days in Northern California, with a significant portion of this precipitation expected during the third AR.
- While the specific hydrologic impacts of these ARs are not clear at the moment (especially from the third AR due to longer forecast lead times), these ARs are likely to provide some much-needed relief to areas experiencing extreme long-term drought.

**Stay tuned to the CW3E webpage for a full AR Update**



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Additional Considerations:

- Visit <https://nwrfc.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/>

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