

February 17, 2021 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

Precipitation during the first half of February was mainly above to well above normal across the Upper Colorado River Basin and Great Basin, with snow water equivalent (SWE) conditions improving in terms of percent of normal since the beginning of the month. The majority of the Upper Colorado River Basin and Great Basin have seen increases in April-July water supply volume guidance since early February. However, below normal spring runoff continues to be likely due to poor antecedent soil moisture conditions and below normal seasonal (October-February) precipitation. The Lower Colorado River Basin was mostly dry during the first two weeks of February, but has received some modest precipitation across the Verde, Salt, and Gila River Basins over the past few days.

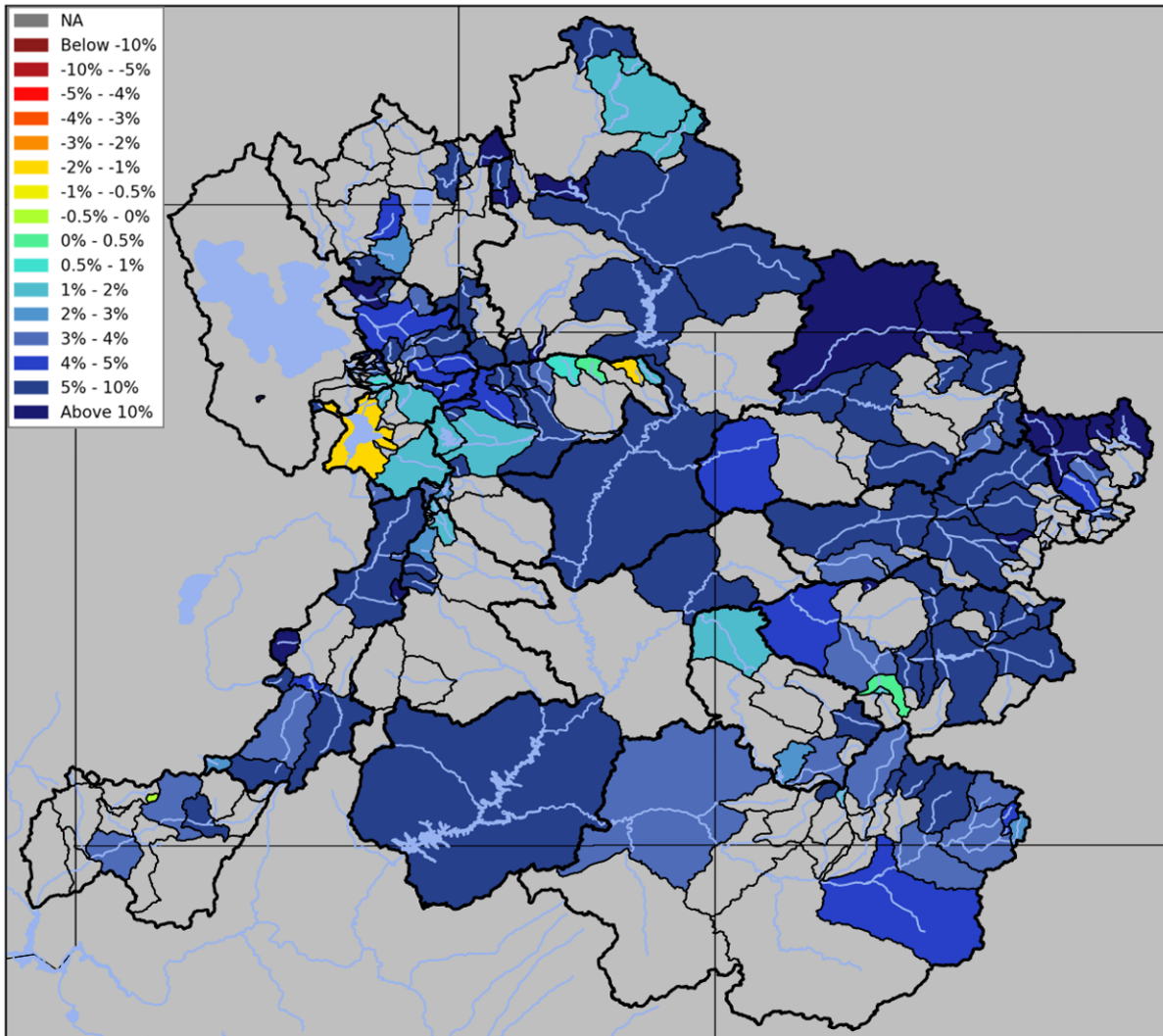
April-July water supply volume guidance has increased by 5-15% across many northern basins since early February, but remains below to much below normal across the region. Mid-February spring runoff volume guidance generally ranges from 40-80% of normal across the Upper Colorado River Basin and 30-60% of normal across the Great Basin. Lower Colorado River Basin January-May water supply volume guidance has decreased since early February and generally ranges between 20-70% of normal.

Mid-February SWE conditions generally range between 70-95% of normal across the Upper Colorado River Basin and 70-85% of normal across the Great Basin. Lower Colorado River Basin SWE conditions are more variable and range between 20-90% of normal.

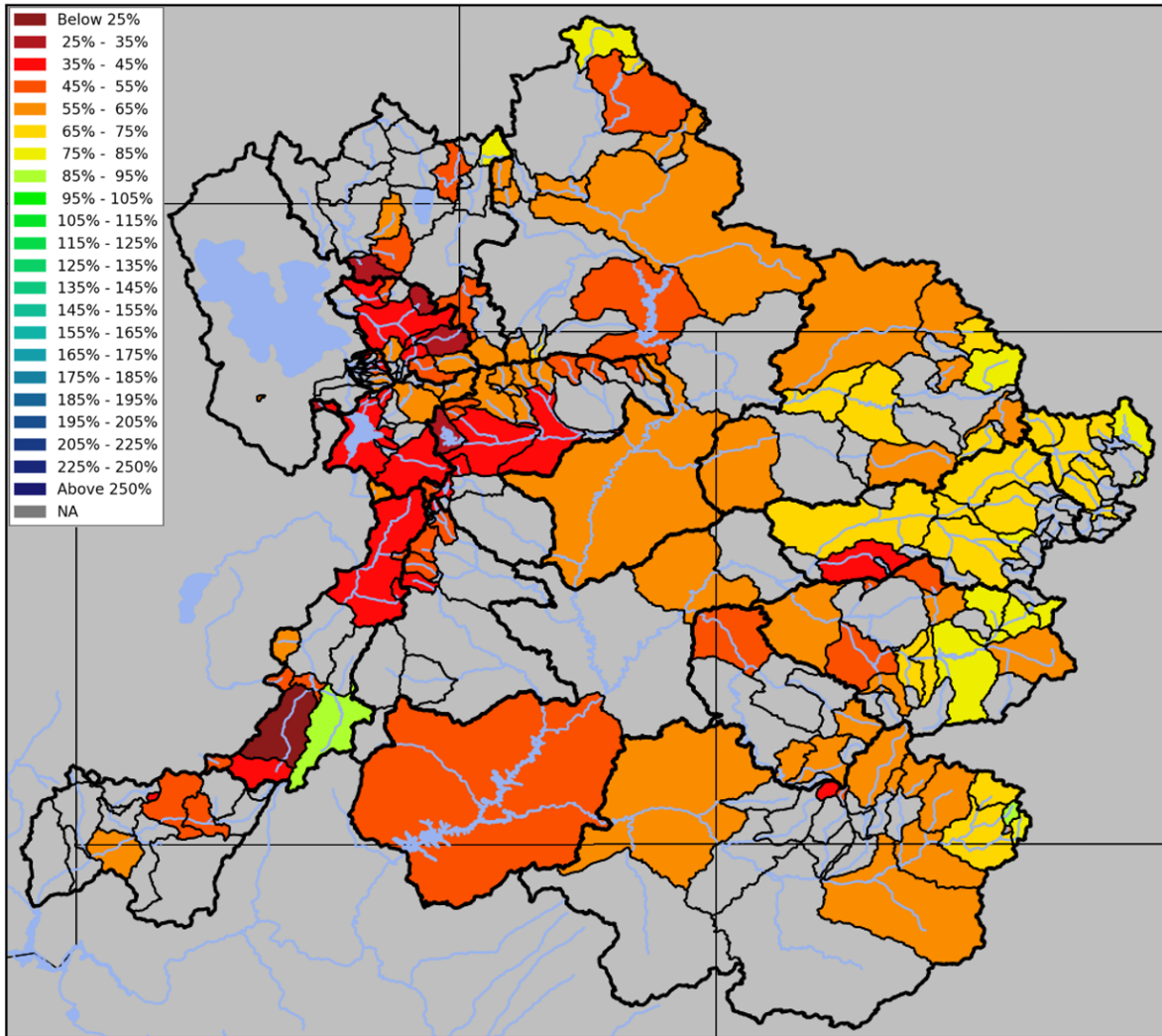
April-July unregulated inflow forecasts for some of the major reservoirs in the Upper Colorado River Basin include Fontenelle Reservoir 460 KAF (63% average), Flaming Gorge 535 KAF (55%), Blue Mesa Reservoir 490 KAF (73%), McPhee Reservoir 157 KAF (53%), and Navajo Reservoir 450 KAF (61%). The Lake Powell inflow forecast is 3.6 MAF (50% of average), a four percent increase from the early February forecast.

The weather pattern is expected to remain active during the next 7-10 days. Additional precipitation is expected across northern Utah and Idaho/Wyoming on Friday/Saturday (February 19-20). The storm track shifts northward and mostly out of the area by Sunday into early next week. Forecasted precipitation totals over the next week are 0.5-1.5 inches over the northern Utah Wasatch Range and mountains of the Upper Green, and 0.5-1.0 inches over the mountains of northern Colorado. Only light precipitation amounts (less than 0.25 inches) are expected across the Lower Colorado River Basin in the coming week.

Seasonal Water Supply Forecasts



Trend in the April-July runoff volume guidance from February 1 to February 16, 2021
(Change in April-July percent of average)



April-July runoff volume guidance as of February 16, 2021
(percent of 1981-2010 average)

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

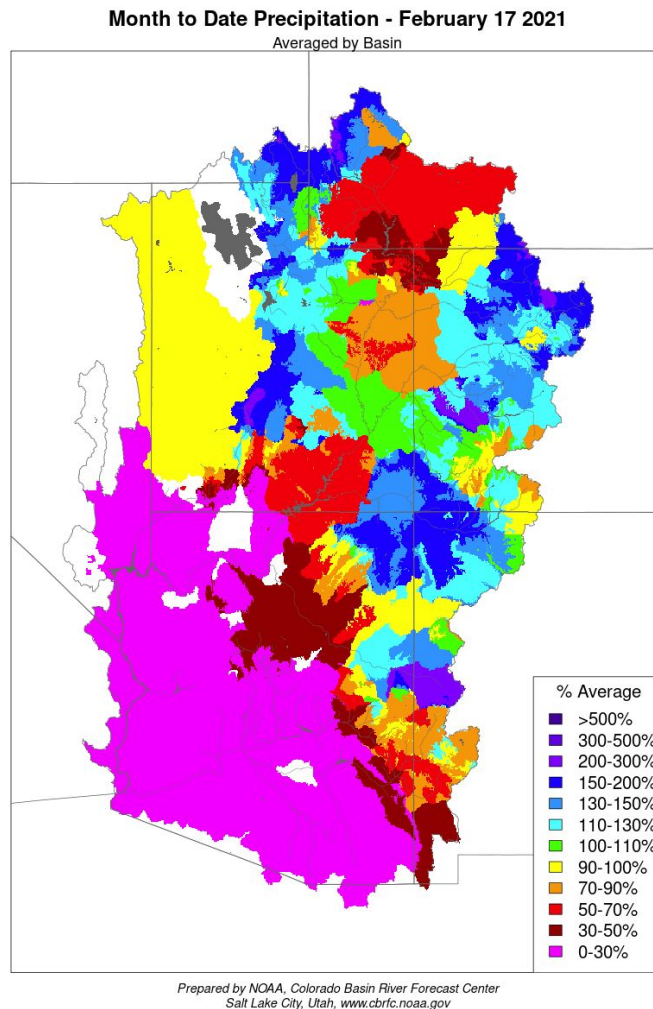
Water Supply Discussion

Weather Synopsis

After a dry first two months of winter across much of the Upper Basin and Great Basin, the weather pattern changed during the first two weeks of February to become more active. A trough and persistent northwesterly flow across the Intermountain West brought multiple rounds of precipitation to Wyoming and northern Utah/Colorado, and resulted in beneficial SWE increases over northern basins. The storm systems have mostly clipped the Lower Basin, resulting in much lower precipitation amounts across Arizona.

Precipitation

Precipitation during the first half of February was mainly above to well above normal across the Upper Basin and Great Basin. Many SNOTELs in northern Utah/Colorado and Wyoming are above the 75th percentile for month-to-date precipitation. The Lower Colorado River Basin was mostly dry during the first two weeks of February, but has received some modest precipitation across the Verde, Salt, and Gila basins over the past few days.

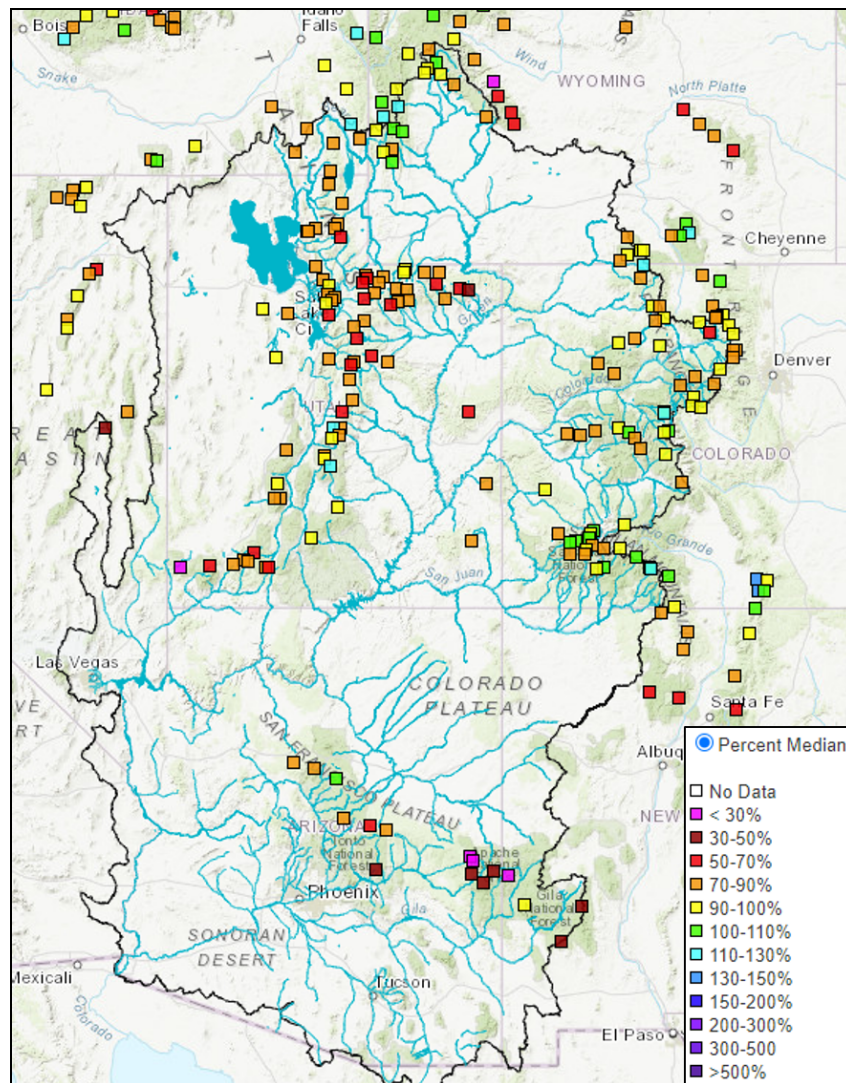


February 1-17, 2021 percent of average precipitation

Snowpack

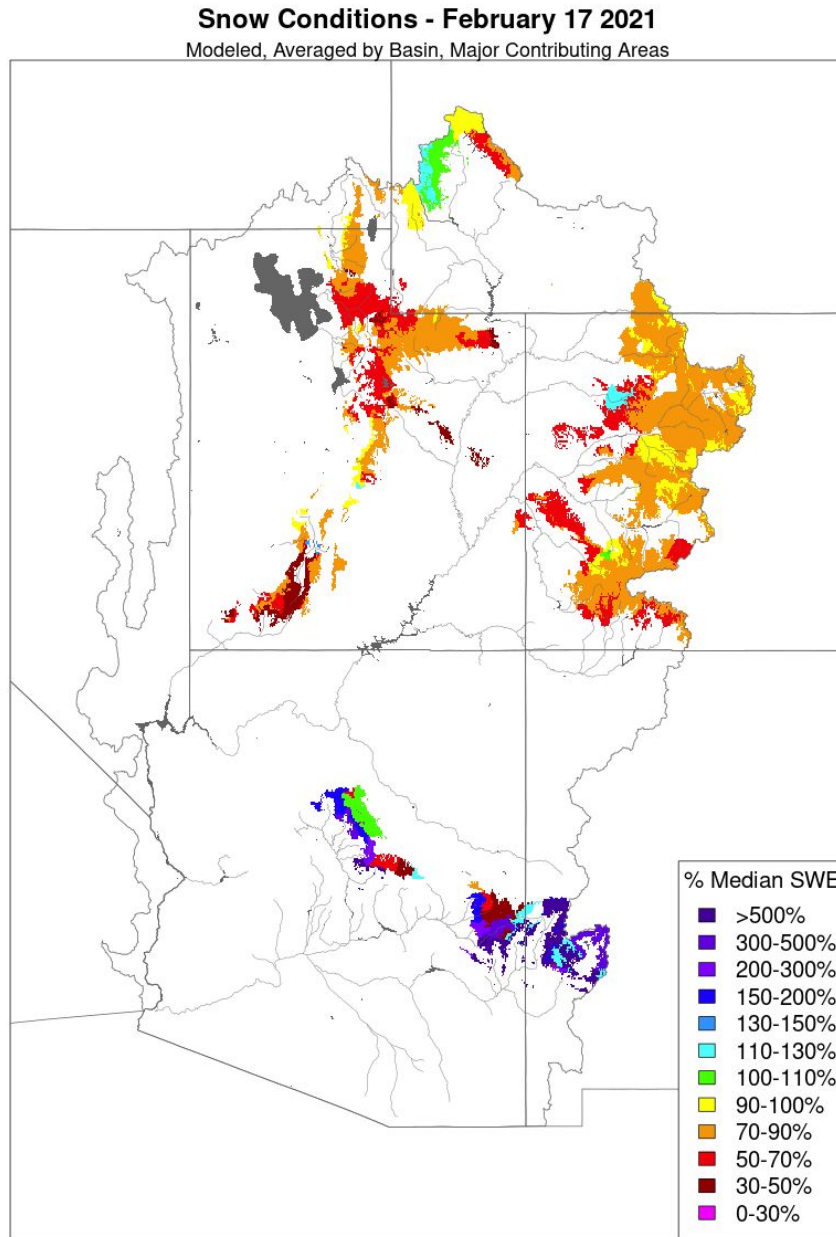
Upper Colorado River and Great Basin snow conditions have improved in terms of percent of normal since early February. SWE conditions are most favorable (around 95% of normal) in the Upper Green and San Juan River Basins, and 70-90% elsewhere across the Upper Colorado River Basin. SWE conditions across the Great Basin generally range between 70-85% of normal and are most favorable in the Six Creeks River Basin.

Lower Colorado River Basin snow conditions have declined since the beginning of February due to a lack of precipitation. Lower Colorado River Basin SWE conditions tend to be more variable and range between 20-90% of the historical median as of mid-February. Snow conditions are near normal (90%) in the Verde Basin, around 45% or normal in the Little Colorado and Upper Gila Basins, and around 20% of normal in the Salt River Basin.



SNOTEL percent median snow conditions as of February 17, 2021

The image below is the representation of mid-February CBRFC model snow conditions in areas that provide the greatest contribution to 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

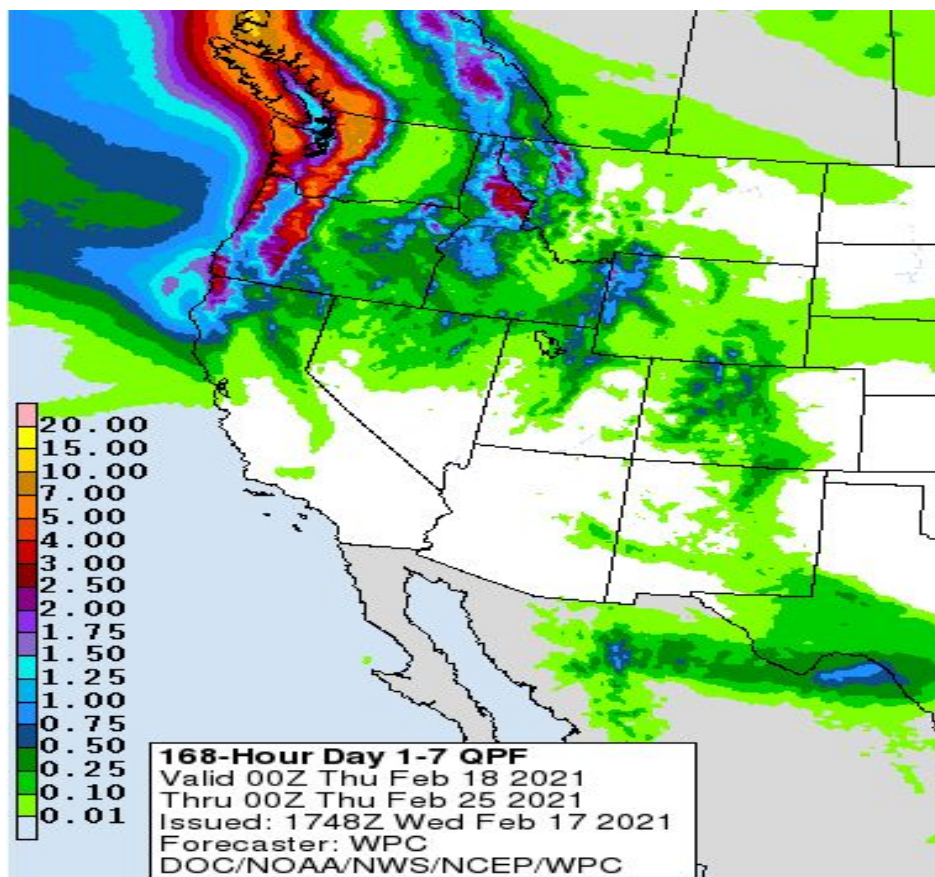
Snow representation from the CBRFC hydrologic model February 17, 2021

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

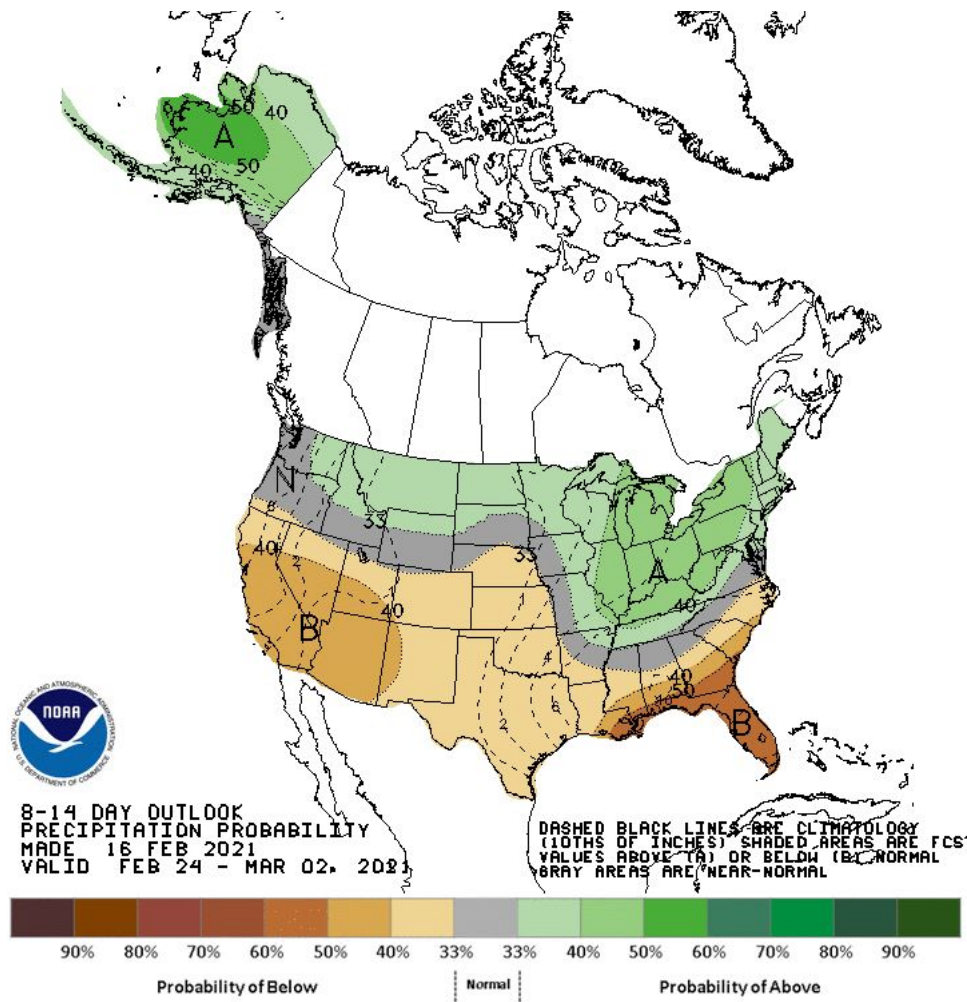
For CBRFC hydrologic model snow click [here](#).

Upcoming Weather

The weather pattern is expected to remain active during the next 7-10 days. A deep trough is persisting across the region today (Wednesday) with northwesterly flow bringing orographic precipitation to much of northern Utah/Colorado and Wyoming. A brief break is forecasted on Thursday before the next storm system brings another round of moderate to heavy precipitation to northern Utah and Idaho/Wyoming on Friday/Saturday (February 19-20). The storm track shifts northward and mostly out of the area by Sunday into early next week. Forecasted precipitation totals over the next week are 0.5-1.5 inches over the northern Utah Wasatch Range and mountains of the Upper Green, and 0.5-1.0 inches over the mountains of northern Colorado. Only light precipitation amounts (less than 0.25 inches) are expected across the Lower Basin. The Climate Prediction Center's 8-14 day (February 24 - March 2) outlook is favoring increased chances of below normal precipitation over the majority of the Colorado River and Great Basins.



Weather Prediction Center precipitation forecast for February 18 - 25, 2021



NWS Climate Prediction Center precipitation probability forecast for Feb 24 - Mar 2, 2021

For CBRFC's beginning of the month online publication that contains basin conditions, summary graphics, and end of month reservoir content tables, refer to the following links.

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](#)