

March 19, 2020 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

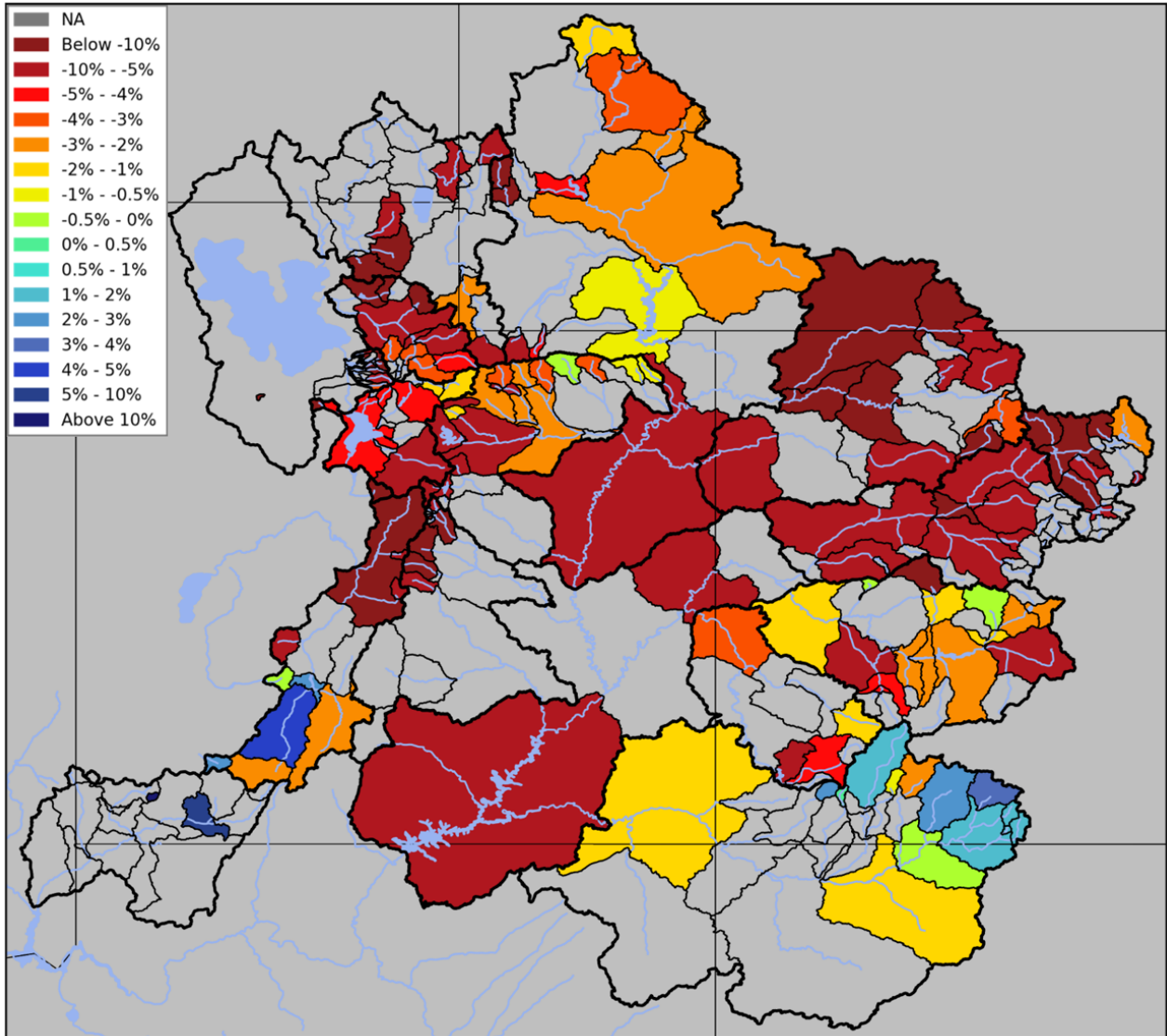
April-July water supply volume forecasts are generally near to below average throughout the Upper Colorado River Basin and Great Basin. Within the Upper Colorado River Basin, the highest forecast volumes with respect to average are in the Upper Colorado River mainstem and White/Yampa basins, where volume forecasts are generally near the 1981-2010 historical average. Volume forecast guidance during March 1-18 generally decreased throughout the Great and much of the Upper Colorado River Basins due to below average precipitation during the first half of the month. Exceptions include the Sevier and Virgin basins in southwest Utah and northeastern San Juan headwater basins in southwest Colorado, where water supply guidance has slightly increased over the past few weeks due to above average precipitation. Below average soil moisture conditions entering the winter season continue to negatively impact water supply forecasts in southwest Colorado.

April-July unregulated inflow forecasts for some of the major reservoirs in the Upper Colorado River Basin include Fontenelle Reservoir 620 KAF (86% average), Flaming Gorge 850 KAF (87% of average), Blue Mesa Reservoir 525 KAF (78% of average), McPhee Reservoir 180 KAF (61% of average), and Navajo Reservoir 440 KAF (60% of average). The Lake Powell inflow forecast is 5.5 MAF (77% of average), a three percent decrease from March 1st.

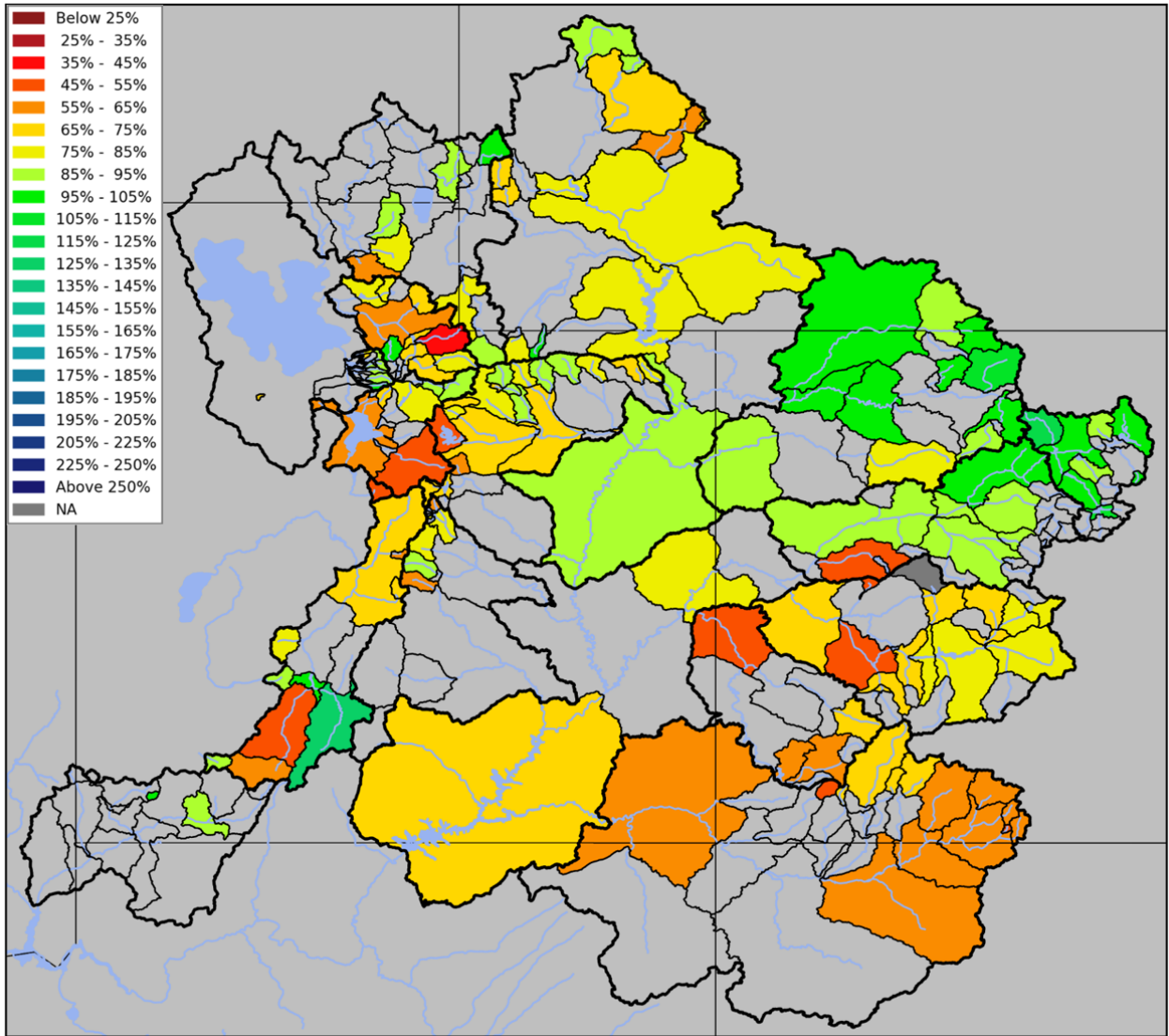
Water supply volume forecasts in the Great Basin have decreased as much as 15-20% since early March. Conditions in the Provo and Utah Lake Basins range from slightly below normal in the headwaters of the Provo to much below normal for Utah Lake and Spanish Fork locations. Conditions in the Six Creeks basins are currently near to slightly below normal. Water supply volume forecasts in the Weber and Bear River basins range from near to much below average as of March 18.

March precipitation has been near to much above average across the Lower Colorado River Basin and has resulted in significant increases in water supply guidance during the last few weeks. January-May water supply guidance across the majority of the Lower Colorado River Basin is above to much above (150-200%) median as of March 18.

Seasonal Water Supply Forecasts



Trend in the April-July runoff volume forecast guidance from March 1 to March 18, 2020.
(Change in April-July percent of average)



April-July runoff volume guidance as of March 18, 2020.
 (percent of 1981-2010 average)

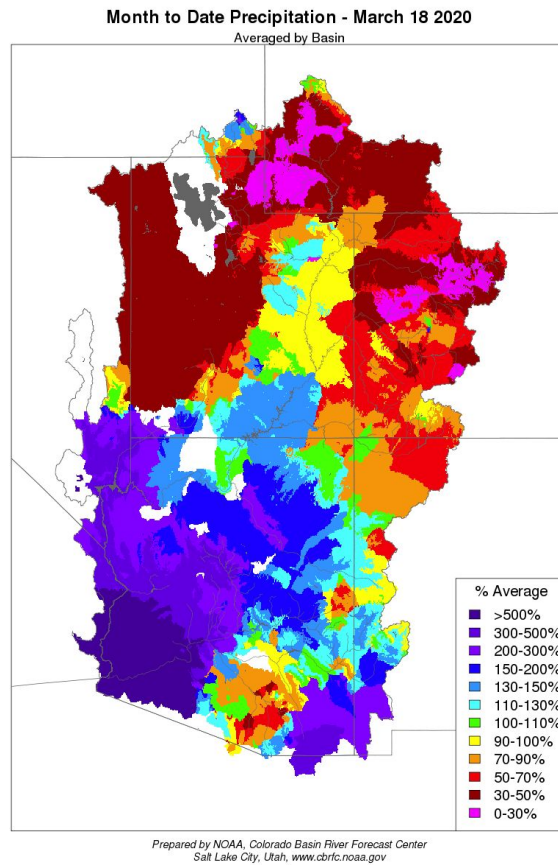
For specific site water supply forecasts click [here](#)

Water Supply Discussion

Weather Synopsis / March Precipitation

The first week of March was rather tranquil weather-wise with general ridging across much of the Intermountain West. A weak storm system moved into northern Utah/Colorado and Wyoming during the first few days of March and produced modest precipitation amounts. Overall, no significant storm systems impacted the Colorado River Basin through March 1-9 and temperatures were generally warmer than normal. A storm system with a subtropical moisture tap and heavy precipitation impacted the southern half of Utah/Colorado and the Lower Colorado River Basin during March 10-13. A weather system from the Pacific Northwest brought moderate precipitation to the northern Great Basin and Upper Green basin during March 14-15.

March precipitation during the first half of the month was variable across the CBRFC forecast area, with precipitation generally coming in above average across the Lower Colorado River Basin and below average across the Great Basin and Upper Colorado River Basin. After a wet February, March precipitation across the Yampa/White and Upper Colorado River mainstem basins has been below to much below average thus far. March to date precipitation has been near to above average in eastern Utah (Duchesne, Lower Green) and near to below average over the majority of southwest Colorado (Gunnison, Dolores, San Juan basins). Precipitation within the Lower Colorado River Basin has been well above average across most basins, and especially the Verde Basin (200-300% of normal) so far this month. March to date precipitation across the Great Basin was generally below to much below normal, with the exception of the northern Bear basin.



March 1-18, 2020 percent of average precipitation.

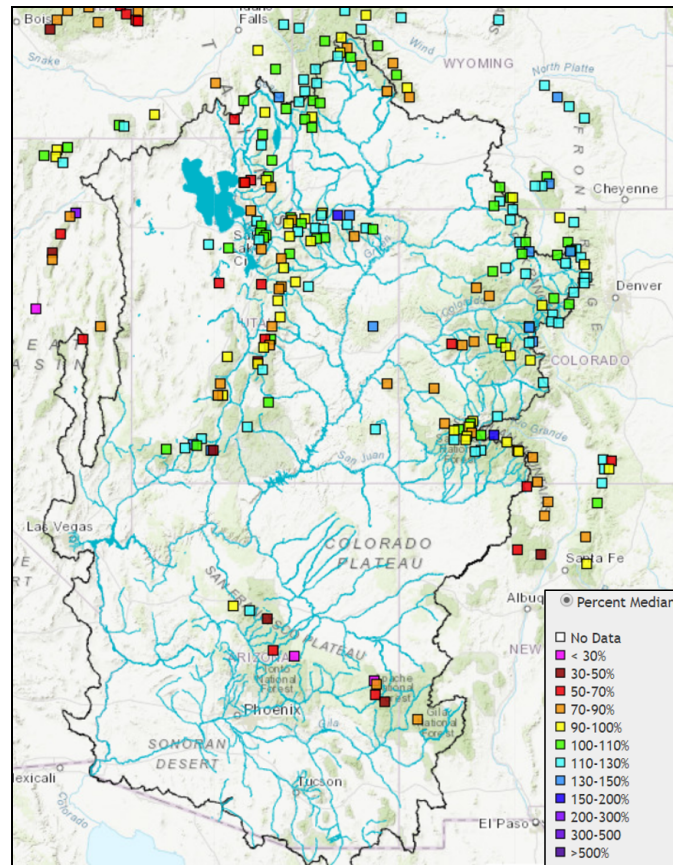
Snowpack

Observed snow water equivalent (SWE) conditions as of early March are variable across the Great Basin and Colorado River Basin, with conditions generally declining from north to south. SWE conditions as a percent of the 1981-2010 median have mostly declined since the beginning of March due to below average precipitation across mountainous basins.

Mid-March SWE conditions in the Upper Colorado remain above normal (median) in the Upper Colorado River mainstem headwaters. Snow conditions are slightly above normal in the Upper Green, White/Yampa, and Duchesne basins. Gunnison, Dolores, and San Juan basin snow conditions in southwest Colorado are slightly below median as of March 18.

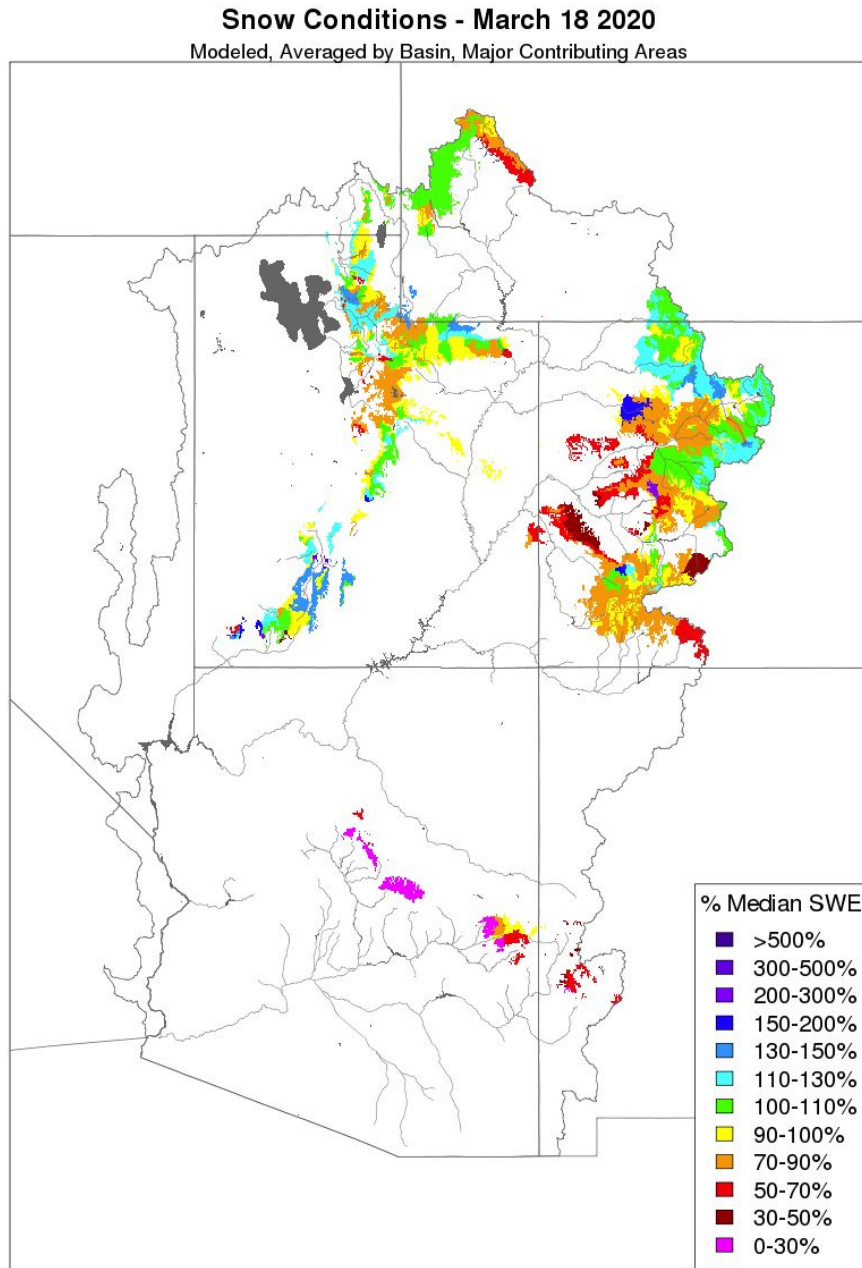
Despite the significant precipitation event on March 10-13 over the Lower Colorado River Basin, much of the precipitation fell as rain across Arizona and thus snow conditions did not improve compared to March 1. However, the upper elevations of the Virgin Basin in southern Utah (above 8000 feet) did see a substantial jump in SWE with this event. It's worth noting that SWE conditions in the Lower Colorado River Basin are more variable and tend to fluctuate more frequently over time, especially during the next month when snowmelt is normally reaching its peak.

Across the Great Basin, mid-March snowpack conditions remain slightly above normal in the Six Creeks basin and near normal in the Bear basin. Weber, Provo/Utah Lake, and Sevier basins SWE conditions are below normal. Early March observed (SNOTEL) conditions as a percent of the 1981-2010 historical median are shown in the image below.



Observed (SNOTEL) percent median SWE conditions as of March 18, 2020.

The image below is the representation of mid-March CBRFC model snow conditions in areas that provide the greatest contribution of April-July runoff. Model snow conditions closely correlate to SNOTEL conditions throughout the Colorado River and Great Basins.



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

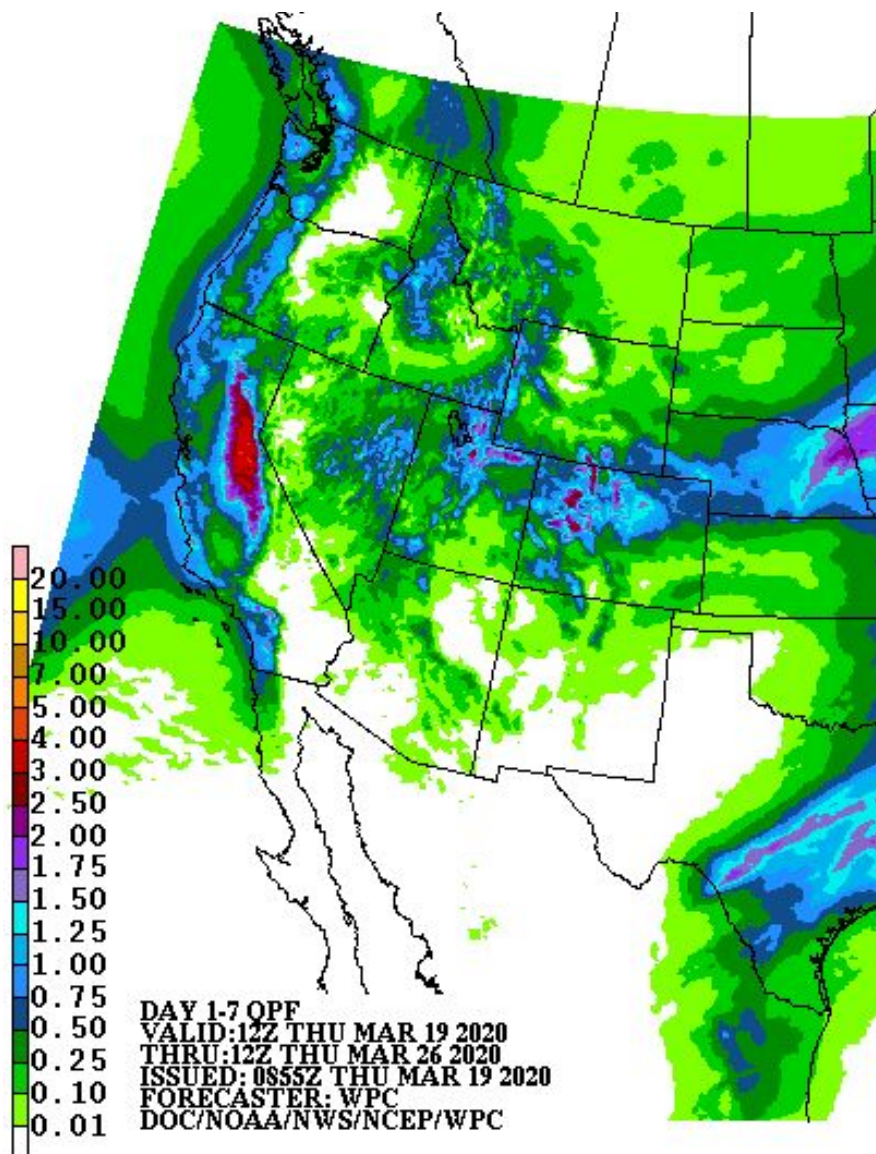
CBRFC hydrologic model snow conditions in significant runoff areas as of March 18, 2020.

For updated SNOTEL information refer to click [here](#)

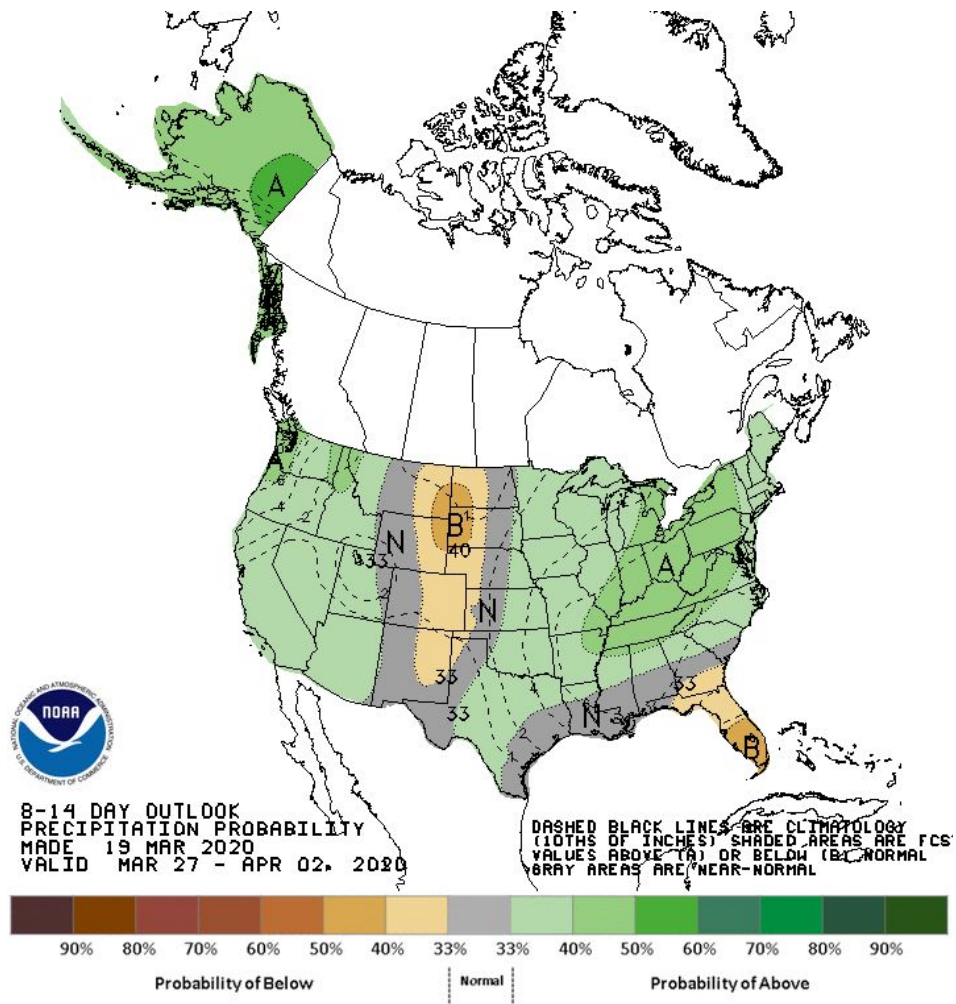
For CBRFC hydrologic model snow click [here](#)

Upcoming Weather

A rather potent storm system with good Pacific moisture is expected to move into Arizona and Colorado on Wednesday-Thursday (March 18-19). The heaviest precipitation with this system is expected in the same areas that benefited from storms during the first half of March, namely the Lower Colorado River Basin and southwest Colorado. Widespread 1-2" of precipitation is expected to fall across the mountainous areas of Arizona and southern Utah/Colorado. A weak trough will persist through Saturday over the Intermountain West with showery conditions and only modest precipitation amounts. Overall, the weather pattern next week remains rather progressive with storm systems moving through the Colorado Basin every few days with a weak one on March 23 and another potentially more significant system in the March 25-26 timeframe. This pattern will tilt the odds to slightly above normal precipitation over Utah and Arizona from late March into early April. In addition to elevated precipitation chances, the increased cloud cover and mean troughing will promote slightly below normal temperatures next week.



NWS Weather Prediction Center precipitation forecast for March 19-26, 2020.



NWS Climate Prediction Center precipitation probability forecast for March 27 - April 2, 2020.

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](#)

End Of Month Reservoir Content Tables

- [Green River Basin](#)
- [Upper Colorado River Basin](#)
- [San Juan River Basin](#)
- [Great Salt Lake Basin](#)
- [Sevier Basin](#)