March 15, 2018 Water Supply Forecast Discussion

The Colorado Basin River Forecast Center (CBRFC) geographic forecast area includes the Upper Colorado River Basin, Lower Colorado River Basin, and Eastern Great Basin.

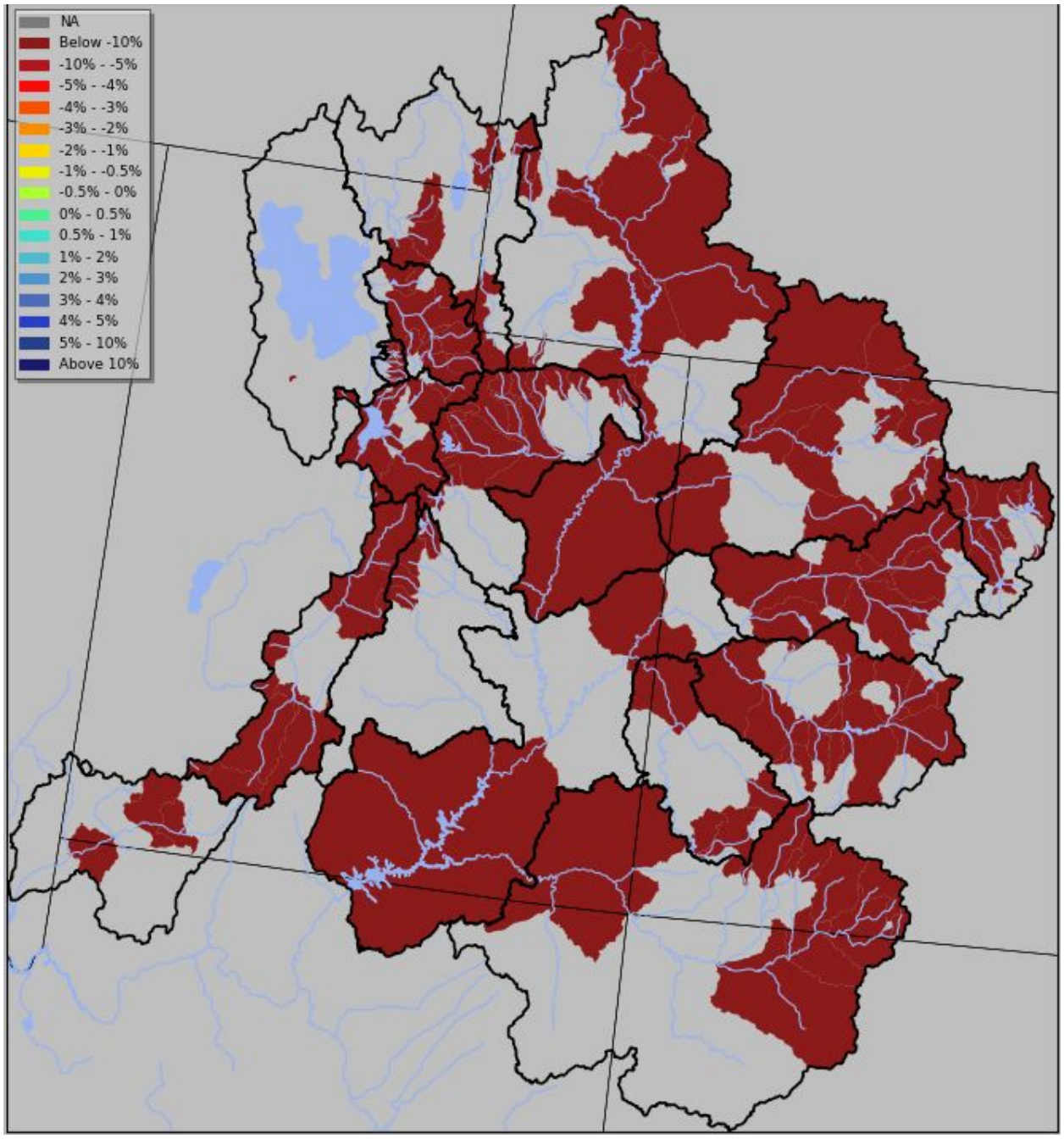
Water Supply Forecast Summary:

The first half of March brought very dry conditions to much of the CBRFC forecast area. Impacts from a storm system the first weekend of the month were fairly localized and brought near to above average precipitation to small parts of the Great Basin in northern Utah and southern Idaho. A storm system the second weekend of the month brought near to above average precipitation to parts of northern Arizona. However, most areas in the Colorado and Great Basin, and particularly those areas that contribute the most to the April-July streamflow volumes, were very dry the first half of March.

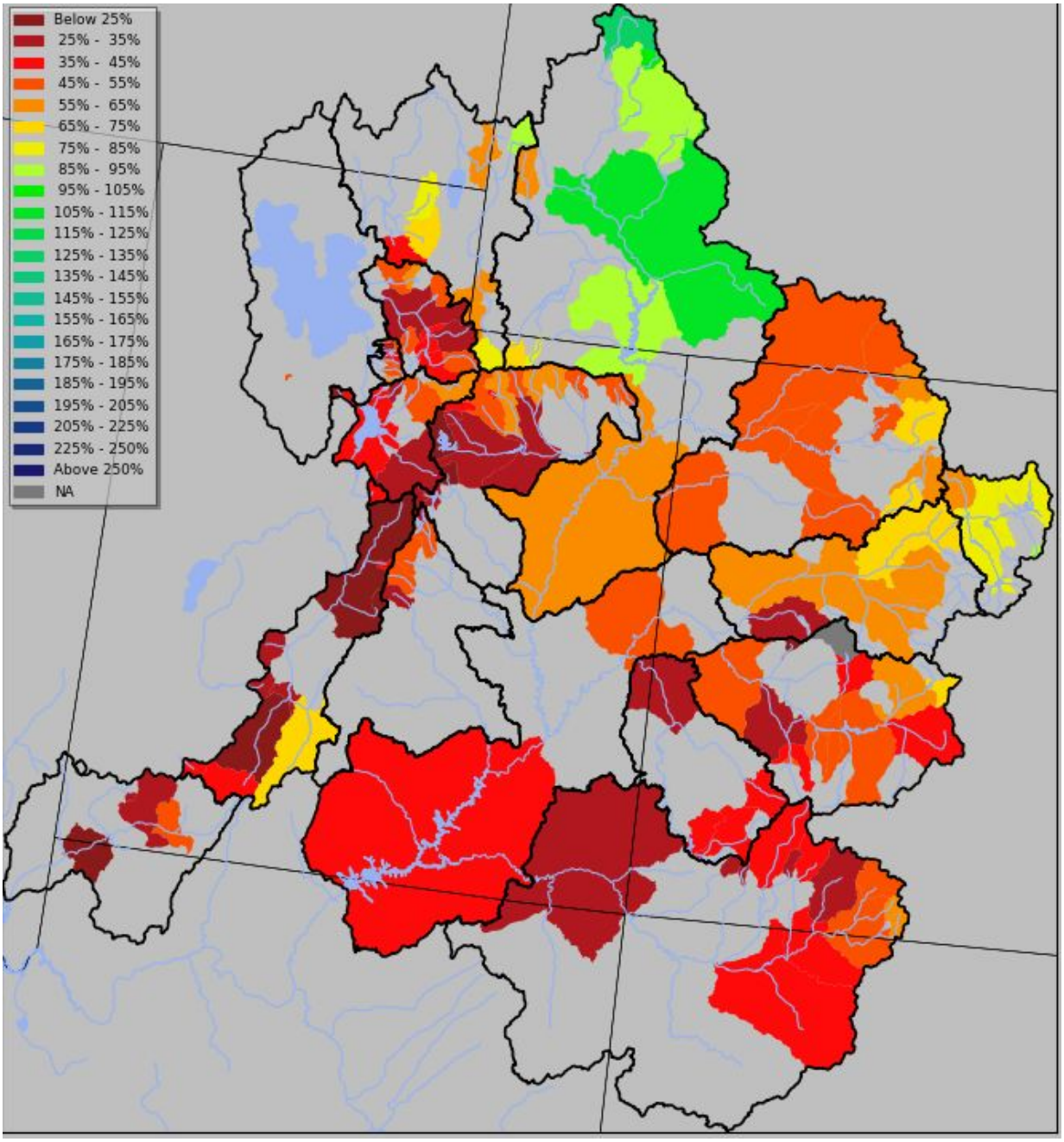
As expected water supply forecast guidance has trended lower since the first of March in all areas due to the dry conditions. Most locations have mid month forecast with at least a 10% of average decrease from that of March 1st. With the second half of March expected to see more active weather and greater precipitation potential these decreasing forecast trends may slow or possibly level out.

April-July unregulated inflow forecasts as of mid-March for some of the major reservoirs in the Upper Colorado River Basin include Fontenelle Reservoir 840 KAF (116% of average), Flaming Gorge 920 KAF (94% of average), Blue Mesa Reservoir 360 KAF (53% of average), McPhee Reservoir 105 KAF (36% of average), and Navajo Reservoir 265 KAF (36% of average). The Lake Powell inflow forecast is 3.10 MAF or 43% of average.

Seasonal Water Supply Forecasts:



Trend in the April-July runoff volume forecast guidance from March 1st to March 13th 2018
(Change in April-July volumes as a percent of average)



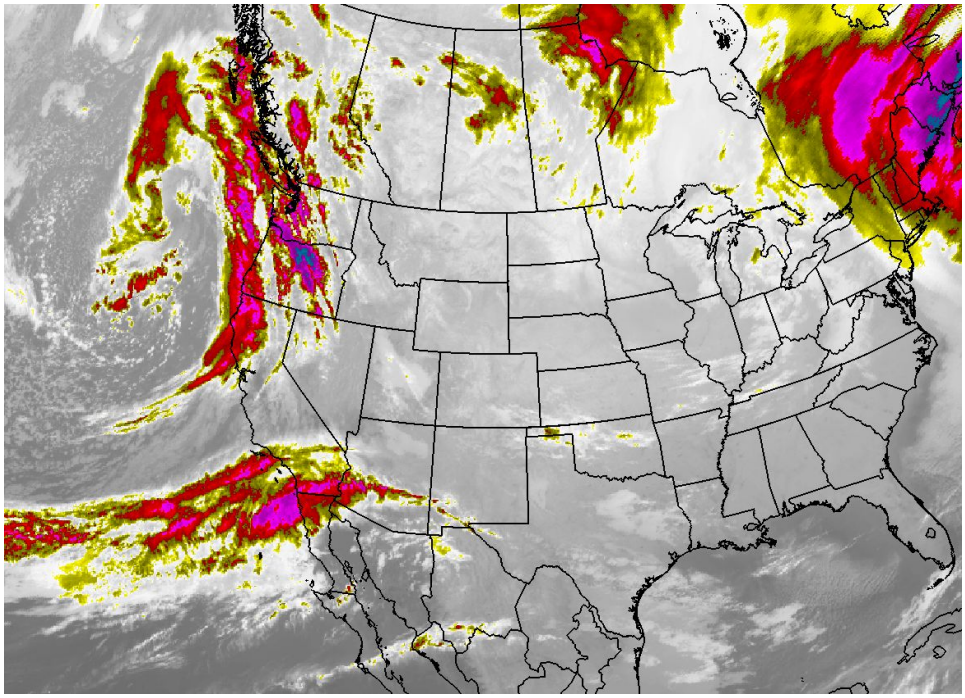
Forecast guidance for April-July runoff as of March 13th 2018
(Percent of the 1981-2010 average)

For specific site water supply forecasts click here

Water Supply Discussion

Weather Synopsis:

Although a couple of storms did impact different parts of the CBRFC forecast area over the first and second weekends of March, most of the period was dominated by high pressure and dry conditions. Temperatures also warmed to 10-15 degrees above average during this time, resulting in the onset of snowmelt in many of the lower elevation and southern river basins. As we transition into the second half of the month, the weather pattern is expected to become active once again with storm systems presently in the Pacific Ocean impacting the area and bringing better chances of precipitation.



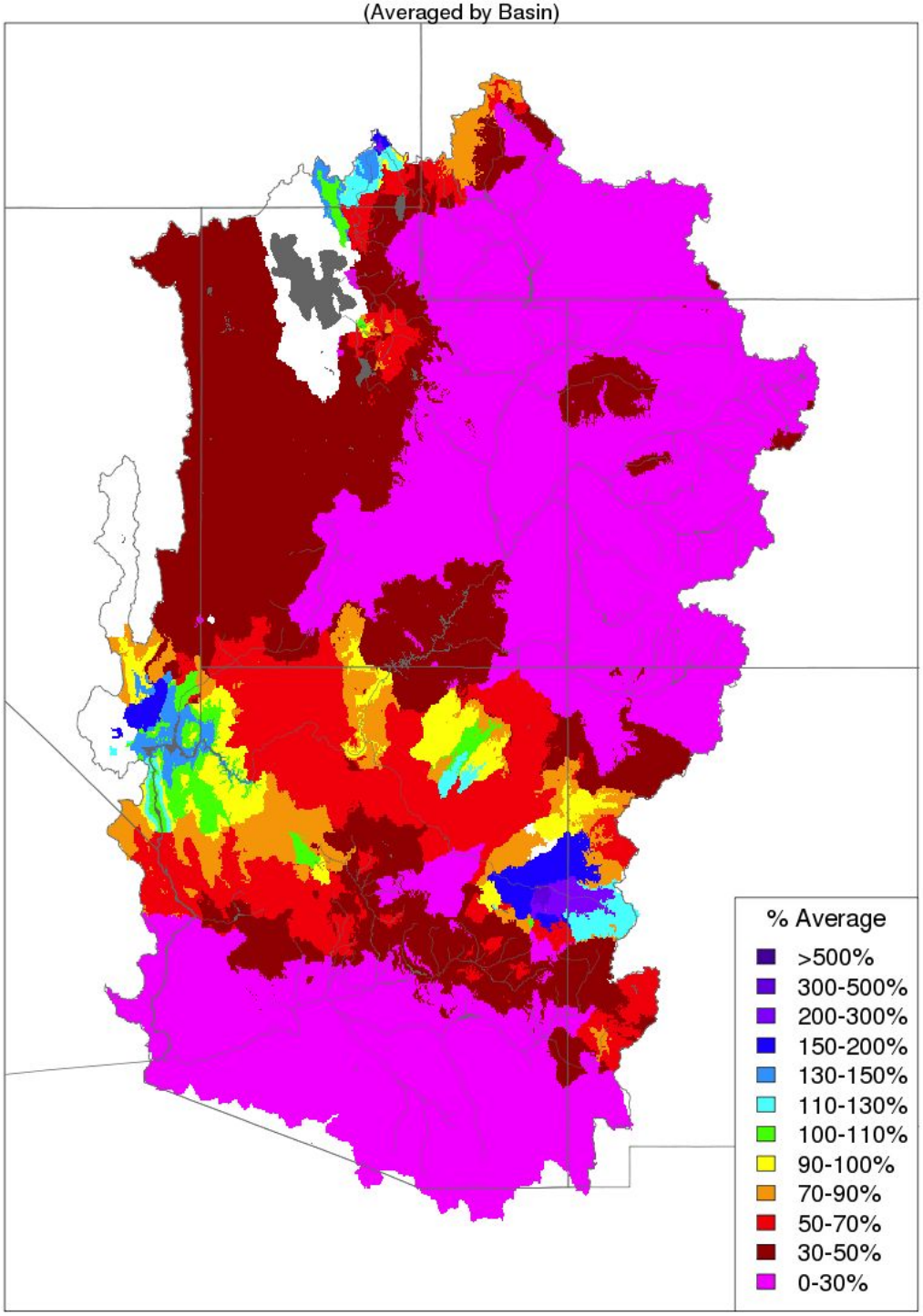
Satellite image as of March 13th shows a ridge of high pressure and dry conditions over the CBRFC forecast area with storms lingering off the west coast.

Precipitation and Temperature:

Precipitation has been much below average over the majority of the CBRFC forecast area during the first half of March. The only places with near to above average precipitation so far this month are parts of the Great Basin in northern Utah and southern Idaho thanks to a storm the first weekend of March and some parts of northern Arizona due to a storm system the second weekend of the month.

Month to Date Precipitation - March 14 2018

(Averaged by Basin)

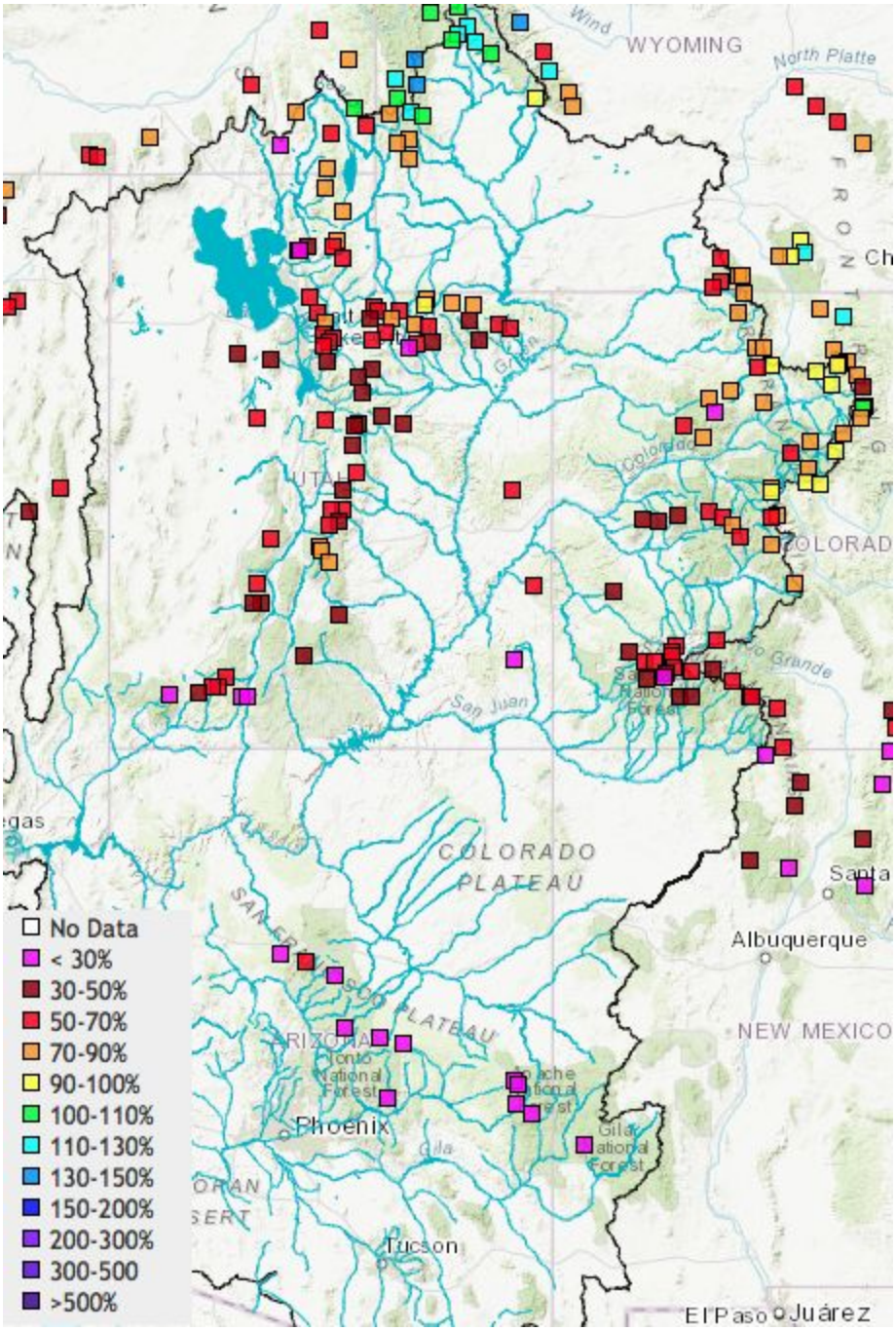


Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

Month to date Percent Average Precipitation through March 14
(Averaged by basins defined in the CBRFC hydrologic model)

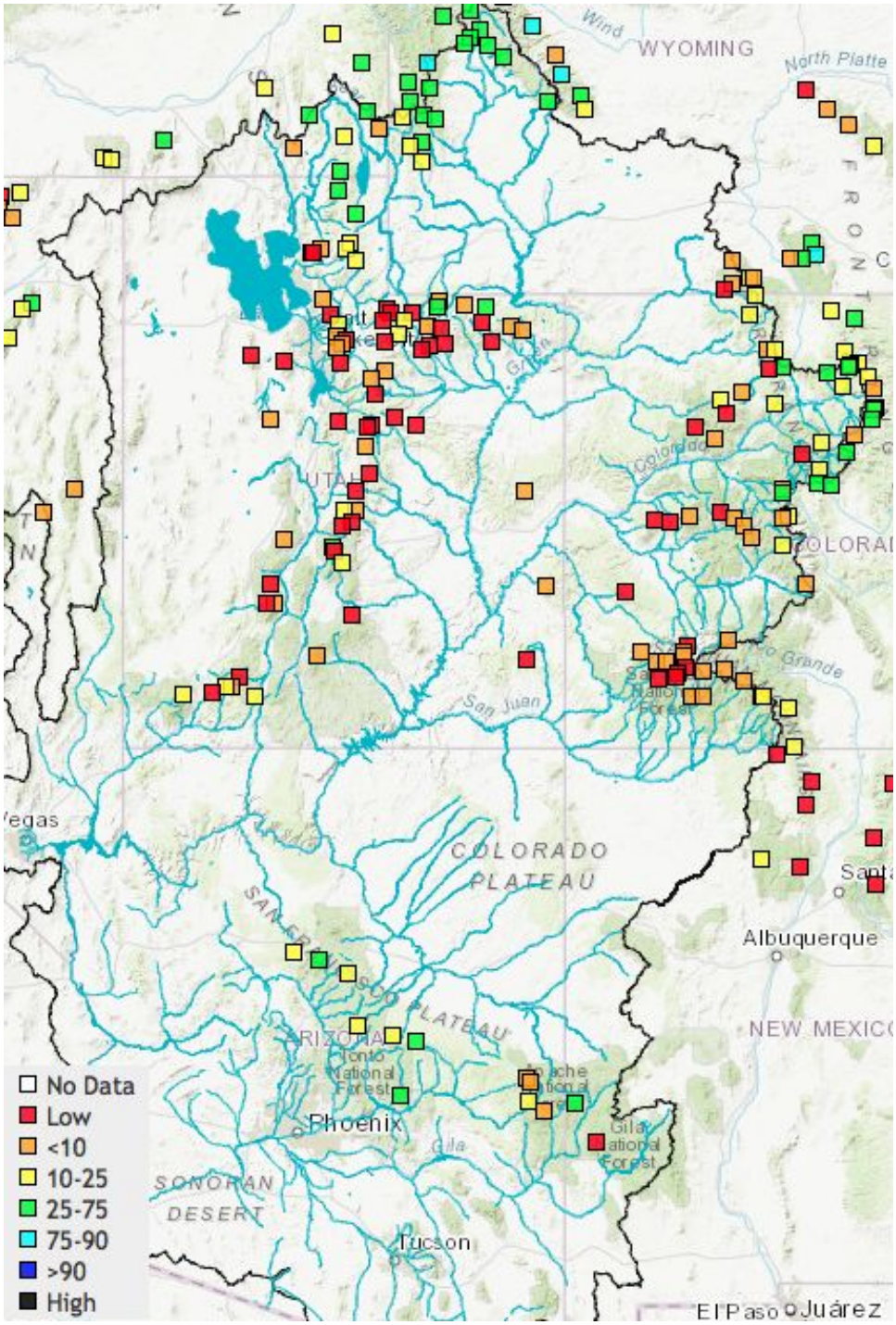
Snowpack:

Snow conditions remain very poor over most of the CBRFC forecast area. Near to above average snow conditions still exist in the extreme northern headwaters of the Green River Basin in Wyoming, while the eastern headwaters of the Colorado River Basin has near to slightly below average snow conditions at this time. Outside of those two areas, individual SNOTEL sites are generally reporting less than 70 percent of median, with many reporting less than 50 percent of median.



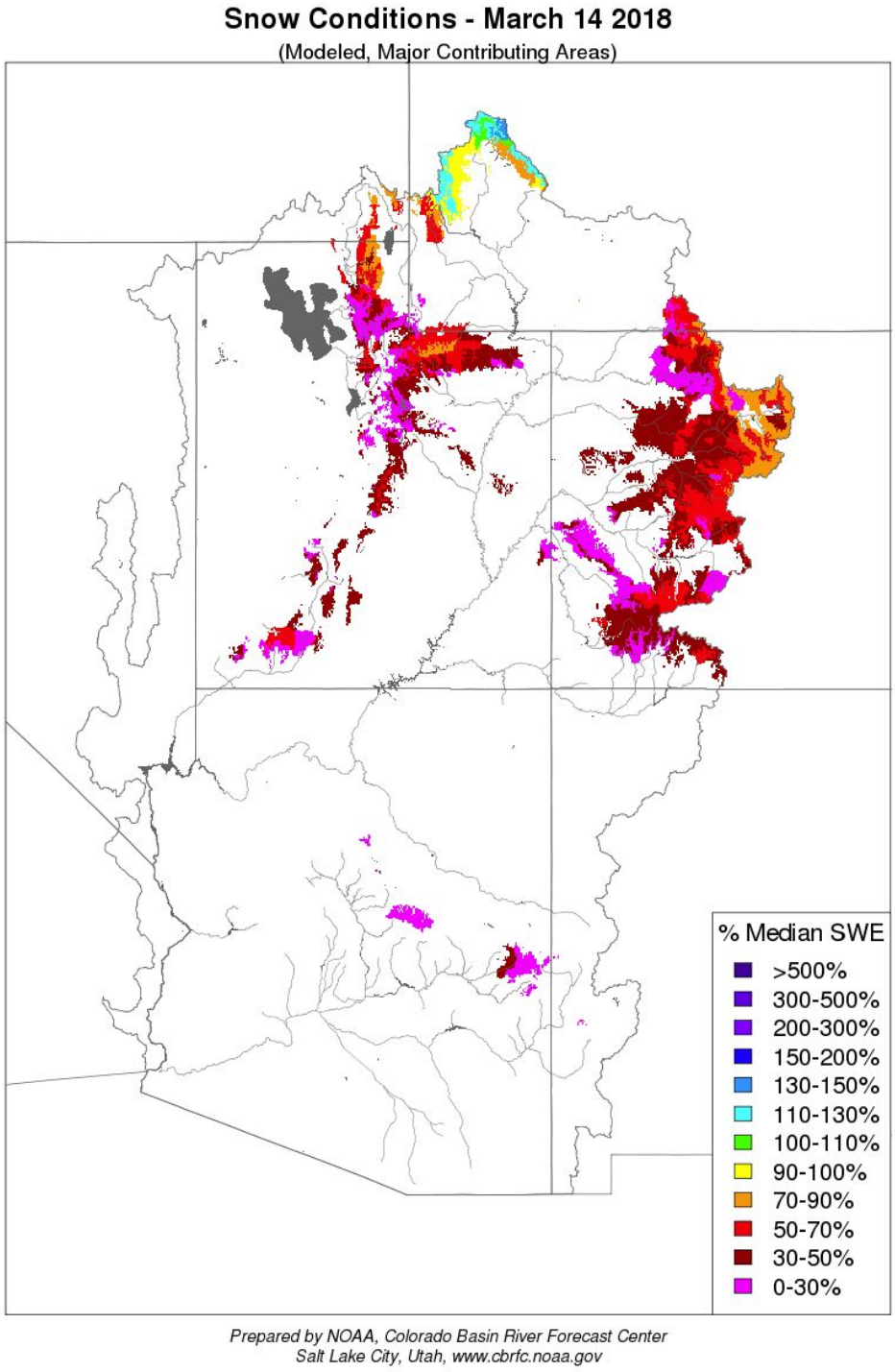
Percent Median Snow Conditions as of March 14, 2018

The snow percentile image displayed below indicates where the current snow measurement ranks in the historical record (typically 35-40 years) for each site. Quite a few sites are depicted with red boxes, indicating the lowest values on record for this time of year. Sites with orange boxes are in the bottom 10 percent of the record, with many ranking as either the 2nd or 3rd lowest for this time of year.



Snow Percentile Image: Historical SNOTEL ranking as of March 14, 2018

The image below is the representation of snow in the CBRFC hydrologic model. Only those areas that provide the greatest contribution to the April-July runoff volumes are displayed. The snow represented in the model closely mirrors the SNOTEL image. The takeaway message is that poor snowpack conditions are widespread as indicated by the hydrologic model.

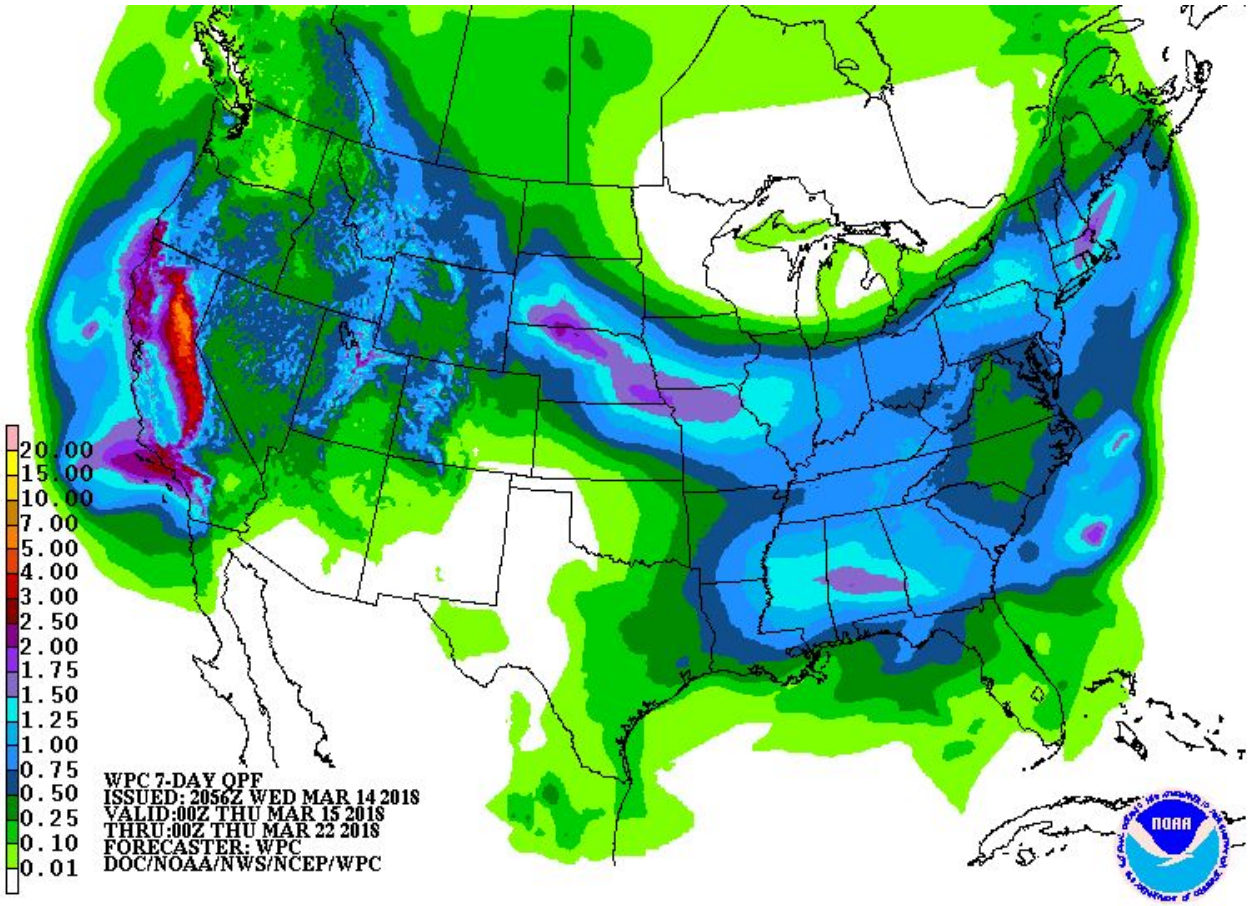


Modeled Snow: Snow representation from the CBRFC hydrologic model March 14, 2018

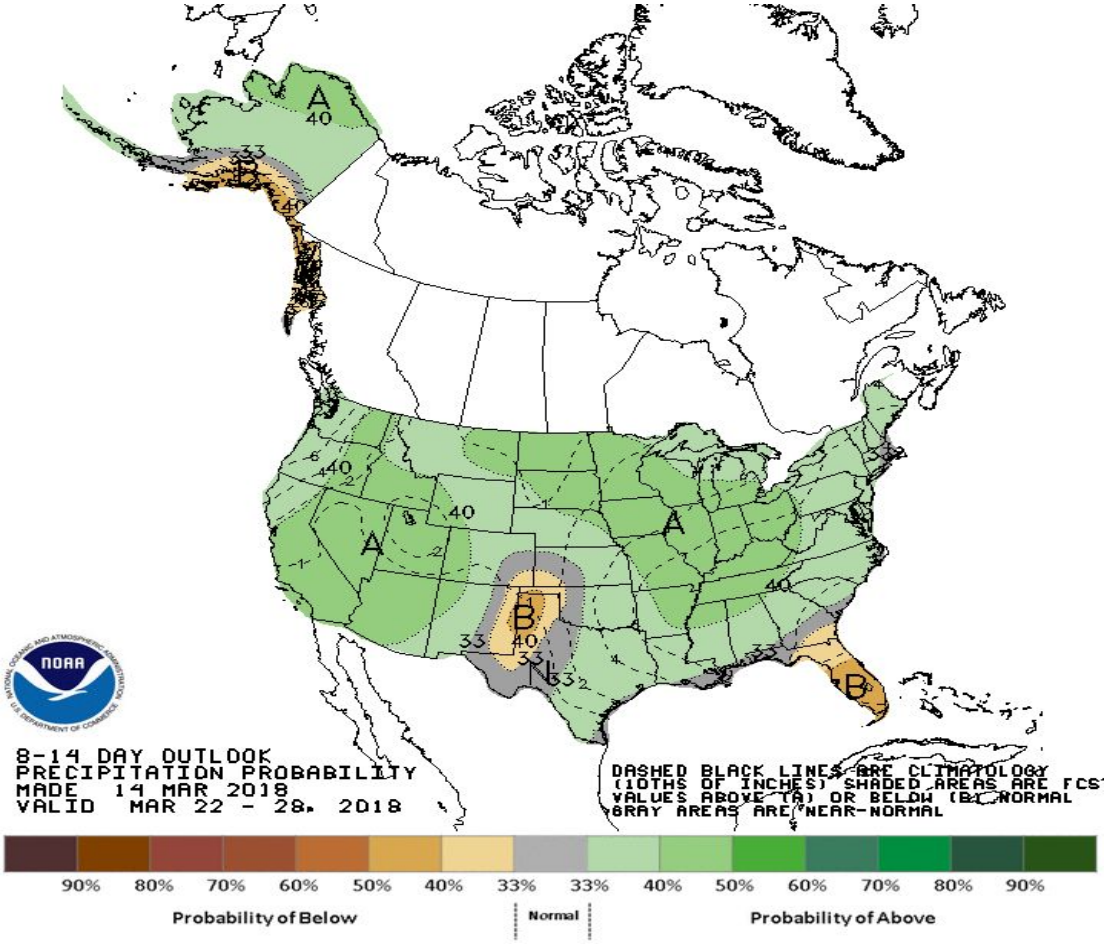
For updated SNOTEL information, click here.
For CBRFC hydrologic model snow conditions, click here

Upcoming Weather:

The weather pattern is expected to transition to more troughing across Western U.S. over the next week. Two storm systems are forecasted to impact much of the Upper Basin, one on Thursday and another by this weekend. These systems will bring widespread precipitation to the Upper Basin through the weekend along with below normal temperatures for mid March. In general, lighter precipitation amounts will fall over the Lower Basin. The outlook for the last two weeks of March is more uncertain, however above normal precipitation is slightly favored (see 8-14 day precip outlook below).



NWS Weather Prediction Center precipitation forecast for Mar 15 - Mar 21, 2018



NWS Climate Prediction Center 8-14 Day Precipitation Outlook for March 22-28, 2018.

End Of Month Reservoir Content Tables

- Green River Basin
- Upper Colorado River Basin
- San Juan River Basin
- Great Salt Lake Basin
- Sevier Basin

Basin Conditions and Summary Graphics

- Green River Basin
- Upper Colorado River Basin
- San Juan River Basin
- Great Salt Lake Basin
- Sevier River Basin
- Virgin River Basin