

CW3E Atmospheric River Outlook

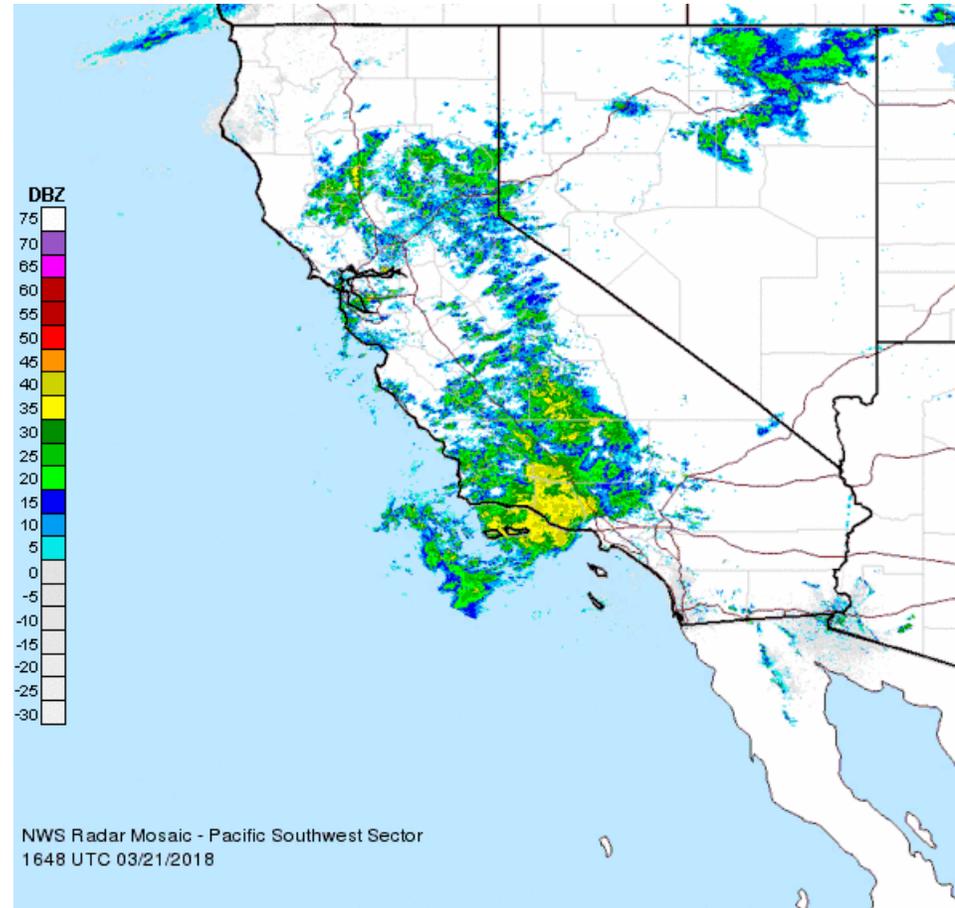


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Update on Atmospheric River Forecast to Impact California This Week

- Light to moderate precipitation has begun falling over portions of California
- GFS Ensemble members have continued to converge on coastal IVT forecast for the remainder of the AR
- Portions of Southern California are forecast to experience Strong AR conditions between 2 and 5 AM on Thursday 22 March
- ~1 – 2 inches of precipitation has fallen over the Santa Ynez Mountains over the past 24 hours
- An additional 10+ inches of precipitation are forecast to fall over the higher elevations of Santa Barbara and Ventura Counties during the remainder of this AR



AR Outlook: 21 March 2018

For California DWR's AR Program



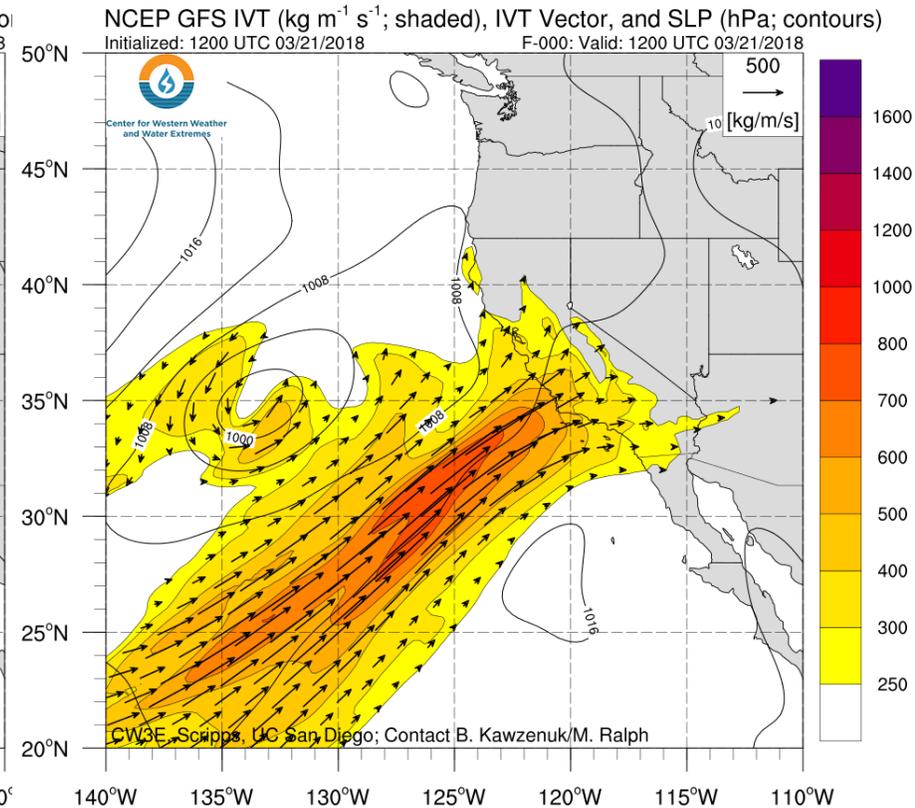
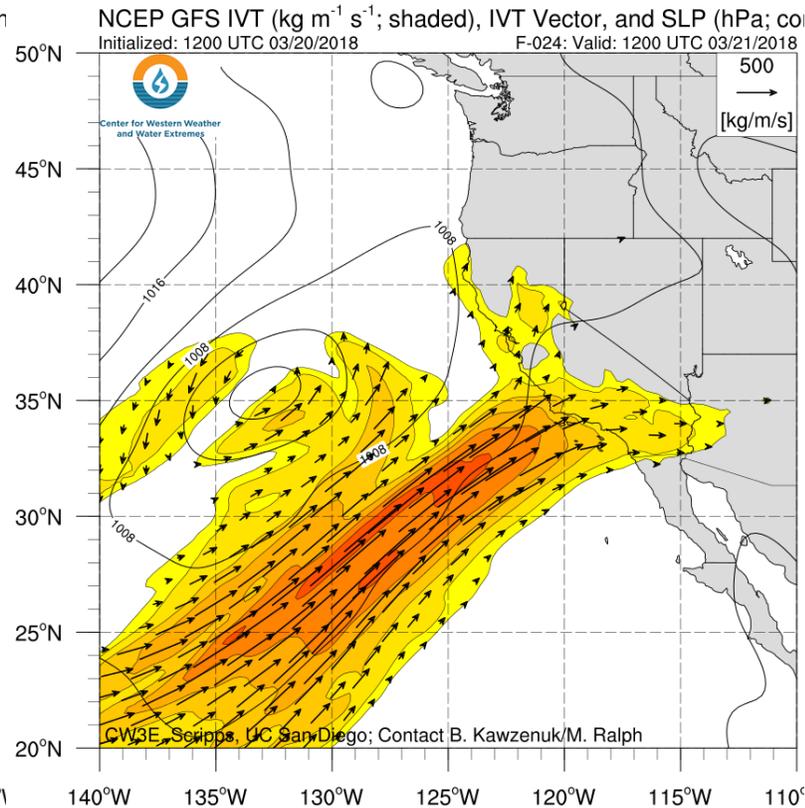
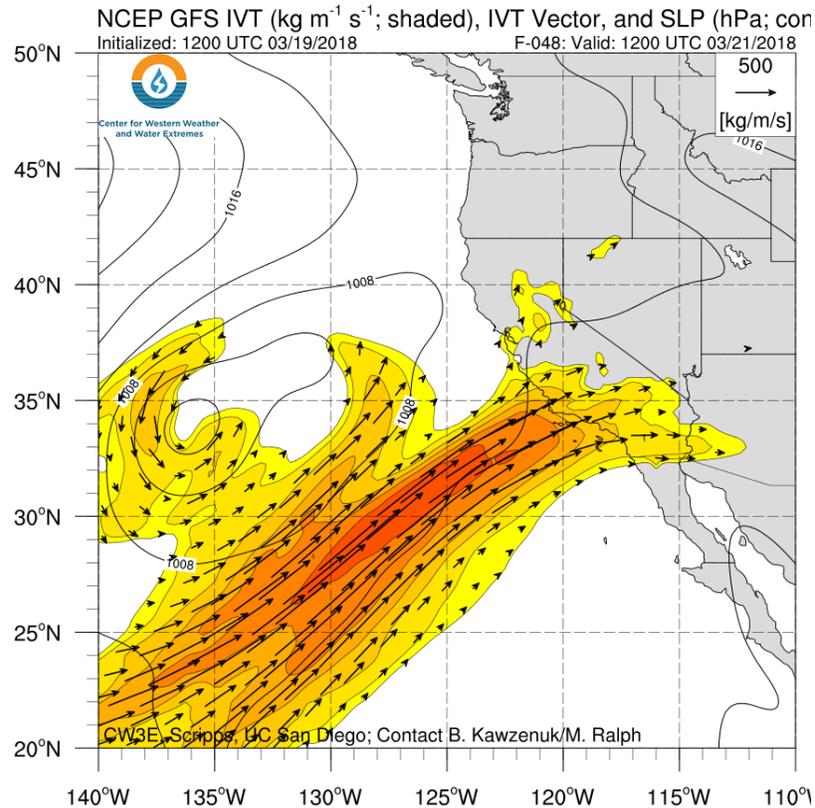
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Model Forecast Compared to Analysis

48-hr Forecast Initialized 12Z 19 March

24-hr Forecast Initialized 12Z 20 March

Analysis Initialized 12Z 20 March



- Compared to the GFS Analysis from today's (12Z 21 March) run, the 24 hour forecasts had the core of the AR further south
- The orientation of IVT over the coast is also more southwesterly than was forecast 24 and 48 hours out, which exhibited a more westerly IVT component.

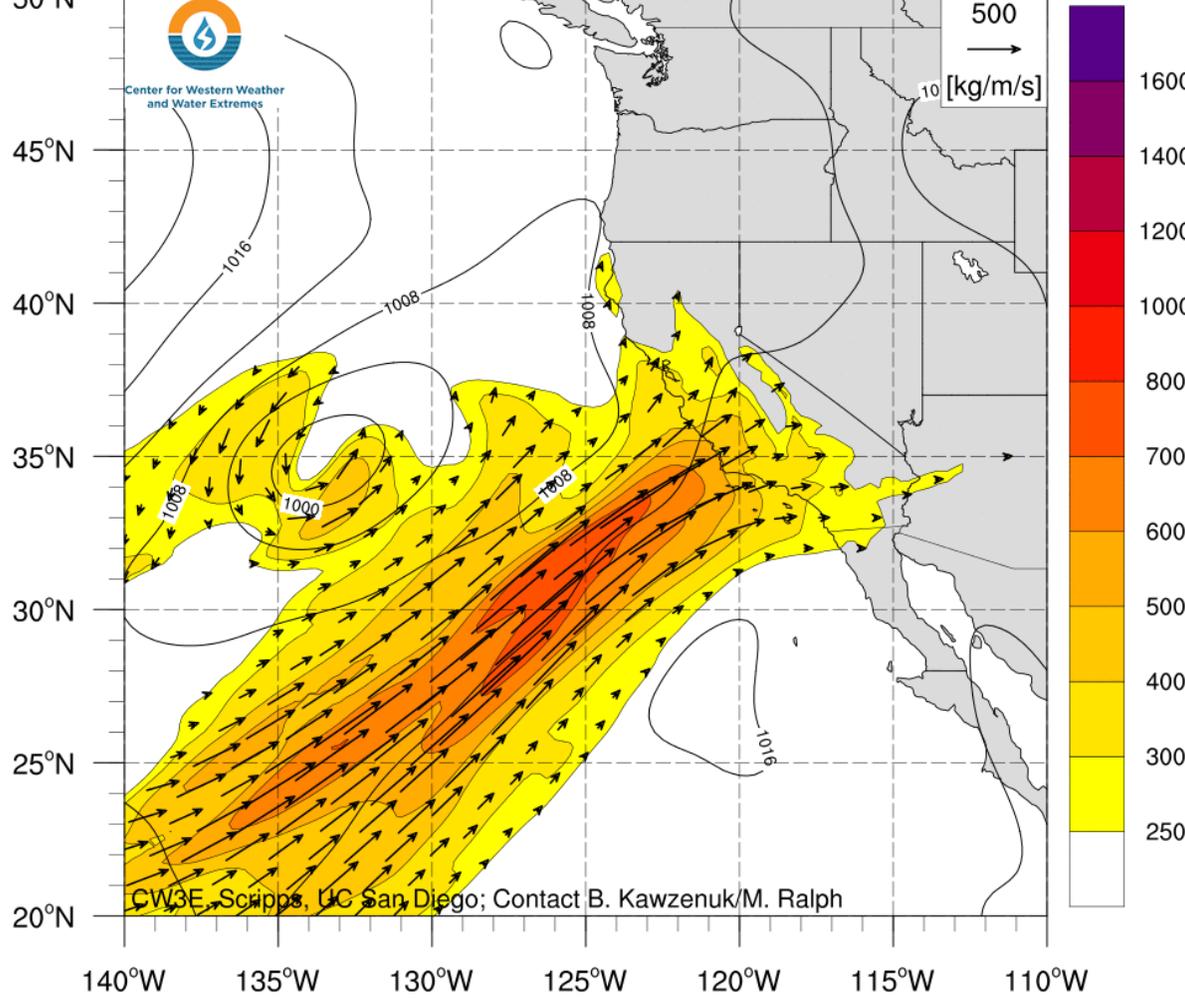
AR Outlook: 21 March 2018



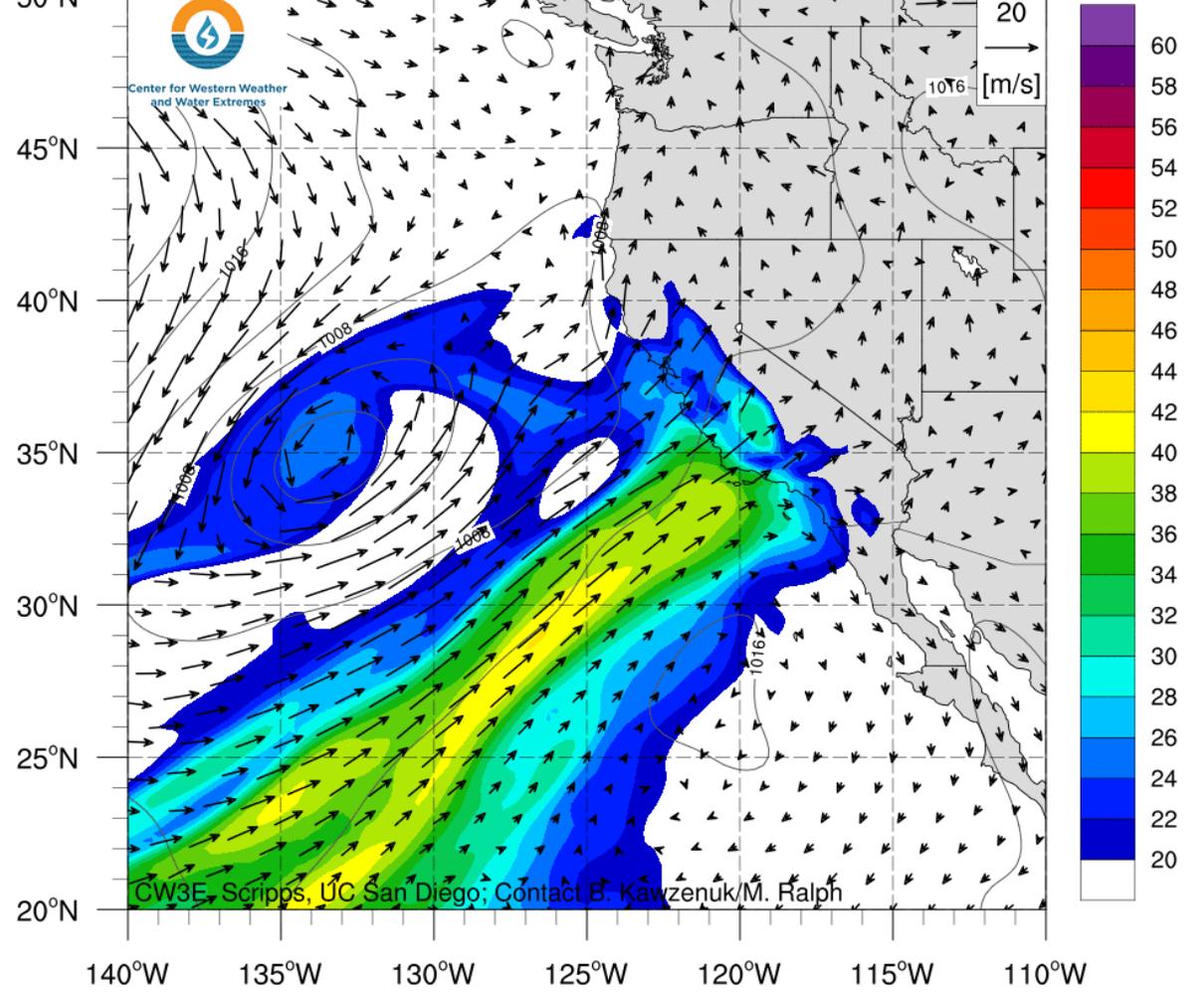
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NCEP GFS IVT ($\text{kg m}^{-1} \text{s}^{-1}$; shaded), IVT Vector, and SLP (hPa; contours)
Initialized: 1200 UTC 03/21/2018 F-000: Valid: 1200 UTC 03/21/2018

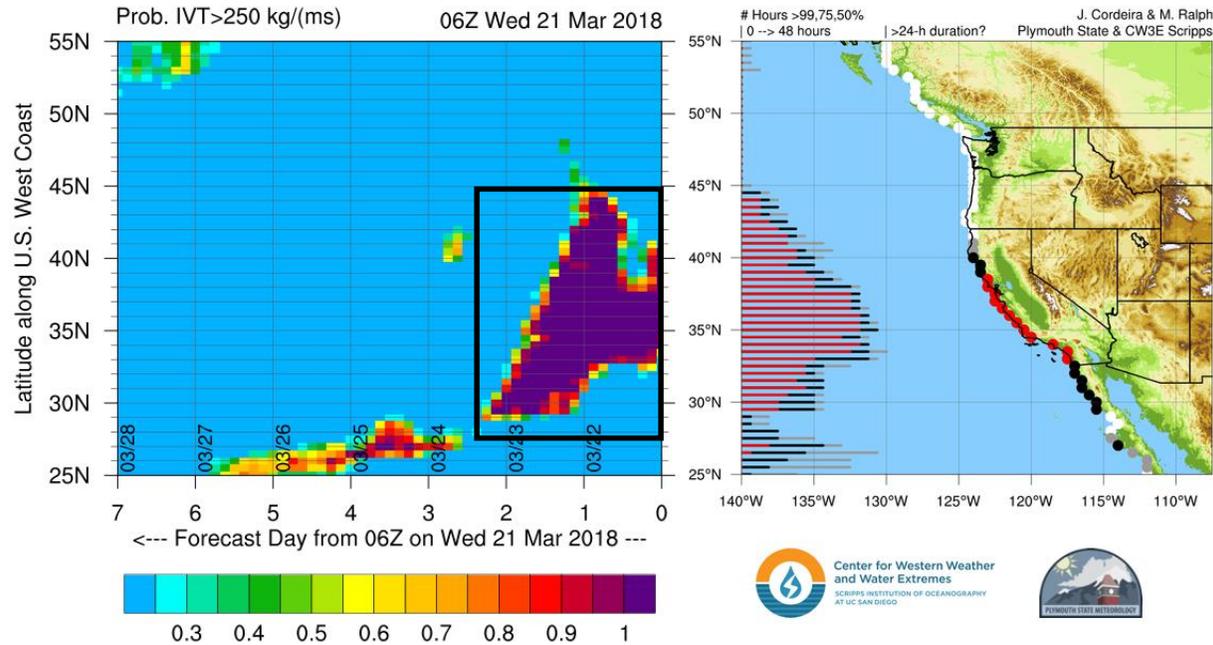


NCEP GFS IWV (mm; shaded), 850-hPa Wind (vectors), and SLP (hPa; contours)
Initialized: 1200 UTC 03/21/2018 F-000: Valid: 1200 UTC 03/21/2018

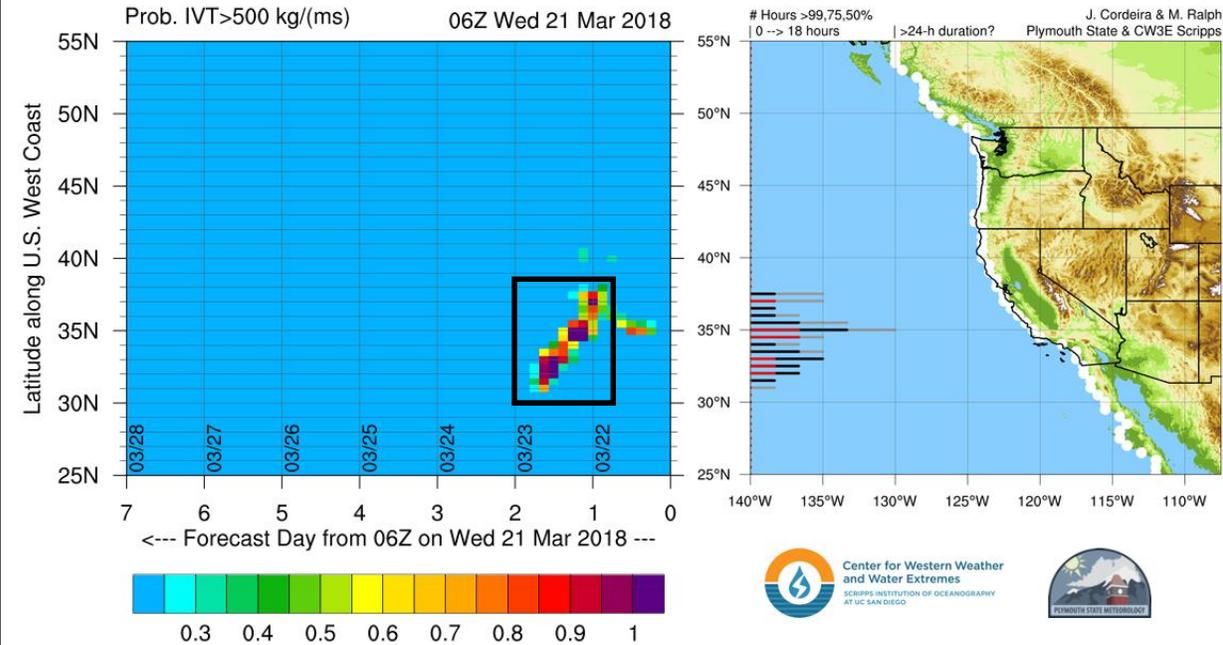




Odds of at least a **WEAK** AR making landfall



Odds of **Moderate** AR making landfall



- There is a high probability (95–100%) of AR conditions ($IVT > 250 \text{ kg m}^{-1} \text{ s}^{-1}$) lasting for >36 hours between 33 and 37°N

- There is a high probability of moderate strength AR conditions ($IVT > 500 \text{ kg m}^{-1} \text{ s}^{-1}$) for coastal locations extending from 36 to 32°N lasting 3 to 6 hours

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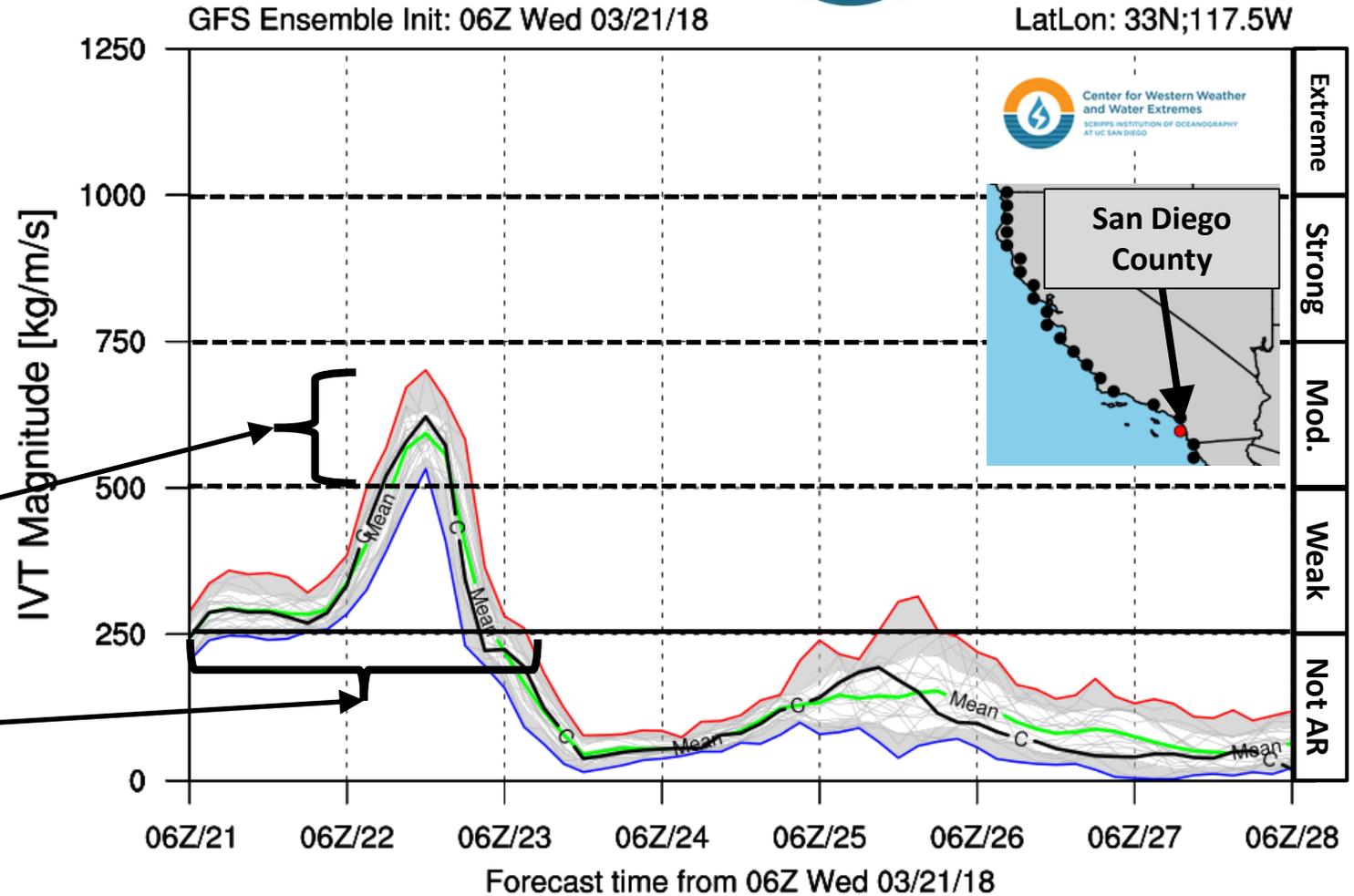
There has been little change in the GFS Ensemble forecast of IVT over coastal San Diego County compared to Yesterday's Outlook

AR conditions were forecast to begin early this morning and peak ~11 AM PDT Thursday 22 March 2018

Magnitude of Potential AR

- Maximum predicted IVT $\sim 700 \text{ kg m}^{-1} \text{ s}^{-1}$
- Mean IVT $\sim 625 \text{ kg m}^{-1} \text{ s}^{-1}$
- Minimum IVT $\sim 525 \text{ kg m}^{-1} \text{ s}^{-1}$

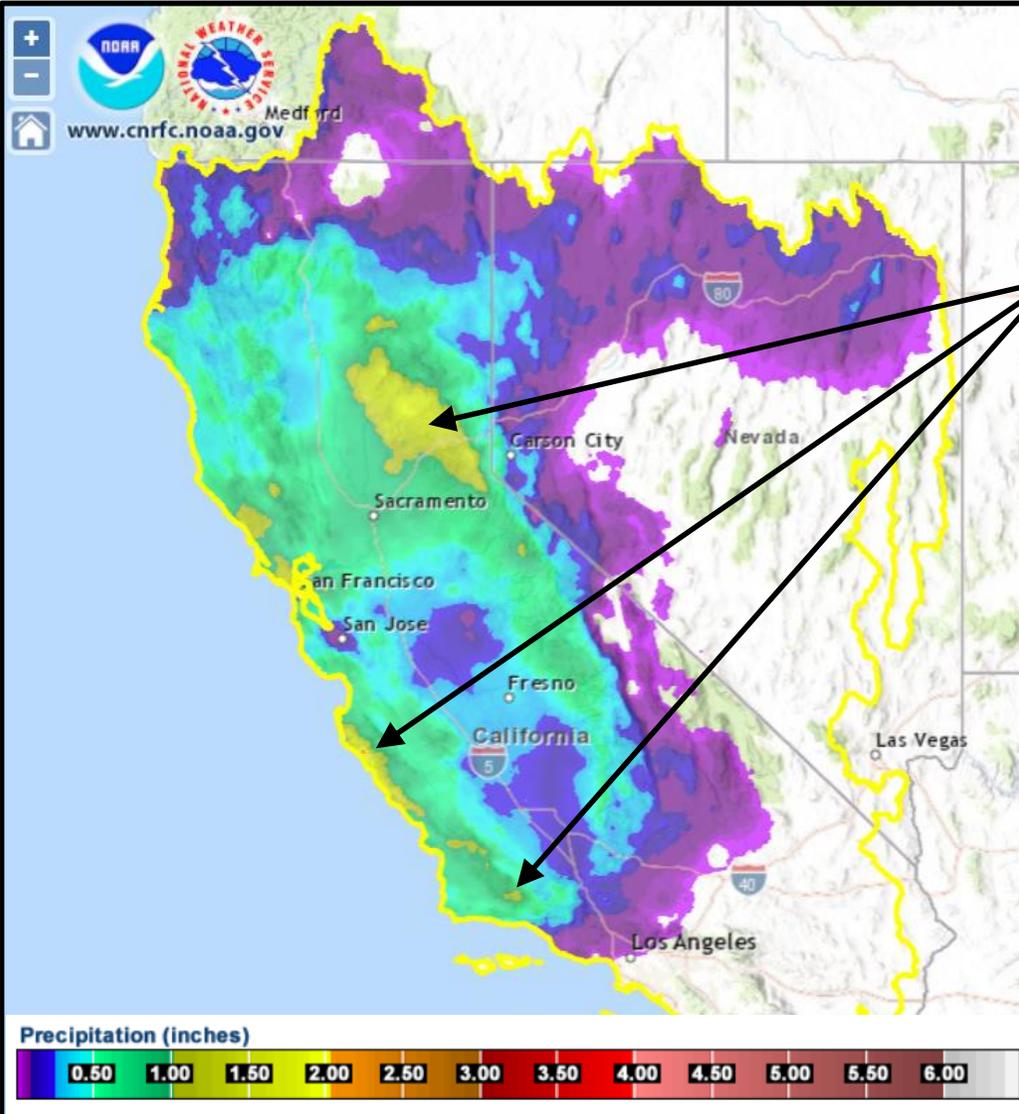
AR conditions are forecast to last until 8 PM (+/- 3 hours) on Thursday



AR Outlook: 21 March 2018

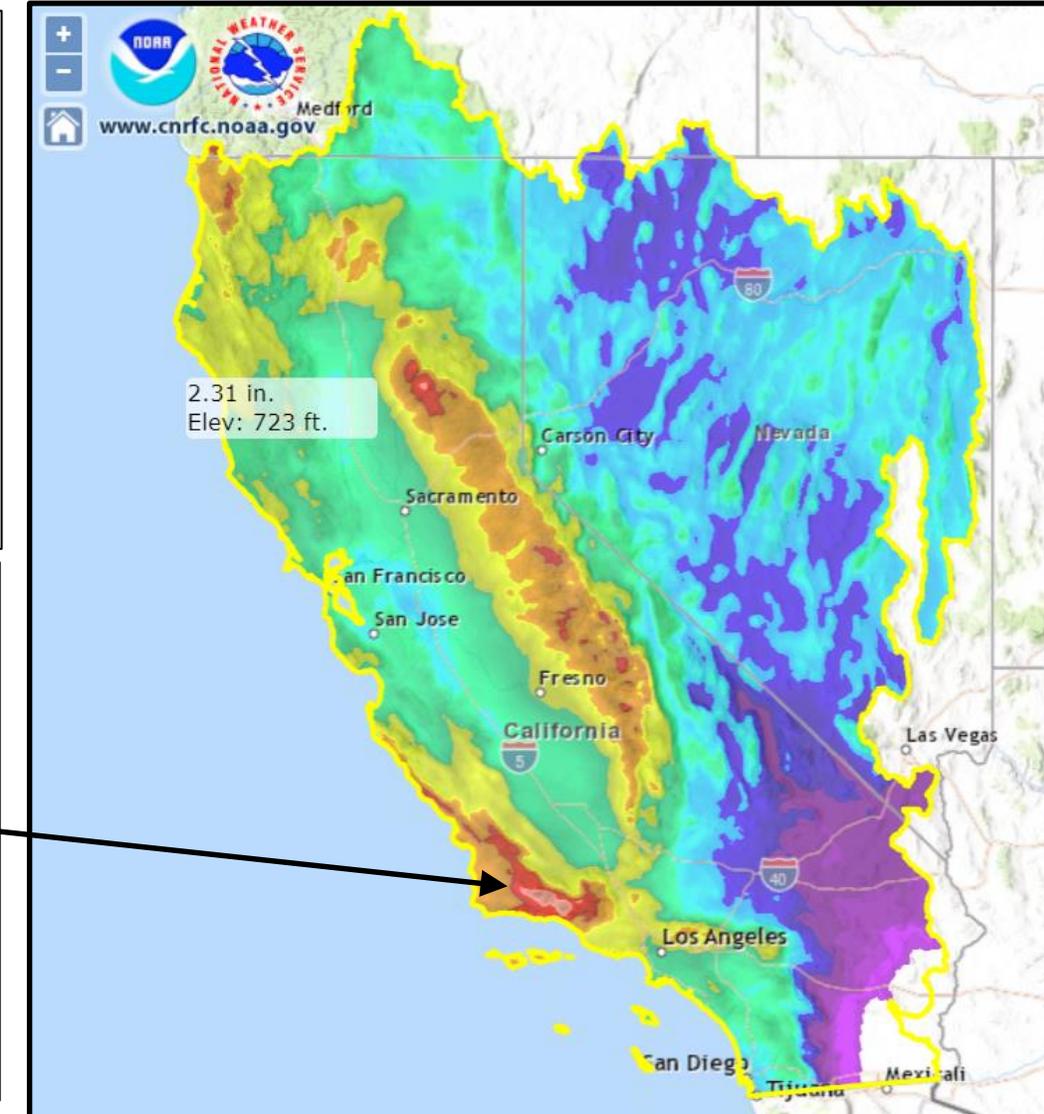


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1-2 in. of precip. has fallen over the higher elevations of the Coastal, Santa Ynez, and Northern Sierra Nevada Mts. over the past 24 hrs

An additional 10+ inches of precipitation is forecast to fall over the higher elevations in Santa Barbara and Ventura Counties



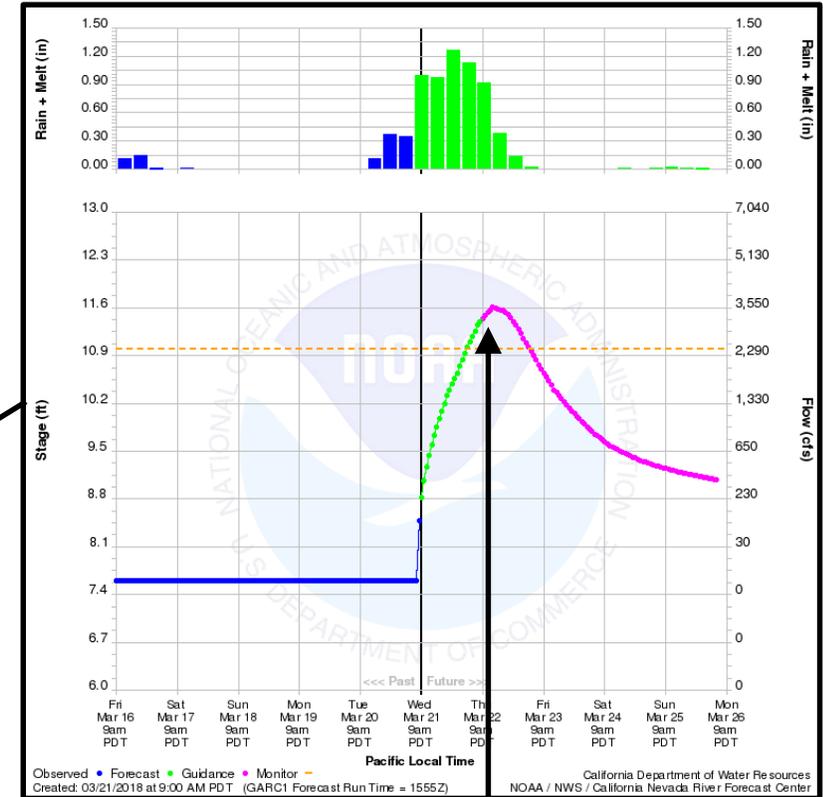
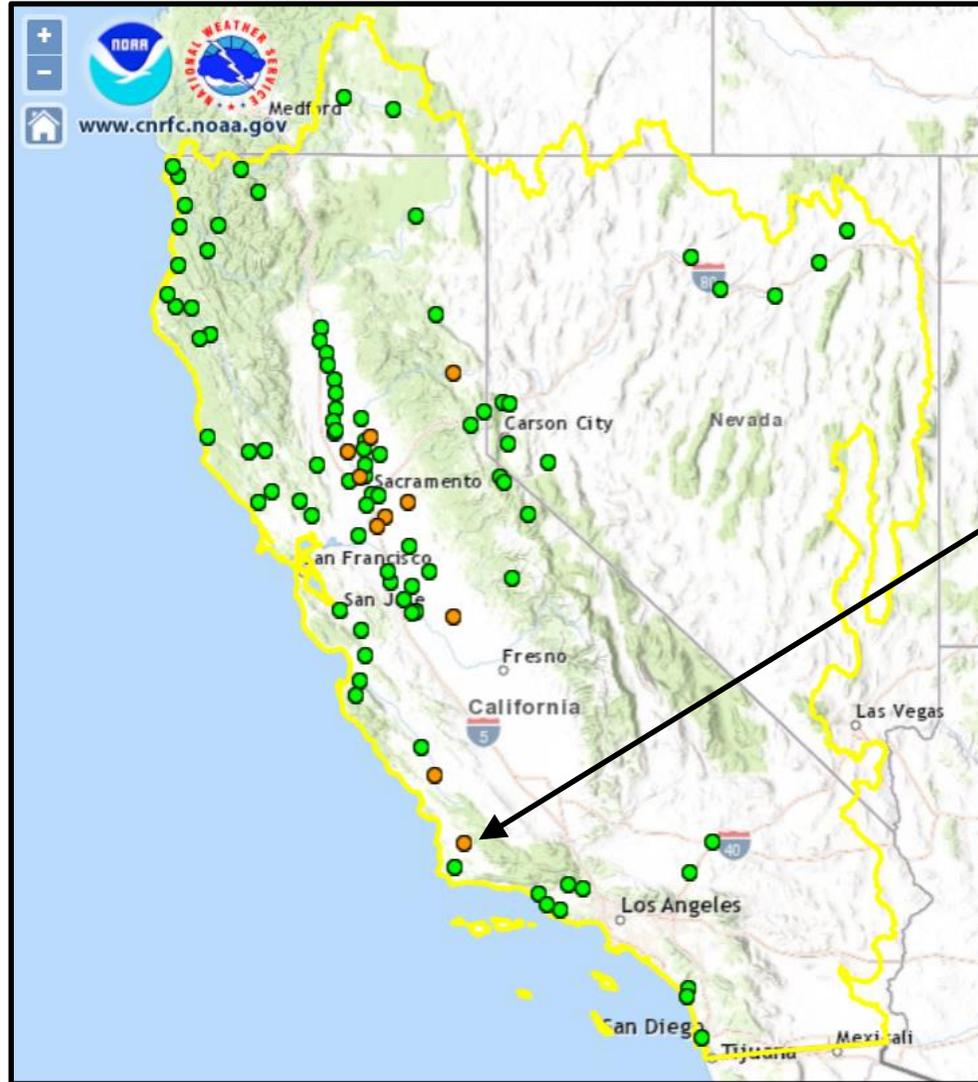
For official CNRFC Products: cnrfc.noaa.gov

AR Outlook: 21 March 2018



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- 10 rivers in California are forecast to rise above monitor stage by the CNRFC, two more than this time yesterday
- A majority of these rivers are in the Central Valley
- While most rivers in SoCal are forecast to see a rise in stage height, only a couple are forecast to rise above monitor stage
- No Rivers are currently forecast to rise above flood stage



The Sisquoc River near Santa Maria is forecast to rise to 11.6 feet at 12 pm PDT on 22 March, ~.6 feet above monitor stage

For official California-Nevada Forecast Center Products:
cnrfc.noaa.gov



Flood Advisory Issued by NWS Los Angeles

Flood Advisory
National Weather Service OXNARD CA
954 AM PDT WED MAR 21 2018

CAC111-211845-
/O.NEW.KLOX.FA.Y.0025.180321T1654Z-180321T1845Z/
/00000.N.ER.000000T0000Z.000000T0000Z.000000T0000Z.00/
Ventura CA-
954 AM PDT WED MAR 21 2018

The National Weather Service in OXNARD has issued a

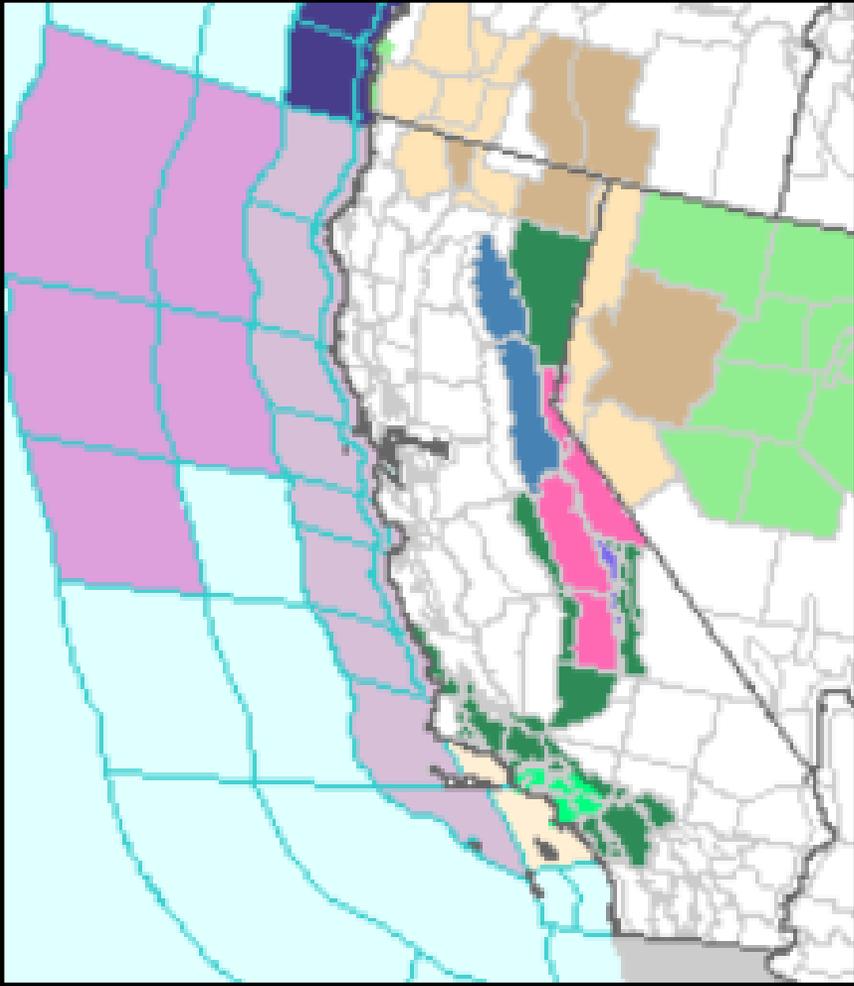
- * Flood Advisory for...
East central Ventura County in southwestern California...
- * Until 1145 AM PDT
- * At 952 AM PDT, Doppler radar and automated rain gauges continue to indicated moderate to locally heavy rain over Ventura and eastern Santa Barbara Counties. Rainfall rates between 0.25 and 0.50 inches have already occurred and will continue through the morning hours. Localized roadway flooding is likely anywhere, motorists should be ready for sudden slow downs and do not cross flooded roadways. Fast runoff is also expected in small creeks creating hazards for hikers.
- * Some locations that will experience flooding include...
Oxnard...
Thousand Oaks...
Simi Valley...
Ventura...
Camarillo...
Port Hueneme...
Point Mugu...
Newbury Park...
Silver Strand Beach...

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Turn around, don't drown when encountering flooded roads. Most flood deaths occur in vehicles.

Numerous Flash Flood
Watches and Winter
Storm Warnings remain
in effect for parts of
California by the
National Weather
Service

A Flood Advisory has
also been issued by
NWS Los Angeles for
several Counties in
Southern California (As
of 10:38 AM)



For localized forecasts and watches/warnings visit
www.weather.gov