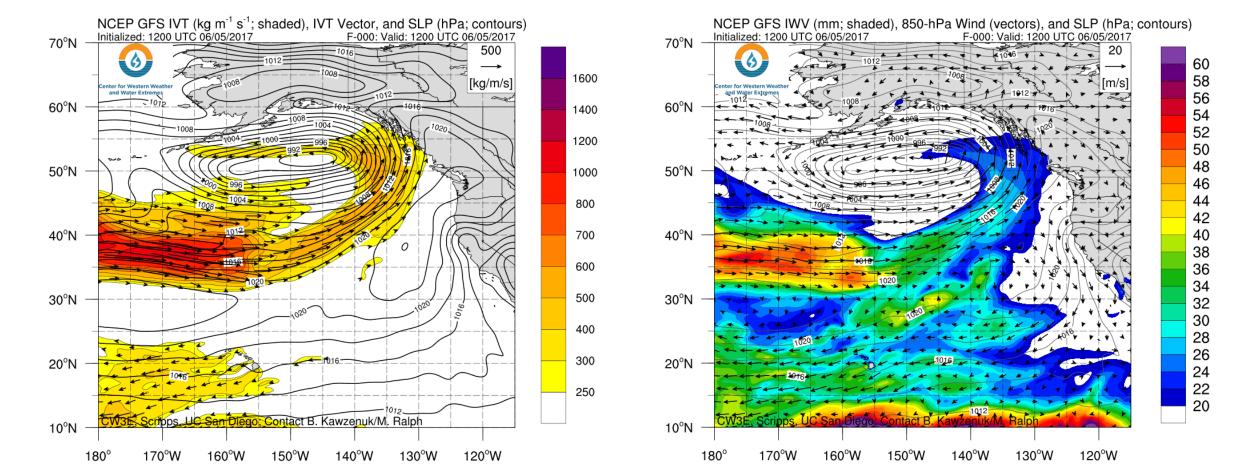
CW3E Atmospheric River Update

Center for Western Weather and Water Extremes SCRIPPS INSTITUTION OF OCEANOGRAPHY AT UC SAN DIEGO

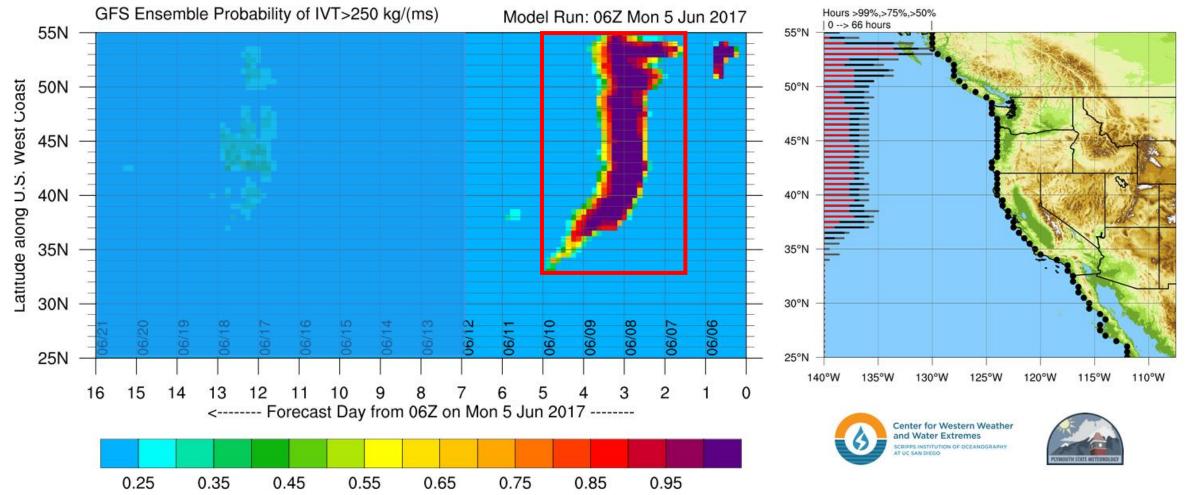
Late Season AR Forecast to Impact West Coast

- An unseasonably strong AR is forecast to impact the Pacific Northwest and Northern CA over the next couple of days
- As much as 4.1 inches of precipitation is forecast to fall over the higher elevations of the Coastal Mountains in CA and OR
- With higher freezing levels forecast during landfall, there is a potential for rain on snow and increased runoff
- Due to the combination of snowmelt and the landfalling AR, several rivers in the Pacific Northwest are forecast to rise above flood stage



For California DWR's AR Program

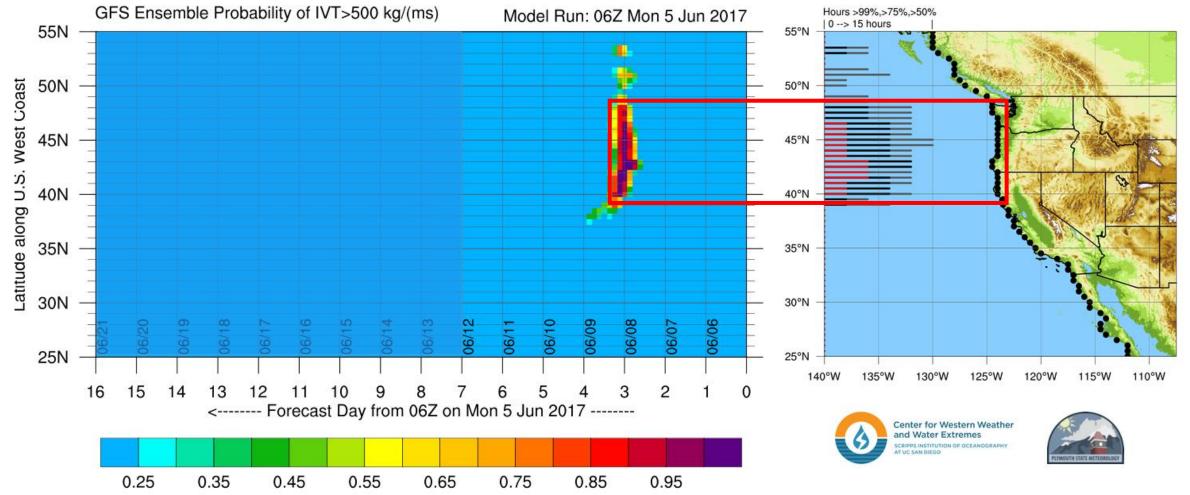




• There is a high probability of AR conditions (IVT >250 kg m $^{-1}$ s $^{-1}$) lasting ~24 hours over coastal locations from British Columbia to as far south as San Francisco

For California DWR's AR Program

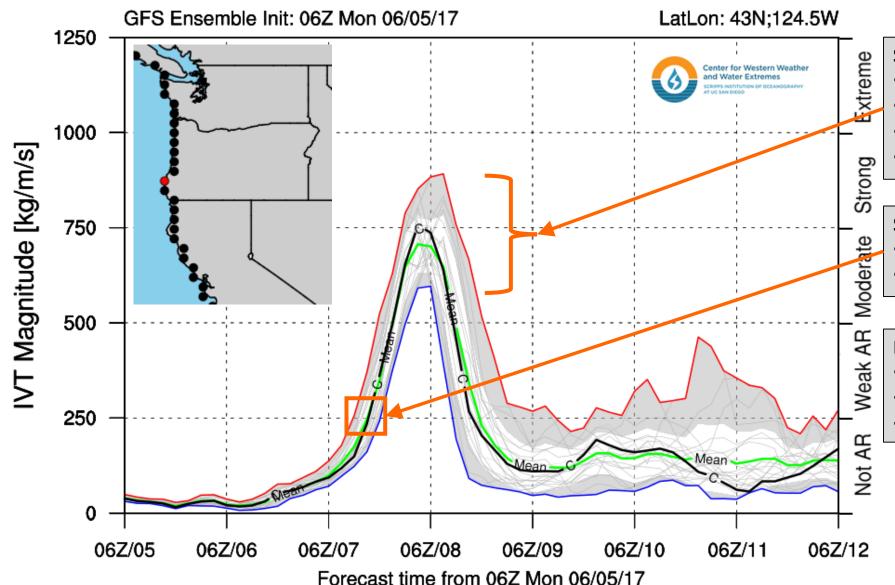




• There is a high probability for a brief period of moderate AR conditions (IVT >500 kg m⁻¹ s⁻¹) over Coastal WA, OR, and Northern CA

For California DWR's AR Program





Southern OR Forecast Magnitude

- Max IVT $\sim 900 \text{ kg m}^{-1} \text{ s}^{-1}$
- Mean IVT \sim 750 kg m⁻¹ s⁻¹
- Min. IVT $\sim 600 \text{ kg m}^{-1} \text{ s}^{-1}$
- Uncertainty ~ +/- 20%

Start Time of first AR conditions

- 4 AM Wednesday 7 June
- High confidence +/-3 h

Duration of AR conditions

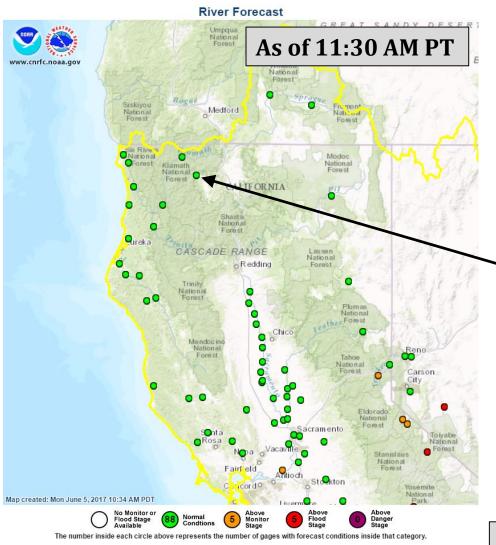
- Weak: ~24 hours
- Moderate: $^{\sim}12$ hours +/-6 h
- Strong: \sim 6 hours +/-6 h

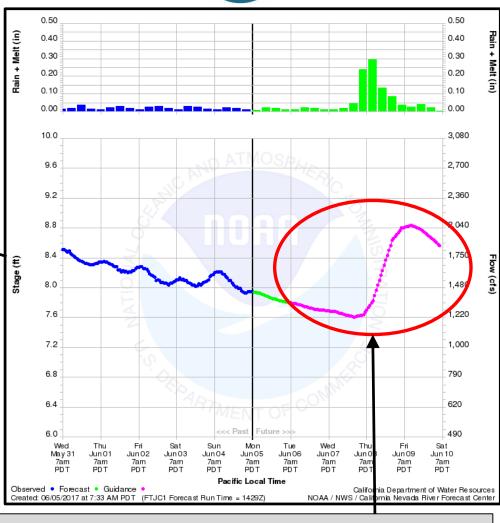
For California DWR's AR Program



While there is the potential for rain on snow, there are currently no rivers forecast to rise above flood stage in the Trinity Alps and Coastal Ranges of Northern California

For official NOAA-NWS
CNRFC Streamflow
Forecasts see
cnrfc.noaa.gov/rfc_guid
ance.php





While there is currently no flood risk on the rivers of Northwestern CA, Rivers like the Scott River at Fort Jones see a rise in stage beginning at 4 am on 8 June

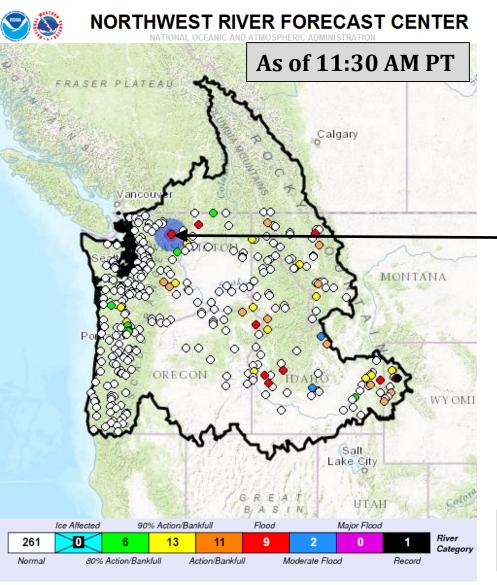
Summary by C. Hecht 1 PM PT Monday 5 June 2017

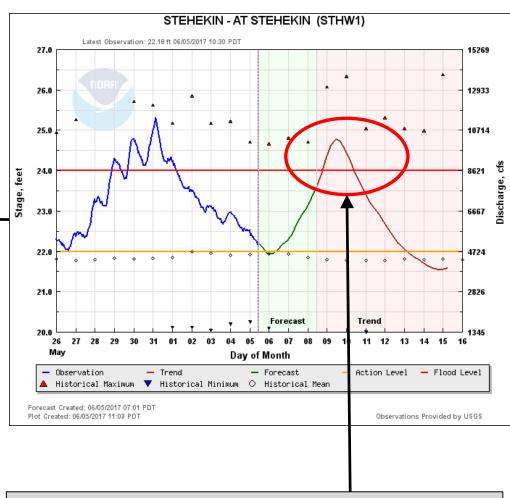
For California DWR's AR Program



Due to the combination of snowmelt and the landfalling AR, there are 11 rivers that are currently or forecast to rise above flood stage by the Northwest River Forecast Center

For official NOAA-NWS
Northwest River
Forecast Center
Streamflow Forecasts
see nwrfc.noaa.gov/rfc/

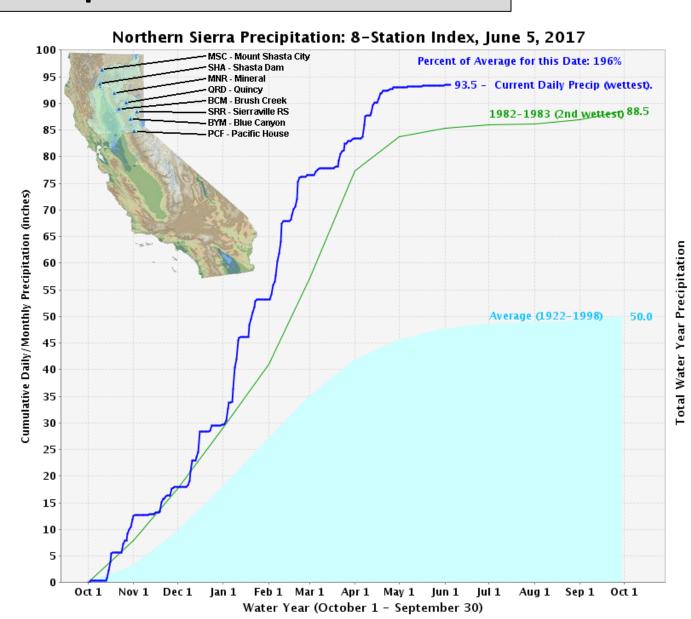




to ~24.75, .75 feet above flood stage, on 9 June 2017

The Stehekin river at Stehekin, WA is forecast to rise





Average (1922-1998) — 1982-1983 (2nd wettest) — 2016-2017 (current and Wettest)

Water year 2017 (1 October 2016 to 31 September 2017) is already the wettest year on record for the Northern Sierra 8-station index, an average of 8 precipitation gauges in Northern California

Any unseasonably late ARs that impact Northern California will continue to contribute to this record breaking water year, which is already 5 inches higher than the second wettest year on record (WY 1983; 88.5 inches)