



## Latest Update on Active Weather Pattern Over California

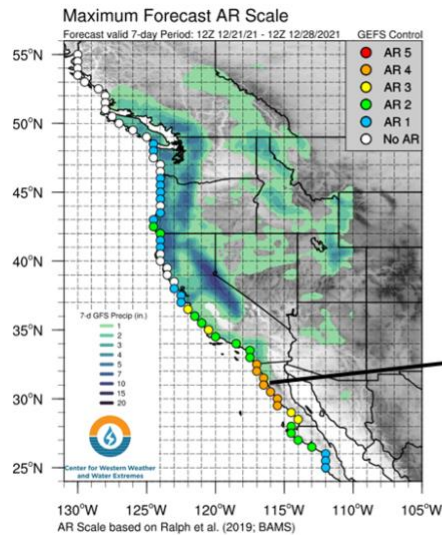
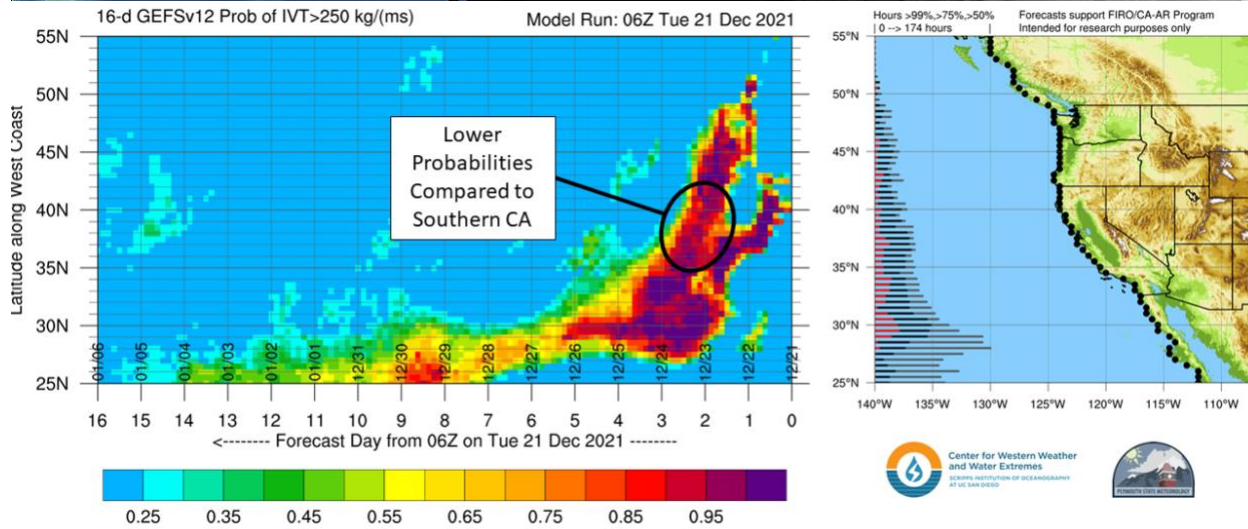
*Updated: 21 December 2021*

A quick look at the complex forecast of AR activity and subsequent storms that are forecast to bring substantial snowfall to the Sierra Nevada and upwards of 5 inches of liquid precipitation to the California Coast.

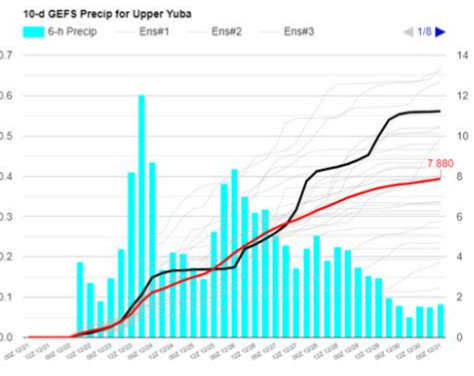
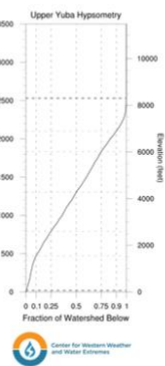
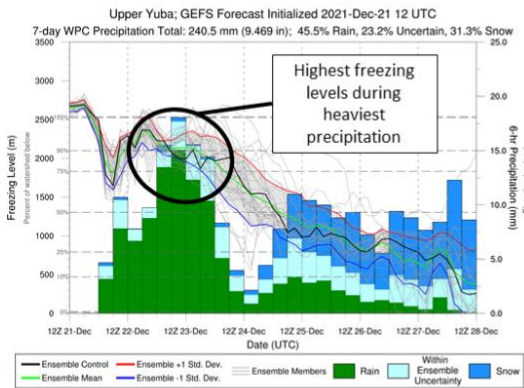
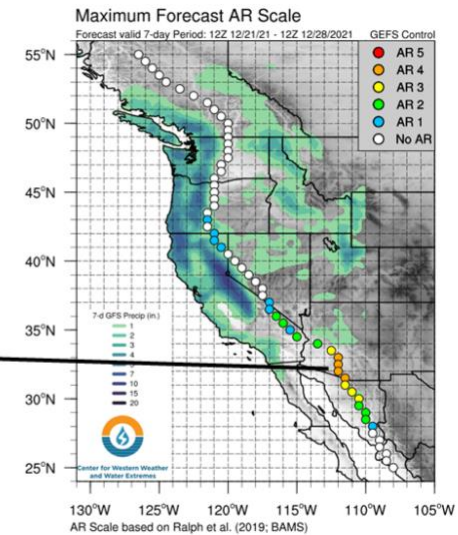
### Forecast Highlights:

- Multiple upper-level systems are still forecast to interact with a region of very moist air in the subtropical East Pacific, bringing AR activity to the western US today through Christmas Eve. Multiple pulses of enhanced integrated water vapor transport of different magnitudes are forecast over California during this period.
- The GEFS landfall tool has continued to increase the probability of AR conditions (IVT >250 kg/ms) over a majority of the US West Coast, though there are lower probabilities (<90%) over Central and Northern California compared to other locations.
- The GEFS is currently forecasting AR 1 to 2 conditions over coastal locations from Washington to Central California (~Monterey Bay).
- The AR is still forecast to strengthen substantially over Central and Southern California, where AR 2 to 3 conditions are forecast.
- The GEFS is currently forecasting AR 4 conditions over the Baja Peninsula, where lower elevations will allow for the inland penetration of the AR into the southwestern US. AR 4 conditions are currently forecasted over south-central Arizona.
- After the AR moves inland, multiple upper-level shortwave troughs are forecast to approach the US West Coast and bring additional precipitation to Northern California.
- Freezing levels over the Upper Yuba watershed are forecast by the GEFS to lower from ~8,000 feet at the beginning of the event to ~2,000 feet by the end of the week, resulting in a prolonged period of snowfall throughout a large portion of the watershed. Several feet of snow are forecast to fall in the higher elevations of the Northern and Central Sierra Nevada.
- The GEFS mean is currently forecasting 7.9 inches of mean areal precipitation over the Upper Yuba watershed during the next 10 days, about 1 inch lower than yesterday's forecast.

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



Inland Penetration over Baja Peninsula to Southern AZ



Stay tuned to the CW3E webpage for a full AR Update



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/>

Update provided by C. Hecht

[checht@ucsd.edu](mailto:checht@ucsd.edu)

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