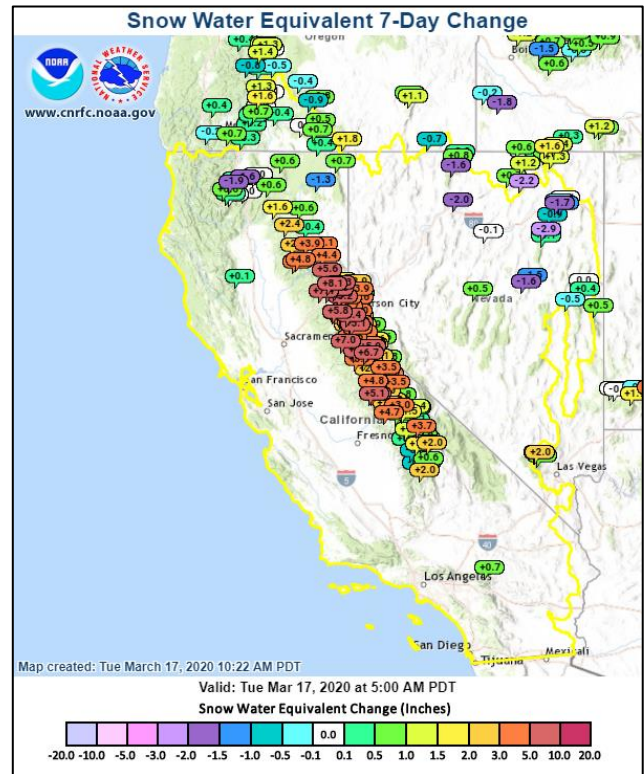
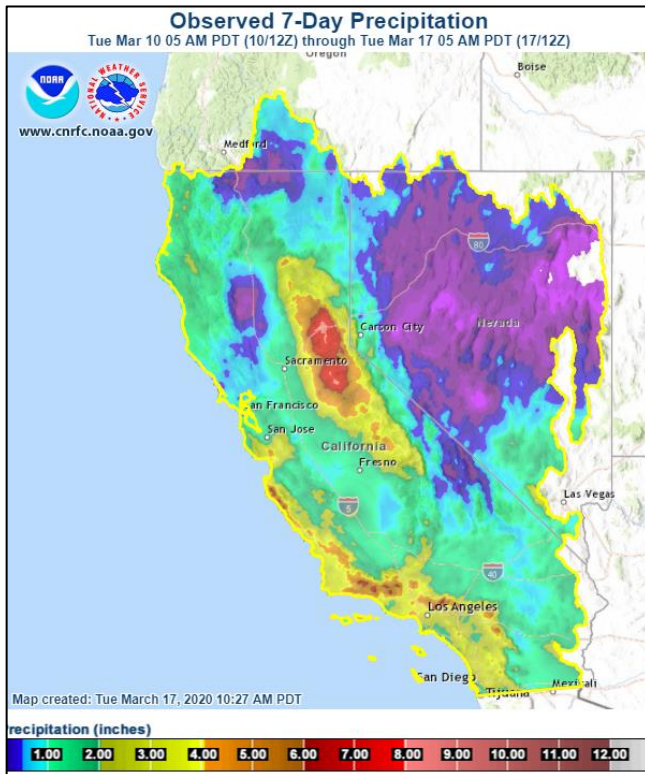


WY2020 Water Resources Update – March 17, 2020

Summary:

- Past 7 days have brought some welcomed precipitation to the region.
- The rest of March looks promising, but uncertainty remains high with a wandering storm track.
- Water Year runoff projections have been increasing steadily the past 8 days.

Details:



After early March storms missed much of the region and slid into Southern California and Baja (March 9-12), this past weekend saw a good soaking for much of the State. This most recent storm stalled nicely over the central part of CA and gave 6-8 inches of water (mostly snow) to basins from the Yuba River to the Stanislaus.

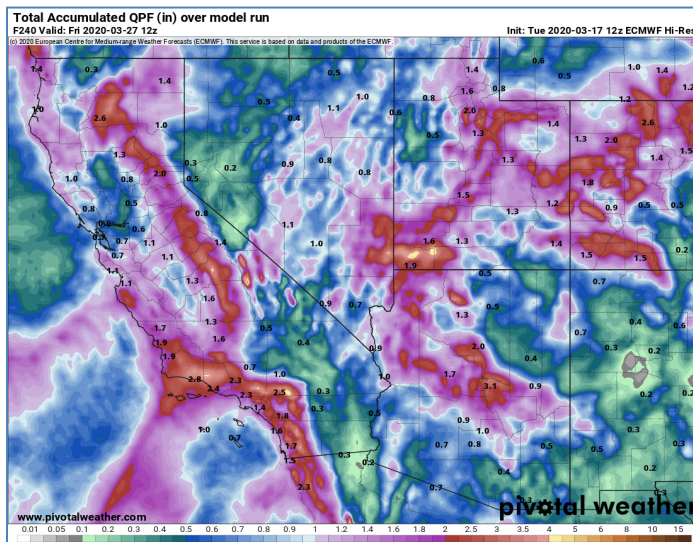
Pillows measuring Snow Water Equivalent (SWE) are also showing an increase of about 6-8 inches over the past 7 days. The March 14-16 system was also quite cold producing snow down to 2500 feet. The big winners from this storm were the Yuba and American River basins which saw 25% and 28% jumps in their April July runoff projections, respectively.

Source of graphics:

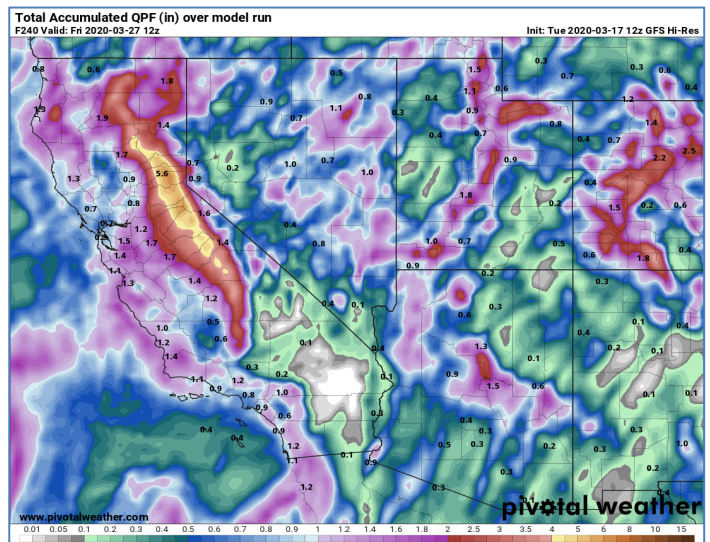
<https://www.cnrfc.noaa.gov>

Second Half of March is Looking Promising

ECMWF 10-day Precipitation (03172020 12Z)



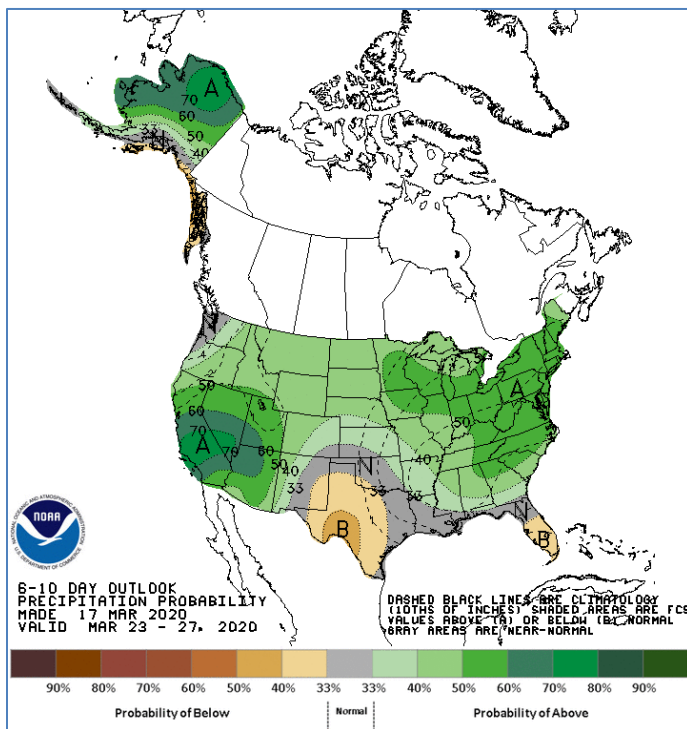
GFS 10-day Precipitation (03172020 12Z)



Sources:

https://www.pivotalweather.com/model.php?m=ecmwf_full&p=qpf_acc&rh=2020031712&fh=240&r=us_sw&dpdt=&mc=

https://www.pivotalweather.com/model.php?m=gfs_flx&p=qpf_acc&rh=2020031712&fh=240&r=us_sw&dpdt=&mc=



The remainder of March is looking a bit wet. I counted 4 distinct weather systems working their way down from the North and impacting some portion of California. As I've mentioned before, the storm track is North-to-South with systems making a left turn somewhere over the West Coast. This pattern leads to lots of uncertainty as to where the bulk of the precipitation will land. Right now the GFS has more in the North, the ECMWF favors the South. Each model run seems to have new solution.

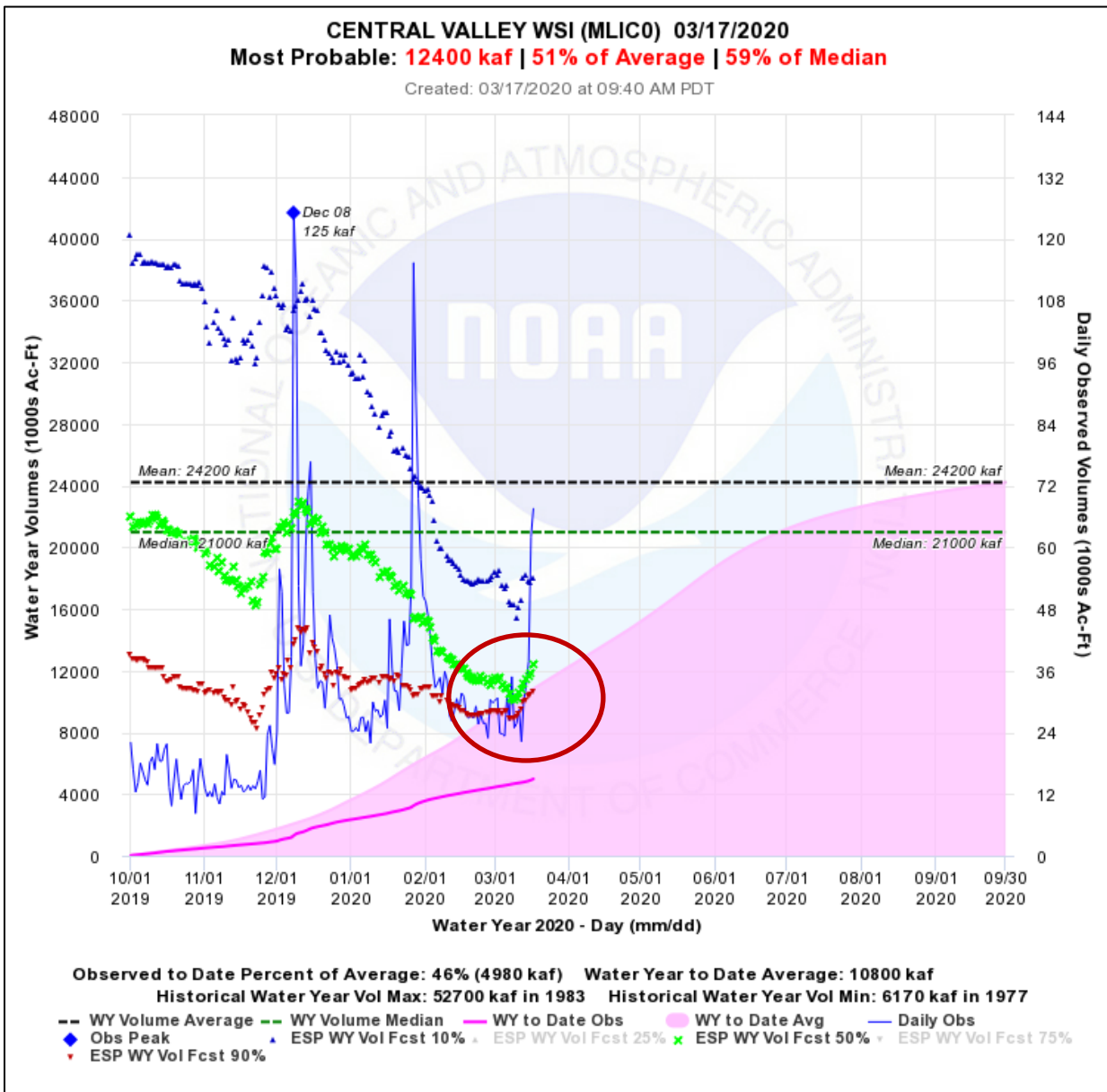
The 6-10 day CPC graphic (left) illustrates this well with all of CA likely to receive above average precipitation. But for now, the best rainfall totals are more likely going to be in central CA, southern CA, and southern NV.

Source:

<https://www.cpc.ncep.noaa.gov/products/predictions/610day/610prcp.new.gif>

Water Supply Impacts (HEFS = Hydrologic Ensemble Forecast Service)

Water Year Runoff Projection



Source: <https://www.cnrfc.noaa.gov/ensembleProduct.php?id=MLIC0&prodID=9>

CNRF water supply forecasts have finally turned the corner and have been rising for the past 8 days. This morning's median forecast of 12.4 MAF for the CA Central Valley is up 2.3 MAF since March 9th. Actual runoff continues to be well below normal (at 46% of average), but the potential for more runoff in the coming months (whether late March storms or snowmelt in April - July) has been leading to a modest improvement in water supply conditions.

Conclusion:

This past storm combined with the potential for a wet week or two in the second half of March has brought some needed relief to what has been a very dry water year. Nevertheless we are still looking at only around 40-70% of average for the Water Year runoff in CA and NV. Some watersheds have certainly seen solid improvement. Perhaps our wandering storm track will bring more precipitation to the rest of the region in the coming weeks.

I've heard people ask, "is it another 'miracle March'?" So far it's been a "modestly marvelous March" – a bit above average and some good additional snow. But compared to the historical "miracle March" of 1991, March 2020 pales in comparison. March 1991 saw 18-19 inches in the northern and central Sierra. For the first 17 days of March 2020 we've only seen a bit above 4 inches in the 8 Station and 5 Station Indices. A little above average is not a "miracle," but it is good to see. Every drop counts - We'll take it.