

February 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

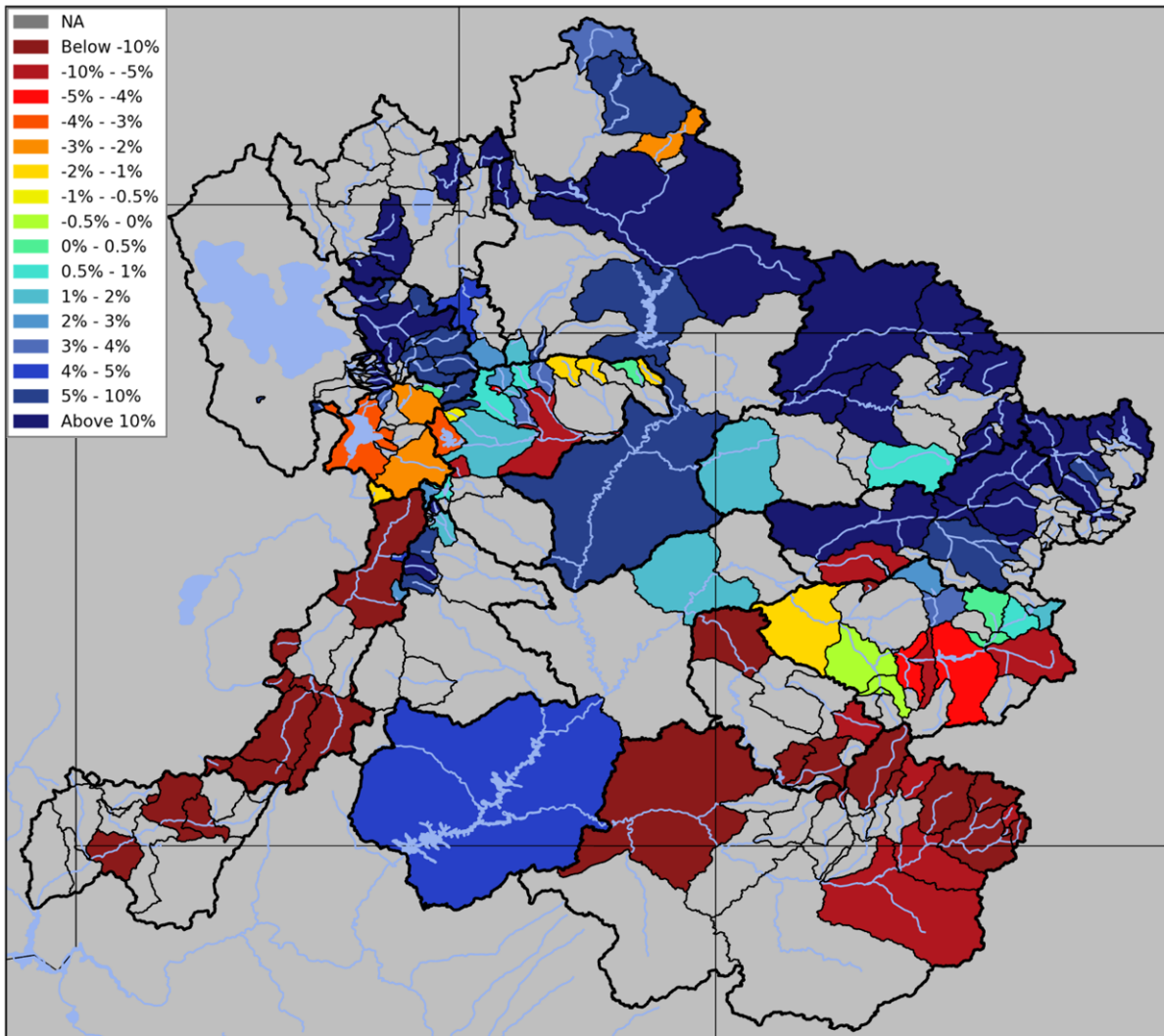
Colorado River Basin and Great Basin April-July water supply volume guidance has generally increased in northern basins and decreased in southern basins since the beginning of February. The improvement in forecast guidance across northern areas is due to above average precipitation and increased snowpack during the first half of February. The majority of SNOTEL sites along the Continental Divide of the White/Yampa and Upper Colorado River mainstem observed precipitation amounts in the top three of their period of record during February 1-18. Observed snow water equivalent (SWE) values at a number of SNOTEL sites across northwest Colorado and the Great Basin currently rank in their top five of record for this time of year.

Great Basin water supply guidance is generally near normal as of mid-February, and has increased in the Six Creeks, Weber, and Bear basins during the past few weeks. Provo/Utah Lake water supply guidance during February has not changed significantly. The largest increases in the Upper Colorado River Basin have been in the Upper Green, White/Yampa, and Upper Colorado River headwaters. Water supply guidance throughout much of the White/Yampa and Upper Colorado River mainstem headwater basins is now above the 1981-2010 historical average. Forecast guidance in the Duchesne and Gunnison has remained the same or slightly declined. Virgin, Dolores, and San Juan volume guidance has decreased as a result of below average precipitation during the first half of February. Southwest Colorado (Gunnison, Dolores, San Juan) water supply guidance as of mid-February is slightly to much below average, with below normal soil moisture conditions continuing to have a negative impact on the water supply outlook.

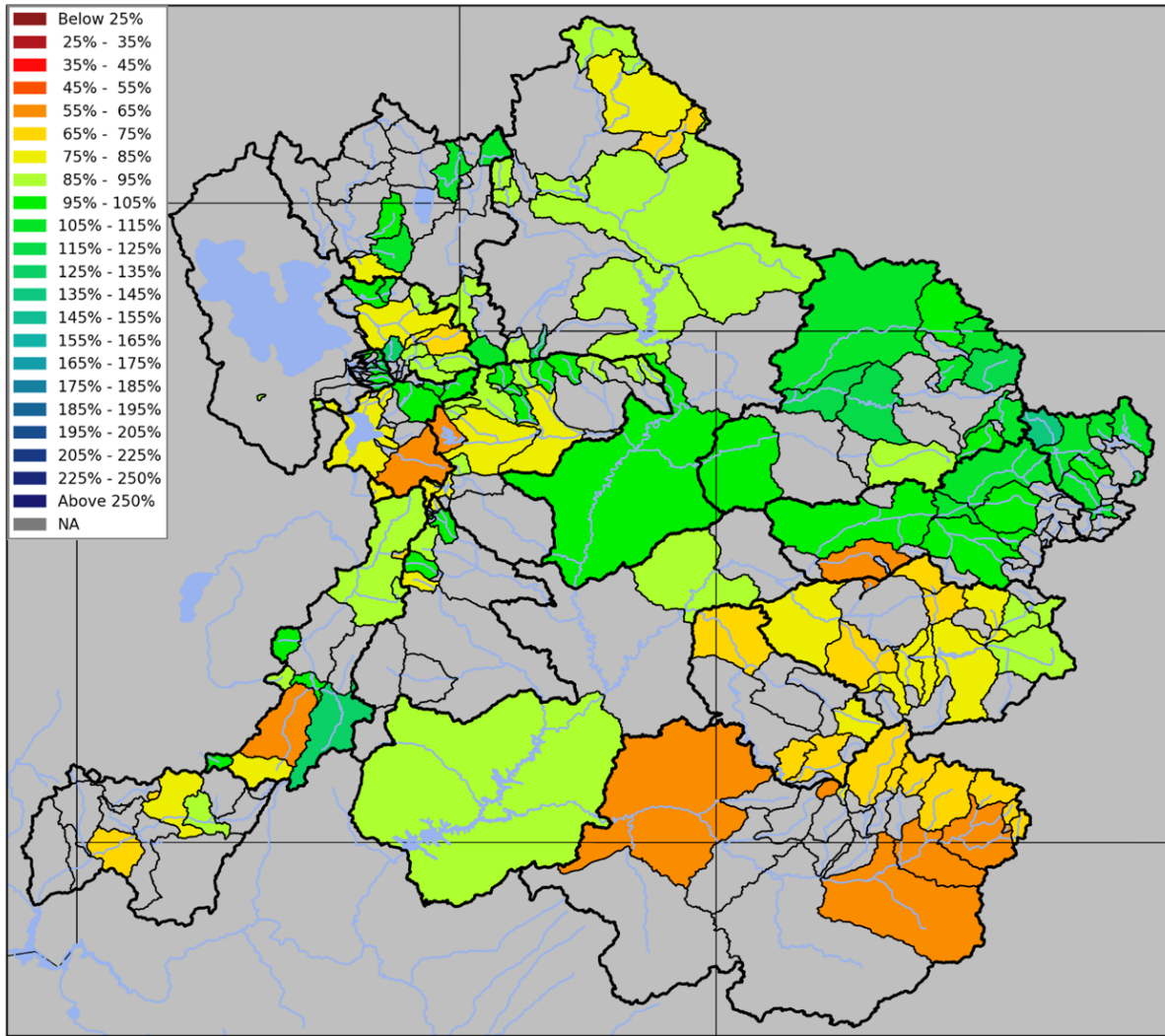
April-July unregulated inflow forecasts for some of the major reservoirs in the Upper Colorado River Basin include Fontenelle Reservoir 620 KAF (86% average), Flaming Gorge 870 KAF (89% of average), Blue Mesa Reservoir 560 KAF (83% of average), McPhee Reservoir 220 KAF (75% of average), and Navajo Reservoir 475 KAF (65% of average). The Lake Powell inflow forecast did not change from the beginning of the month and is 5.7 MAF (80% of average).

Precipitation was variable across the Lower Colorado River Basin during the first half of February. Upper Gila and Little Colorado water supply guidance has generally remained steady since the beginning of the month due to near/above average precipitation. Mid-February water supply guidance in the Verde and Salt basins has declined during February and is currently near to below the 1981-2010 median.

Seasonal Water Supply Forecasts



Trend in the April-July runoff volume forecast guidance from February 1 to February 17, 2020.
(Change in April-July percent of average)



April-July runoff volume guidance as of February 17, 2020.
(percent of 1981-2010 average)

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

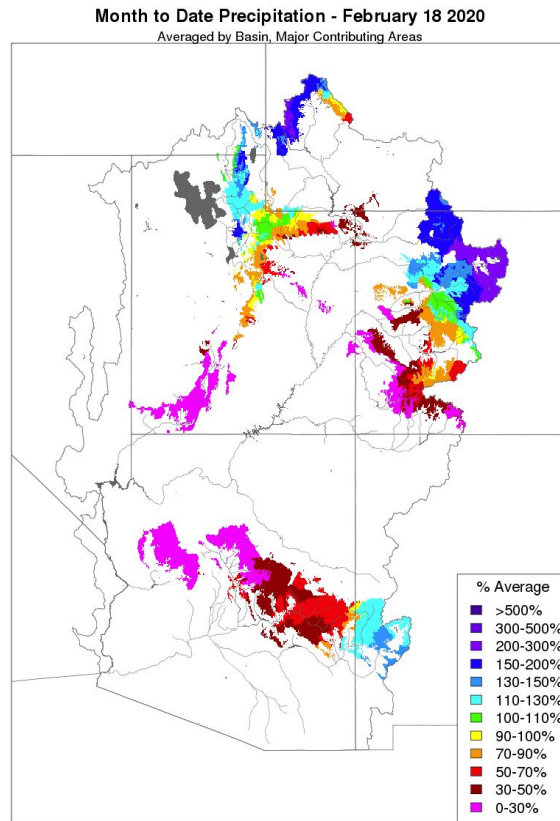
Water Supply Discussion

Weather Synopsis

The weather pattern during the first week of February was similar to the first week of January. A persistent jet stream combined with moisture streaming in from the Pacific produced precipitation amounts across the mountainous areas of northern Utah/Colorado and Wyoming. This was followed by a weather system that brought moderate precipitation and high elevation snow to southern Arizona on February 10-11. Another storm system just after the middle of the month brought additional precipitation to northern portions of the basin.

Precipitation

February-to-date precipitation favored basins near the Utah-Idaho-Wyoming border, northwest Colorado, and southern Arizona. The majority of SNOTEL sites along the Continental Divide of the White/Yampa and Upper Colorado River mainstem observed precipitation amounts in the top three of their period of record during February 1-18. In the Great Basin, a number of SNOTEL sites also experienced near record precipitation during the first half of February. In southwest Colorado, the Gunnison received near to below average precipitation while the Dolores and San Juan basins received much below average precipitation during the first half of February. Lower Colorado River Basin precipitation during the first two and a half weeks of February was generally below to much below average, with the exception of eastern parts of the Upper Gila and Little Colorado basins. The image below shows February-to-date precipitation in significant runoff areas, as a percent of average.



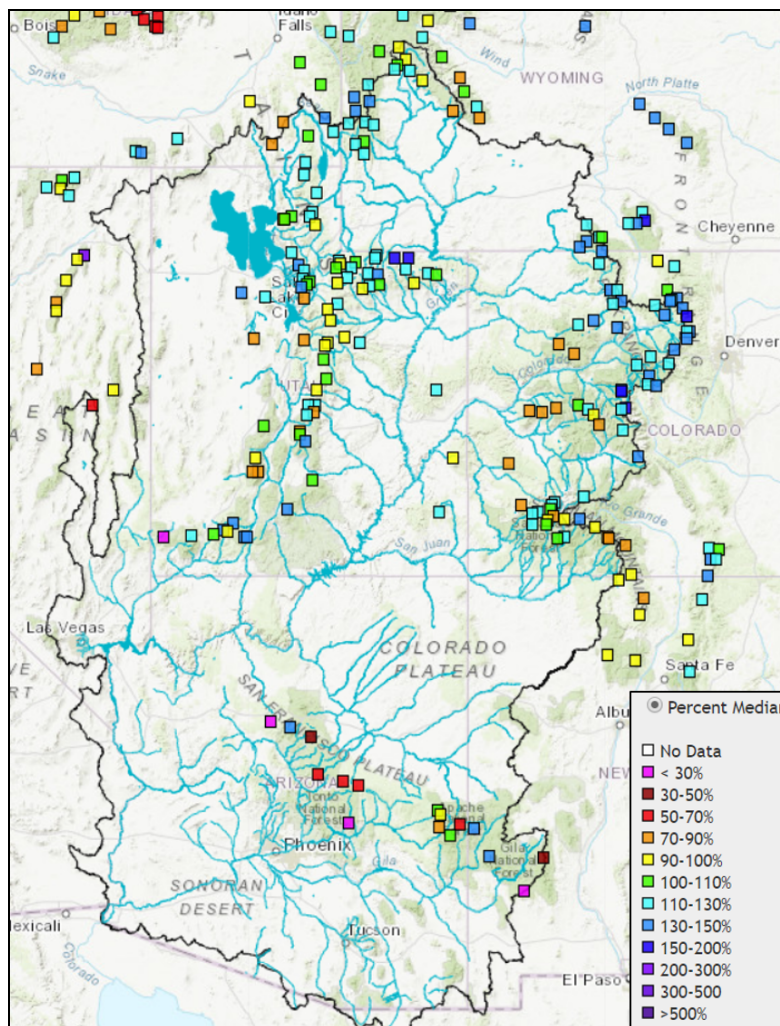
February 1-18, 2020 percent of average precipitation in significant runoff areas.

Snowpack

Snow water equivalent (SWE) conditions as of mid-February are generally above to near normal (median) throughout the Great Basin and Upper Colorado River Basin. Observed SWE values at a number of SNOTEL sites across northwest Colorado and the Great Basin currently rank in their top five of record for this time of year. Basins in southern Utah/Colorado did not benefit from the weather pattern over the past several weeks. A lack of snow during the first part of February has caused a decline in Virgin and southwest Colorado (Gunnison, San Juan, Dolores) SWE conditions, when compared to the 1981-2010 percent of median.

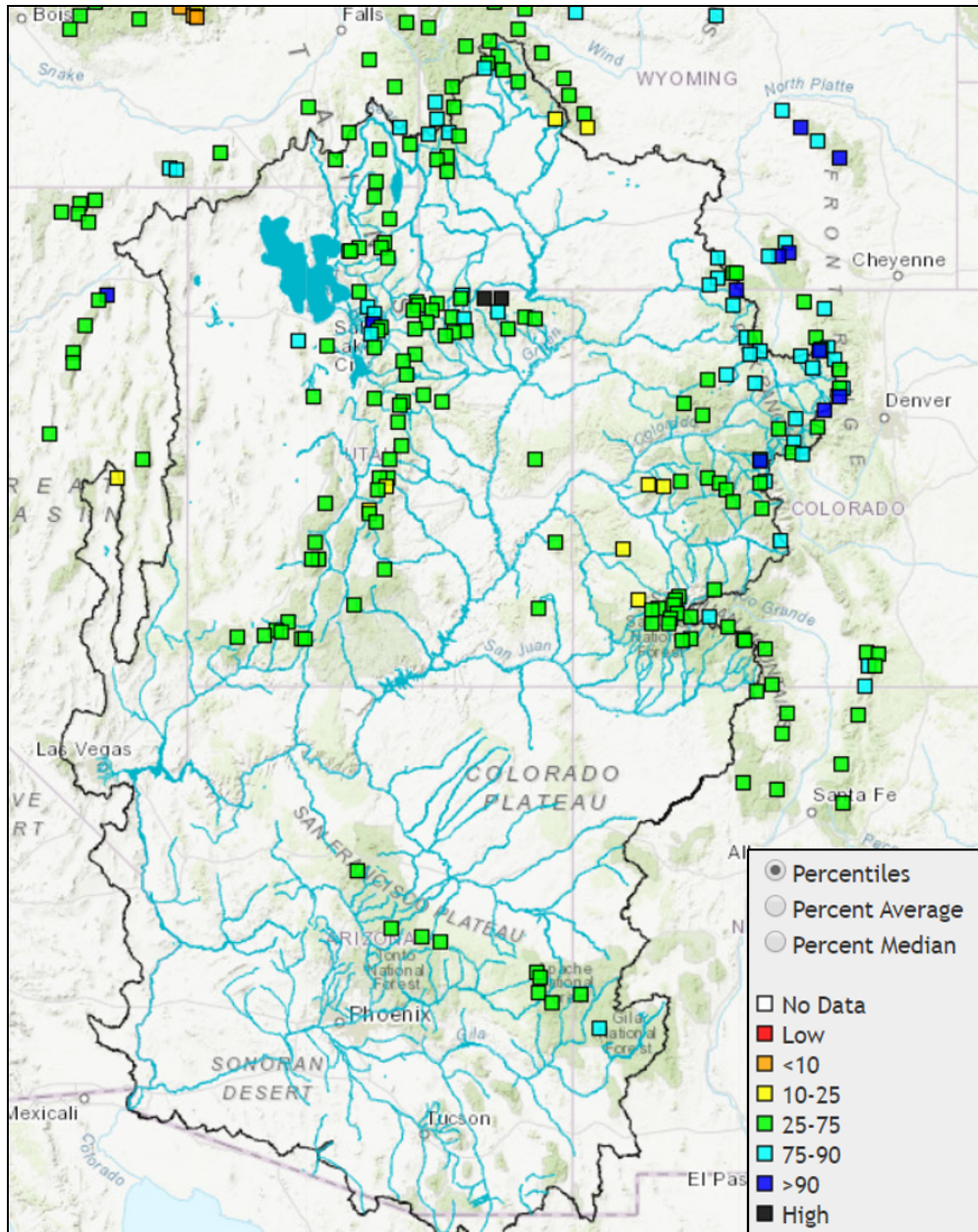
Snow conditions during the first half of February across the Great Basin saw the most improvement within the Six Creeks basin, where SWE is currently around 130% of the historical median. Bear, Weber, Sevier, and Provo/Utah Lake basin snow conditions remain near normal as of mid-February.

In the Lower Colorado River Basin, Upper Gila SWE conditions have improved since the beginning of February but remain below normal. Salt and Little Colorado basin snow conditions did not change significantly during the first half of February and continue to be near to slightly below normal. SWE conditions as a percent of the historical median have declined the most in the Verde basin during the first half of February, where SWE is now below normal.



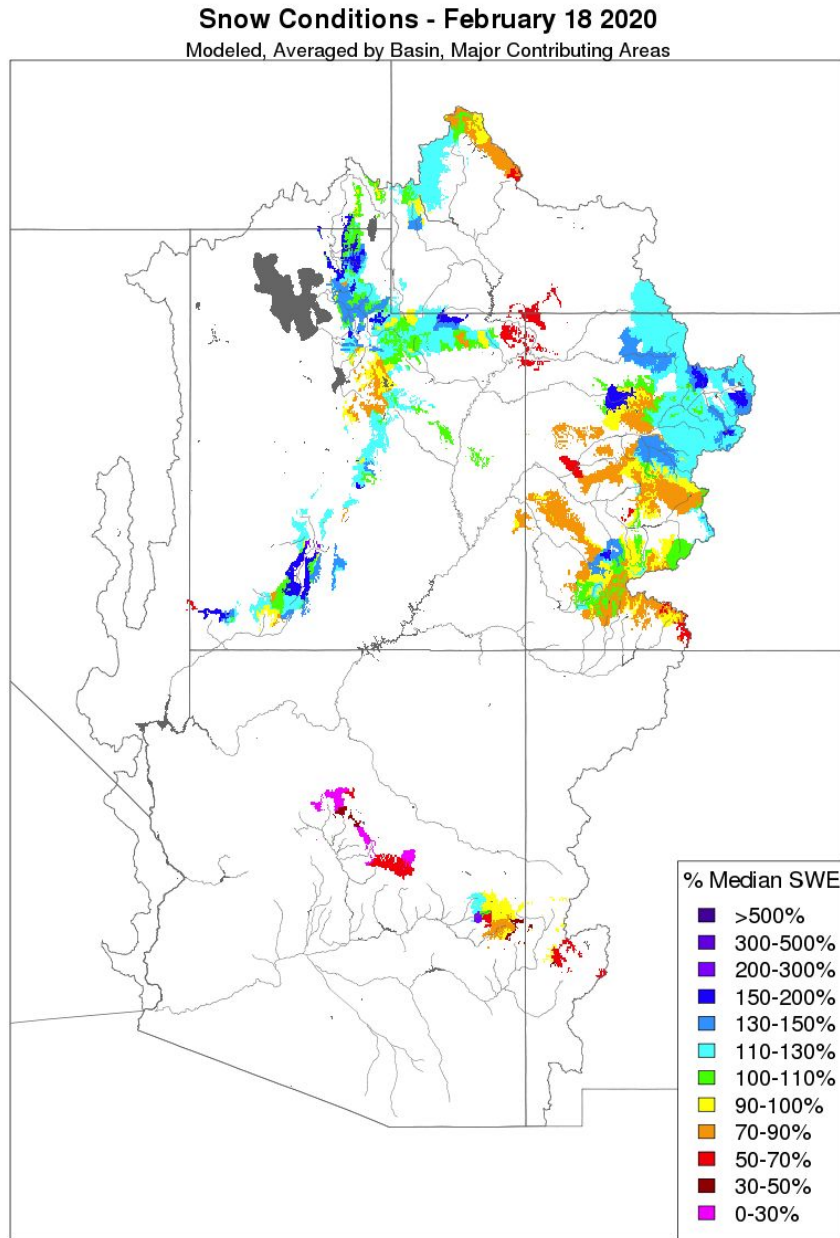
Observed (SNOTEL) percent median SWE conditions as of February 18, 2020.

The snow percentile image displayed below indicates where current SWE measurements rank in the historical record (typically 33-42 years) for each site. Sites in black are the highest on record. Most sites in dark blue are ranked in the top three.



February 18, 2020 SNOTEL SWE percentile.

The image below is the representation of snow in the CBRFC hydrologic model. The snow represented in the model closely mirrors the SNOTEL image.



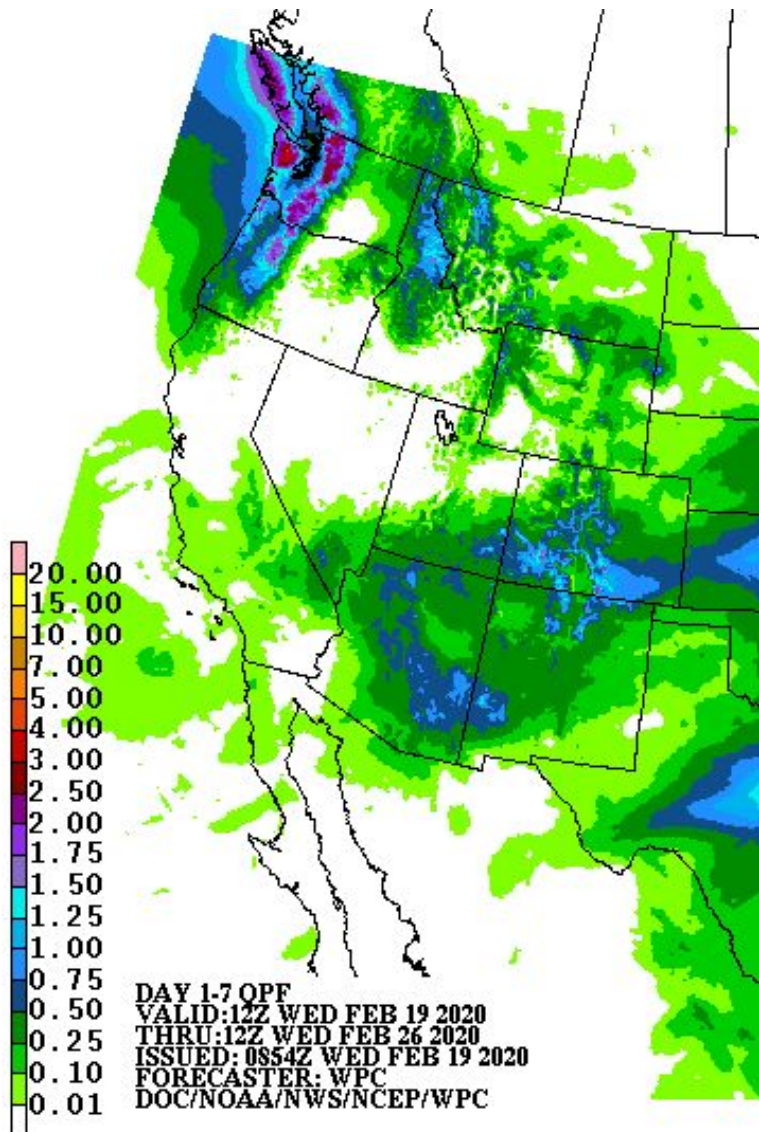
CBRFC hydrologic model snow conditions in significant runoff areas as of February 18, 2020.

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

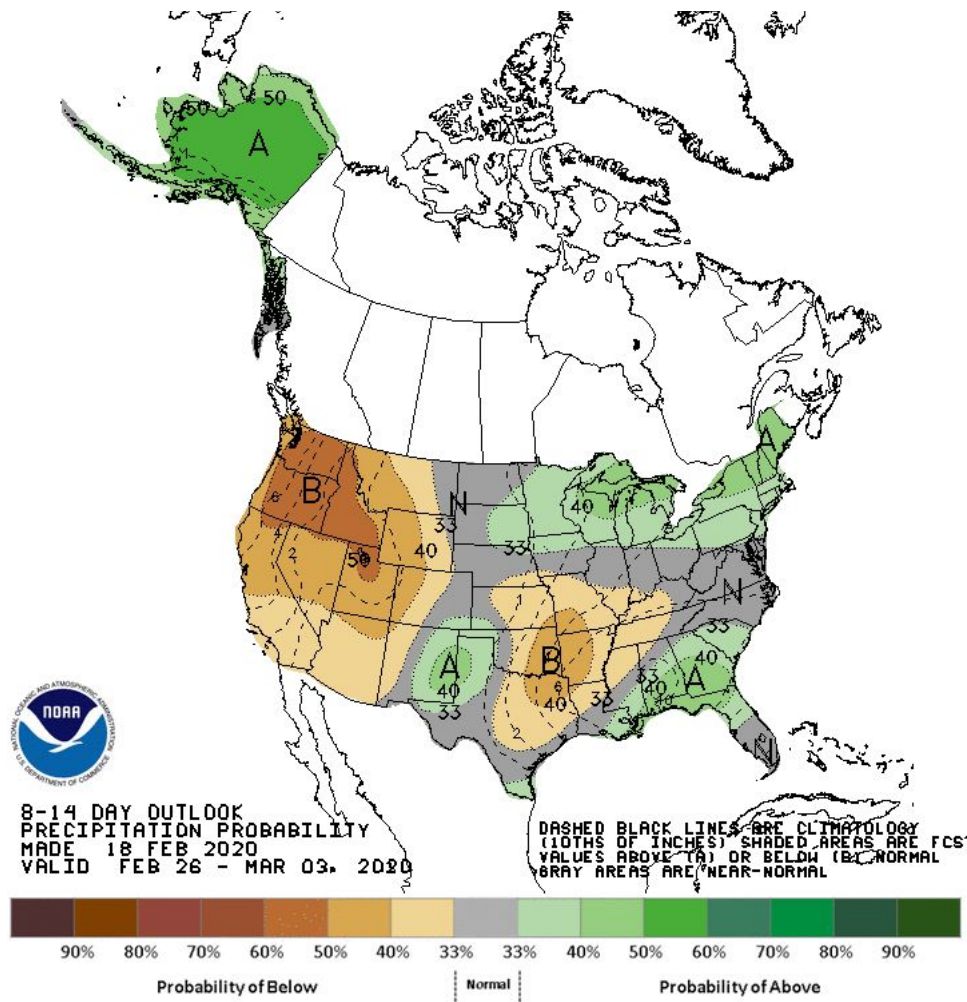
For CBRFC hydrologic model snow click [here](#).

Upcoming Weather

A weather system is expected to move across Arizona, southern Utah, and southwest Colorado this weekend (February 22-23). Forecast storm total precipitation amounts of a half inch to an inch are common over the Upper Gila and Salt basins within the Lower Colorado River Basin as well as higher elevation areas in southwest Colorado (San Juan, Dolores, Gunnison). Another system is expected to arrive from the Pacific Northwest later in the weekend into early next week, which looks to be similar to previous weather events this winter for the northern Wasatch, Upper Green, and northern Colorado basins. There is uncertainty between weather models in the medium (5-7 day) term forecast, but high elevation snow looks probable across the northern mountains. The 8-14 day (February 26-March 3) outlook is forecasting increased chances of below average precipitation and temperature.



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



NWS Climate Prediction Center precipitation probability forecast for February 26-March 3, 2020.

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](#)