

May 18, 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

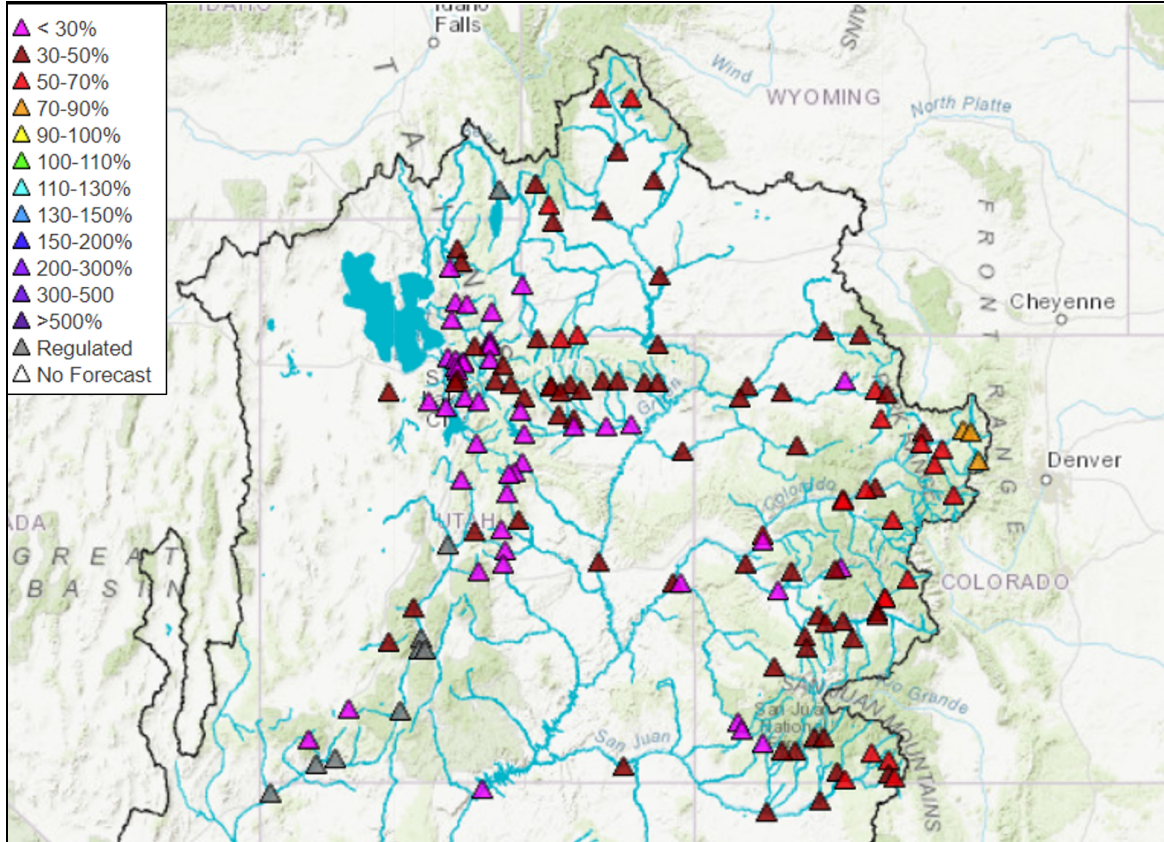
Below to much below normal spring runoff is expected across the region due to very poor (dry) antecedent soil moisture conditions and below to much below normal seasonal (October-May) precipitation. Mid-May water supply guidance generally ranges between 5-85% of normal across the Upper Colorado River Basin and 5-50% of normal across the Great Basin. April-July water supply volume guidance falls in the bottom (driest) five on record at many locations.

April-July water supply volume guidance has decreased across the majority of the region since the beginning of May. May precipitation has been below normal across most of the region, with the exception of the Upper Colorado River mainstem headwaters, where precipitation was near to above normal. Temperatures through the first half of May have been generally near normal, with no prolonged periods of well above or below normal temperatures.

Below normal snow water equivalent (SWE) conditions have existed throughout the winter and spring over most of the Colorado River and Great Basins. SWE at the majority of SNOTEL stations across the region peaked between 70-85% of the historical normal peak SWE. Since the beginning of May, SWE conditions as a percent of normal have declined across the majority of the region as a result of snowmelt and below average precipitation during the first half of the month. Mid-May SNOTEL SWE conditions generally range between 0-70% of normal across the Upper Colorado River Basin and 20-35% of normal across the Great Basin.

April-July unregulated inflow forecasts for some of the major reservoirs in the Upper Colorado River Basin include Fontenelle Reservoir 345 KAF (48% average), Flaming Gorge 395 KAF (40%), Blue Mesa Reservoir 340 KAF (50%), McPhee Reservoir 74 KAF (25%), and Navajo Reservoir 310 KAF (42%). The Lake Powell inflow forecast is 1.85 MAF (26% of average), a two percent decrease from the early May forecast.

Seasonal Water Supply Forecasts



Upper Colorado, Great, Virgin River Basins: April-July runoff volume guidance as of May 17, 2021
(percent of 1981-2010 average)

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

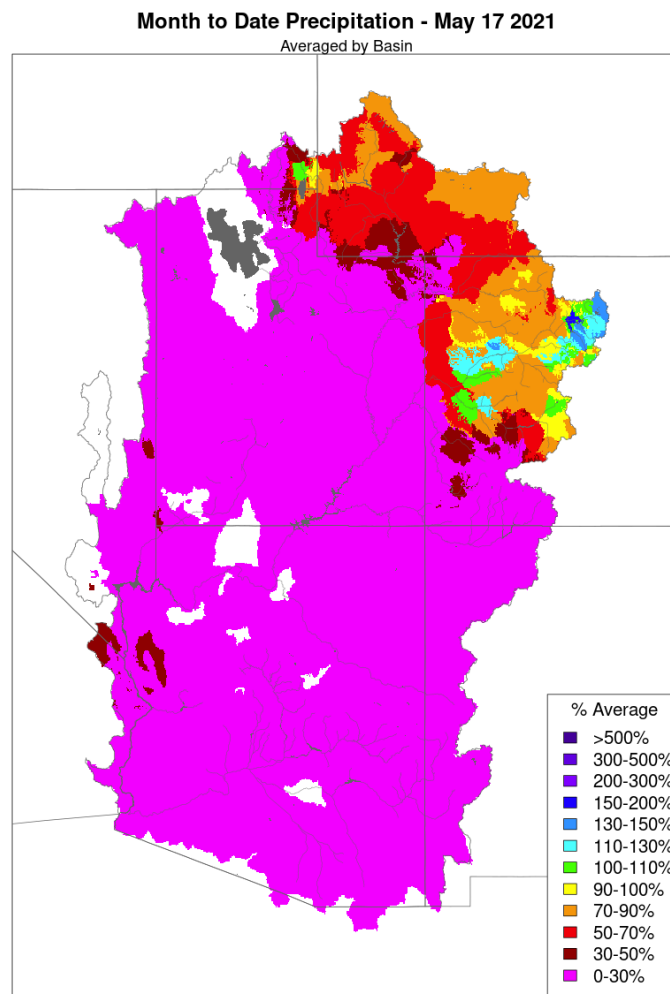
Water Supply Discussion

Weather Synopsis

The weather pattern through the first half of May has been rather progressive, with generally near normal temperatures and no prolonged periods of well above or below normal temperatures. A few storm systems have produced decent precipitation amounts across Colorado. In fact, the Upper Colorado headwaters have been rather wet with above normal precipitation.

Precipitation

Month-to-date precipitation has generally been much below normal across Utah, Arizona, and southwest Colorado, below normal in Wyoming, and near to above normal over the northern half of Colorado. As mentioned earlier, some heavier precipitation events have occurred over the Upper Colorado headwaters where SNOTELs are generally in the 70-90th percentile. The Lower Colorado River Basin has seen little if any precipitation, however this is not particularly unusual as we progress into the late spring.



May 1-16, 2021 percent of average precipitation

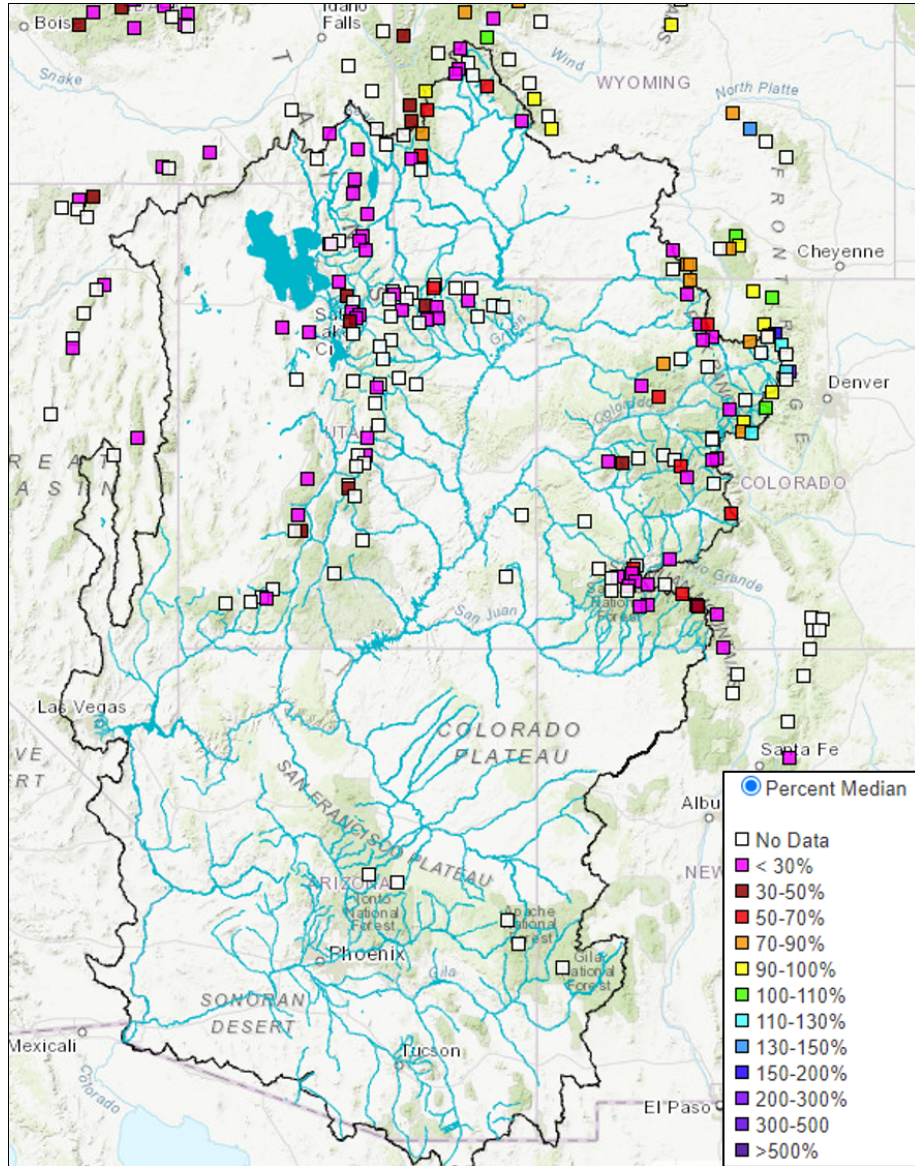
Snowpack

Percent normal (median) snow water equivalent (SWE) can be misleading and vary significantly in the spring after peak snowpack has passed and during the snowmelt season. With that said, mid-May SWE conditions are mostly below to much below normal throughout the CBRFC forecast area. Below normal snow conditions have existed throughout the winter and spring over most of the Colorado River and Great Basins. SWE at the majority of SNOTEL stations across the region peaked between 70-85% of the historical normal peak SWE.

Since the beginning of May, snow water equivalent (SWE) conditions as a percent of normal have declined throughout the majority of the region as a result of snowmelt and below average precipitation during the first half of the month. The one exception is the Upper Colorado River mainstream headwaters, where SWE conditions have improved slightly since the beginning of May as a result of near to above normal precipitation and delayed snowmelt due to mild temperatures.

Upper Colorado River Basin mid-May SNOTEL SWE conditions generally range between 0-70% of the 1981-2010 historical median: Upper Colorado River mainstem/headwaters (70%); Upper Green (65%); White/Yampa (60%); Gunnison (50%); San Juan (35%); Duchesne (25%); Virgin (5%); Dolores (0%). Mid-May SWE conditions across the Great Basin generally range between 20-35% of normal: Six Creeks (35%); Provo/Utah Lake and Sevier (25%); Bear and Weber (20%).

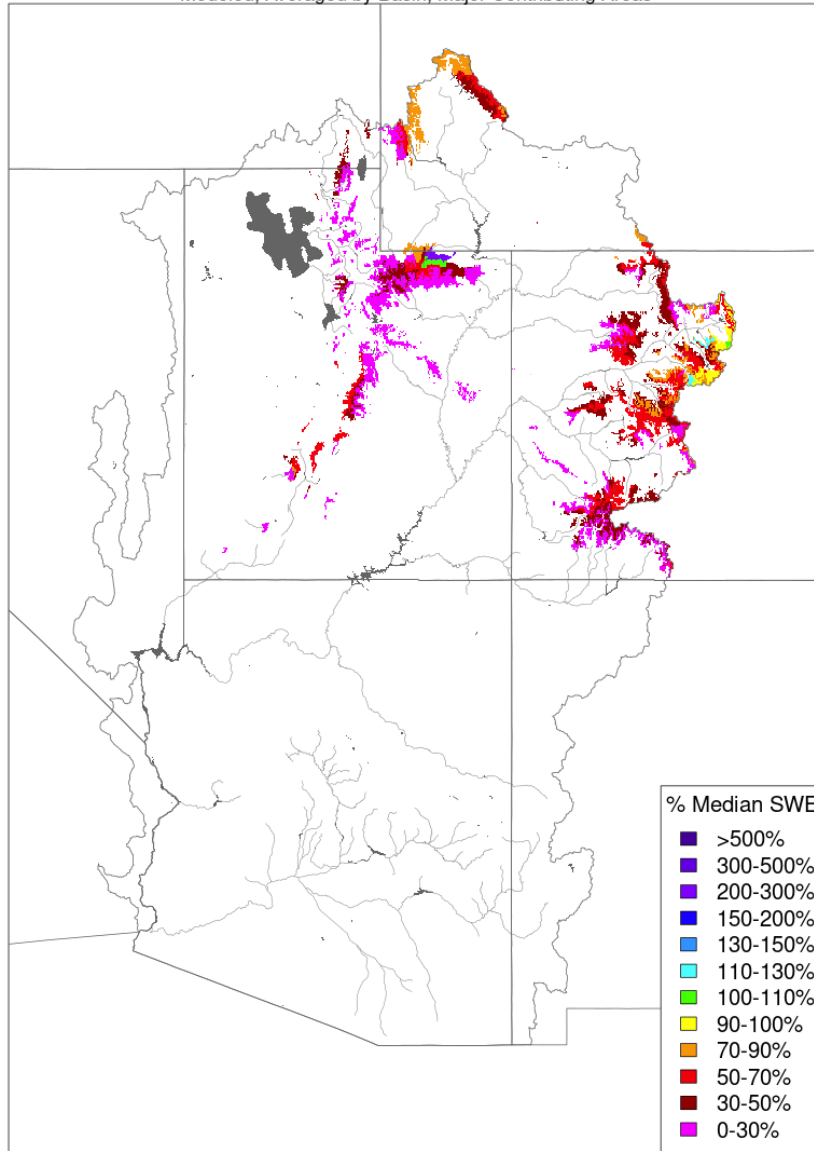
The images below show observed snow conditions and CBRFC hydrologic model snow conditions.



May 17, 2021 observed (SNOTEL) SWE (percent median)

Snow Conditions - May 17 2021

Modeled, Averaged by Basin, Major Contributing Areas



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

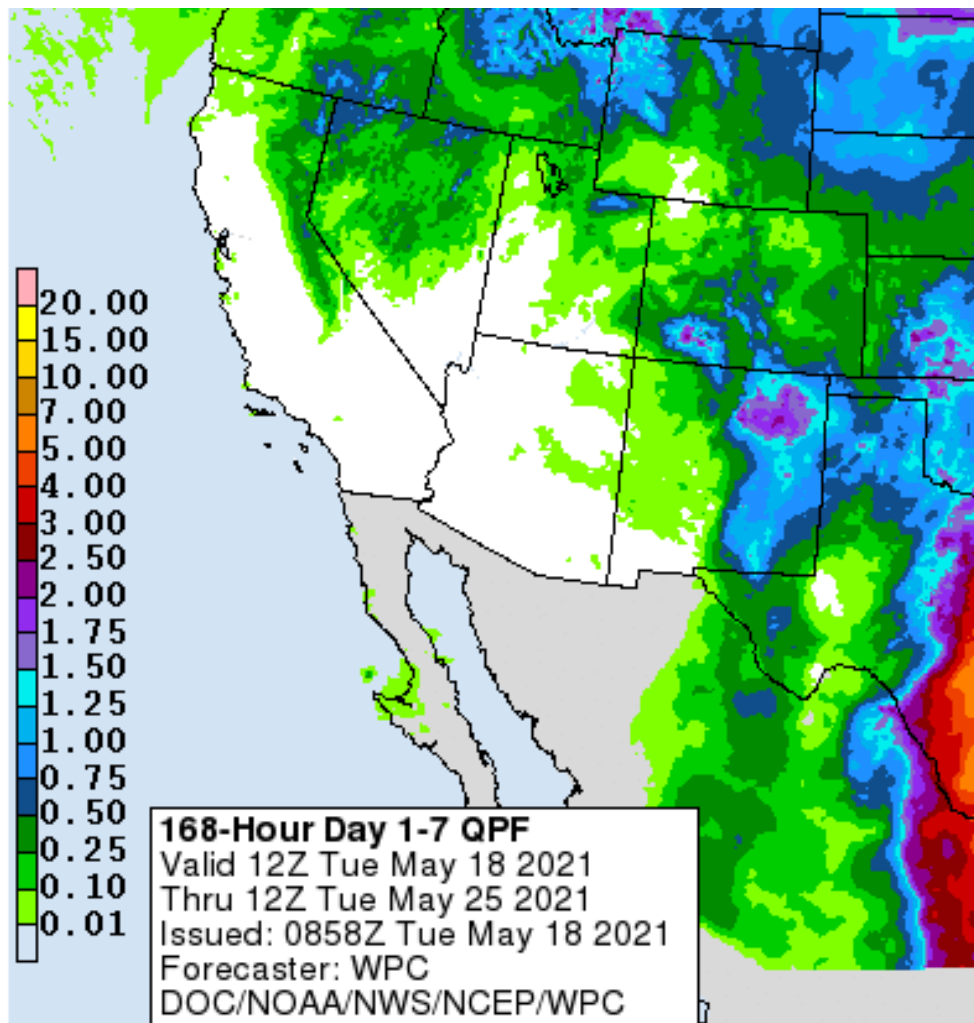
May 17, 2021 CBRFC hydrologic model SWE (percent median)

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

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

Upcoming Weather

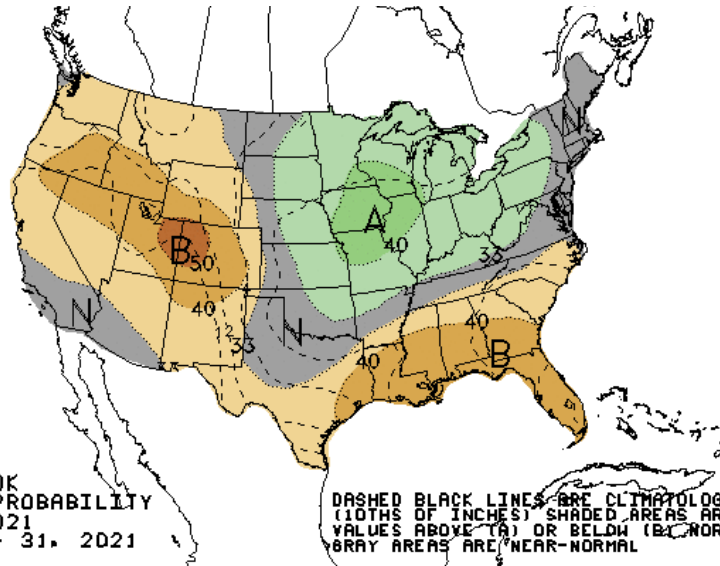
A weak upper low will move across southern Colorado through Tuesday afternoon. Showers are expected to develop with this system (mainly during the afternoon/evening), with the heaviest amounts over the mountains of Colorado (0.50-1.25 inches possible). Cloud cover will be widespread during the afternoon and temperatures will be moderated by this cloud cover and precipitation. Conditions will dry out by the middle of this week ahead of a deep trough that is forecasted to move southward into Nevada. Temperatures will be 5-10 degrees above normal by May 19-20. Weather models are in general agreement for the latter half of this week, showing the low lifting northward across Idaho by the weekend. Temperatures will cool to slightly below normal, mainly across the Great Basin from Friday through the weekend (May 21-23), with less cooling (near normal temperatures) further east over the Colorado basins. While the weather models indicate scattered showers will occur with this trough, forecasted precipitation amounts are modest at this time. The Climate Prediction Center outlook for the last week of May has slightly elevated odds for below normal precipitation and near normal temperatures.



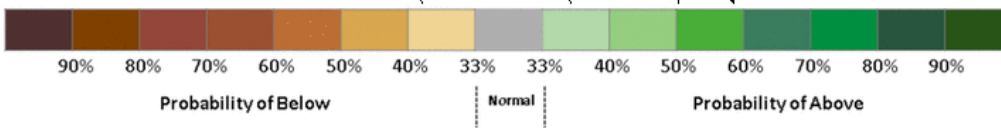
Weather Prediction Center precipitation forecast for May 18-24, 2021



8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 17 MAY 2021
VALID MAY 25 - 31, 2021



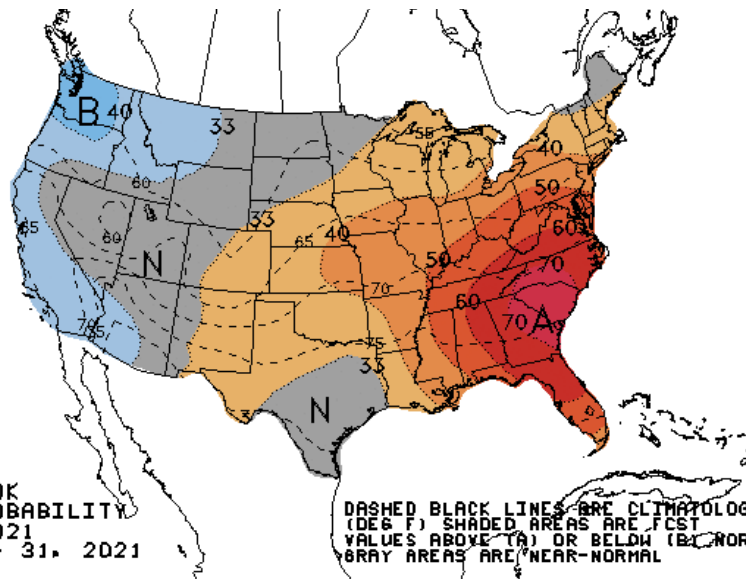
DASHED BLACK LINES ARE CLIMATOLOGY (TENTHS OF INCHES). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.



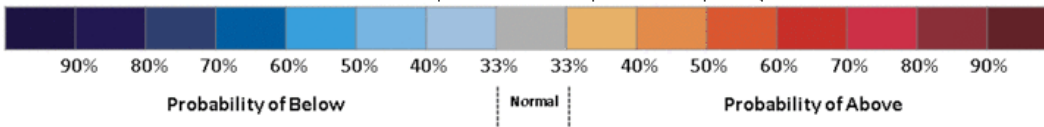
NWS Climate Prediction Center precipitation probability forecast for May 25-31, 2021



8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 17 MAY 2021
VALID MAY 25 - 31, 2021



DASHED BLACK LINES ARE CLIMATOLOGY (DEGS F). SHADED AREAS ARE FCST VALUES ABOVE (A) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.



NWS Climate Prediction Center temperature probability forecast for May 25-31, 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](#)