

May 18, 2022 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

May precipitation has targeted central and northern Utah, southwest Wyoming, and northwest Colorado, but the majority of areas across the Great Basin and Colorado River Basin have received well below average precipitation during the first half of the month. Mid-May snow water equivalent (SWE) conditions are below to well below normal across most of the Colorado River Basin and Great Basin with snowpack conditions declining rapidly from north to south. Accelerated snowmelt is currently occurring across much of the Upper Colorado River Basin as a result of above normal temperatures (increased solar radiation) and significant dust-on-snow conditions (reduced snowpack albedo) across western Colorado. Spring peak flows have recently occurred or are expected to occur this week across much of the Upper Colorado River Basin, with seasonal peak flows occurring earlier than normal if forecasts verify.

April-July water supply volume guidance has decreased during May and is mostly below average across the Upper Colorado River Basin and Great Basin. Mid-May Upper Colorado River Basin water supply guidance generally ranges between 45-95% of the 1991-2020 historical average. Great Basin water supply volume guidance is 30-80% of average.

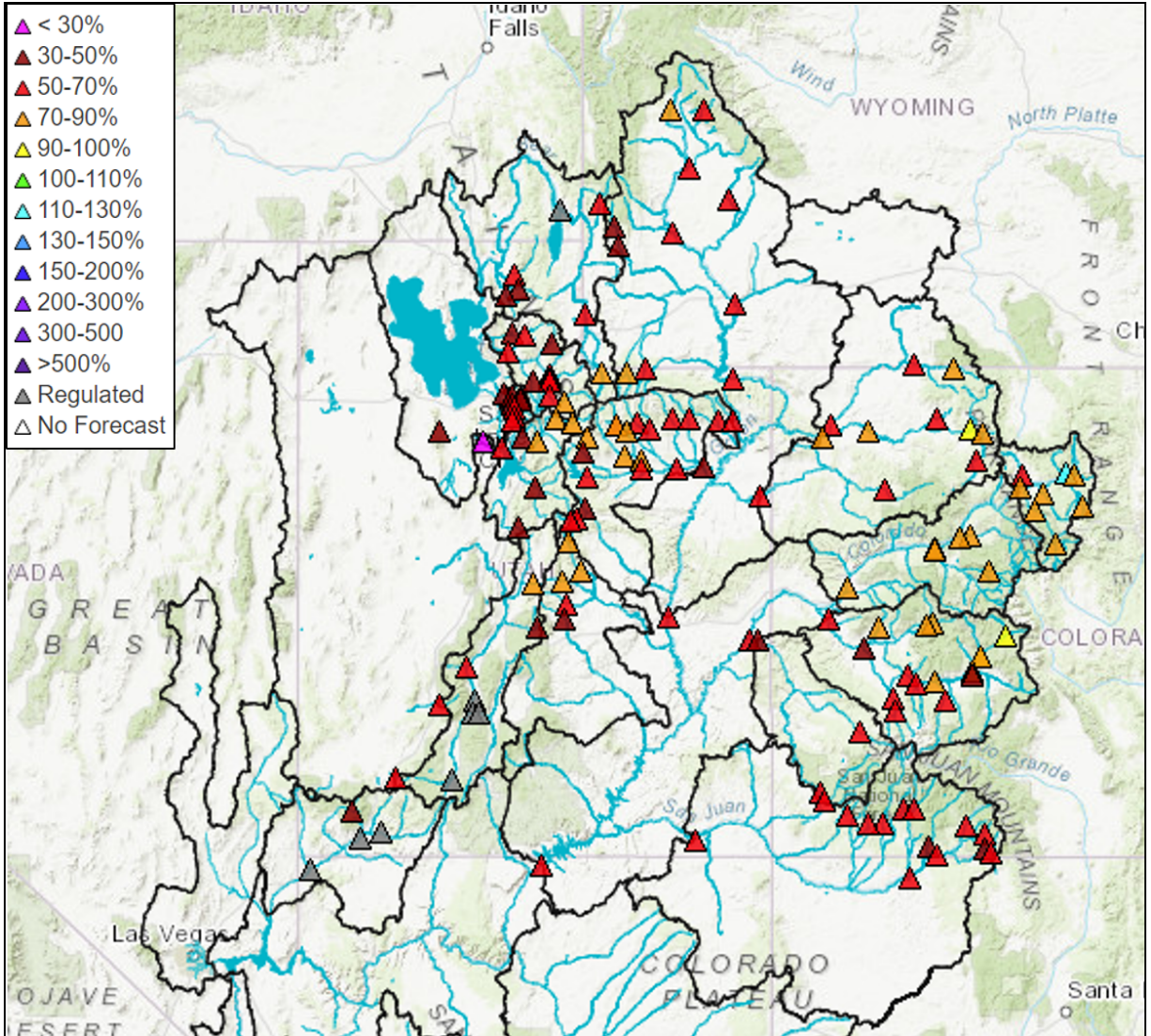
May 17 water supply guidance (% of normal) by basin:

Basin	Apr-Jul Water Supply Guidance Range
Upper Green	45-75%
Duchesne	50-80%
White/Yampa	65-95%
Upper Colorado Mainstem	55-90%
Gunnison	50-95%
Dolores	45-60%
San Juan	50-70%
Bear	30-80%
Weber	45-75%
Six Creeks	35-70%
Provo/Utah Lake	45-80%
Sevier	30-75%

April-July unregulated inflow forecasts for some of the major reservoirs in the Upper Colorado River Basin include Fontenelle Reservoir 450 KAF (61% average), Flaming Gorge 520 KAF (54%), Blue Mesa Reservoir 445 KAF (70%), McPhee Reservoir 136 KAF (53%), and Navajo Reservoir 340 KAF (54%). The Lake Powell inflow forecast is 3.5 MAF (55% of average), a four percent decrease from the early May forecast.

Warm weather is forecast across the region through tomorrow (Thursday), with temperatures approximately 5-10 degrees above climatology. A broad trough is expected to deepen over the western US on Thursday, bringing a shift to below average temperatures across the region by Friday, as well as a chance of precipitation to northern basins including the Green, White/Yampa, and Colorado River headwaters. Generally, precipitation totals in these areas are expected to be around 0.25"-0.75", with higher amounts possible across northwest Colorado (headwaters of the White/Yampa/Colorado Rivers).

Seasonal Water Supply Forecasts



Colorado River Basin and Great Basin
April-July runoff volume guidance as of May 17, 2022.
(percent of 1991-2020 average)

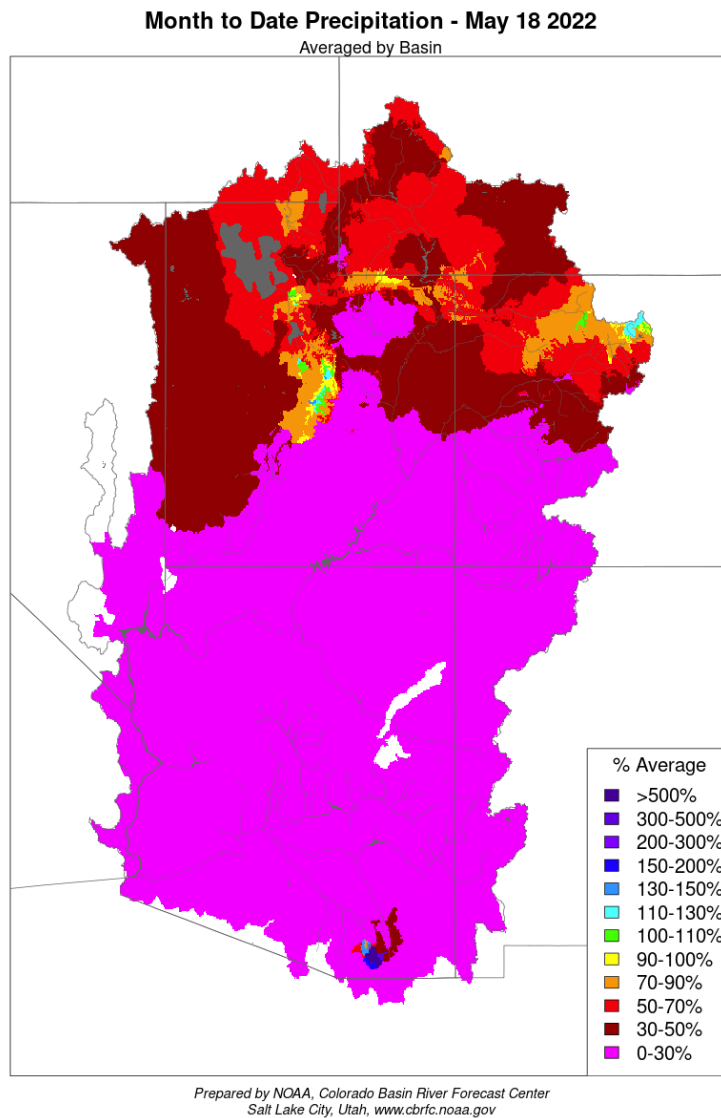
For specific site water supply forecasts click [here](#).

Water Supply Discussion

May Weather/Precipitation

Most basins have received well below average precipitation during the first half of May. May precipitation has targeted central and northern Utah, southwest Wyoming, and northwest Colorado. Limited areas in central Utah and northwest Colorado have received near to above average May-to-date precipitation (image below).

Since April 1, southern Utah, southwest Colorado, and Arizona have received well below normal precipitation. April through mid-May precipitation is below the 25th percentile and ranks in the driest five at the majority of SNOTEL stations across southwest Utah (southern Sevier, Virgin basins), southwest Colorado (Gunnison, Dolores, San Juan basins), and central Arizona (Verde, Salt basins). Conversely, April through mid-May precipitation across northern areas including the Weber/Bear/Upper Green basins and portions of the White/Yampa basins has generally been above the 60th percentile.



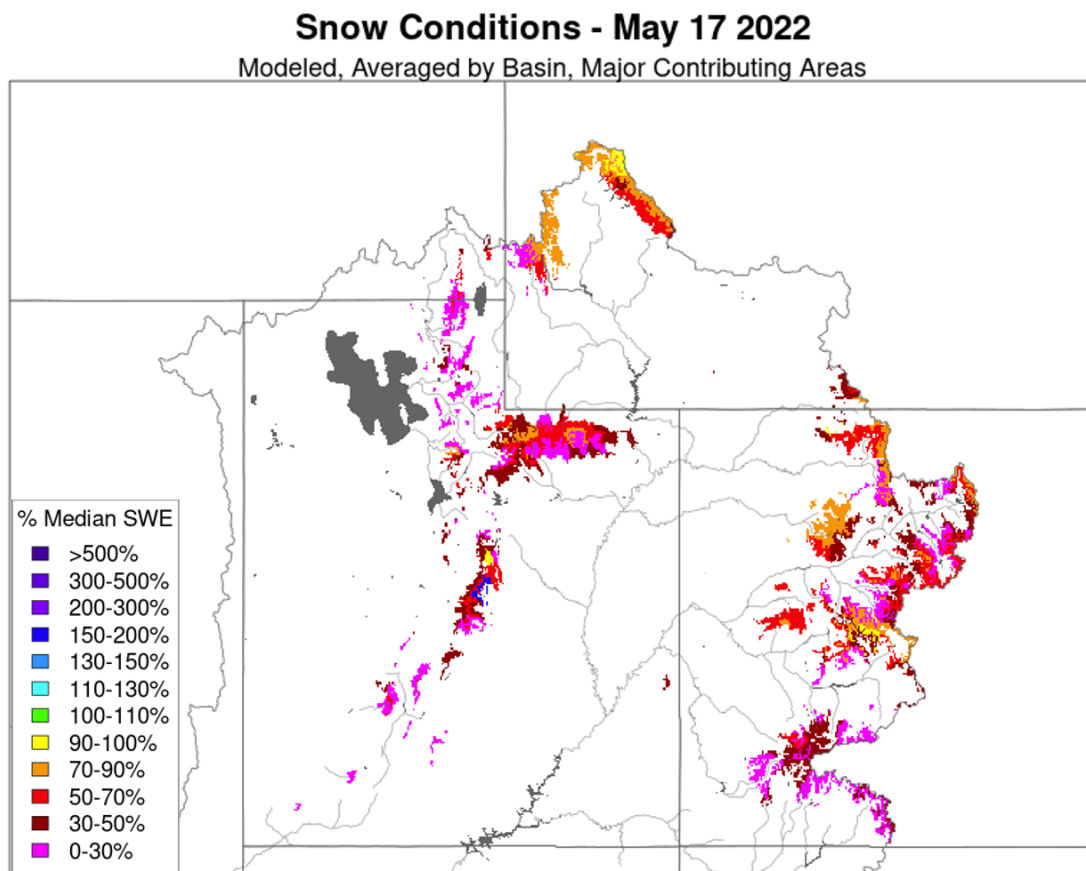
Percent of average precipitation - May 1-17, 2022.

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 below to well below normal across most of the Colorado River Basin and Great Basin with snowpack conditions declining rapidly from north to south. The exception is the Upper Green River Basin in southwest Wyoming, where near to below normal April through mid-May temperatures, periods of additional snow accumulation, and cloudier weather has slowed snowmelt. The Wyoming Range (Upper Green headwaters) near the Idaho-Wyoming border is currently the only area with near/slightly above normal SNOTEL SWE conditions. SNOTEL stations across northwest Colorado (White/Yampa/Colorado River headwaters) that have not yet melted out are reporting mid-May SWE values that are generally 50-80% of normal. Most SNOTEL stations across southern Utah (Sevier, Virgin basins) and southwest Colorado (Gunnison, Dolores, San Juan basins) have melted out or are near melt out.

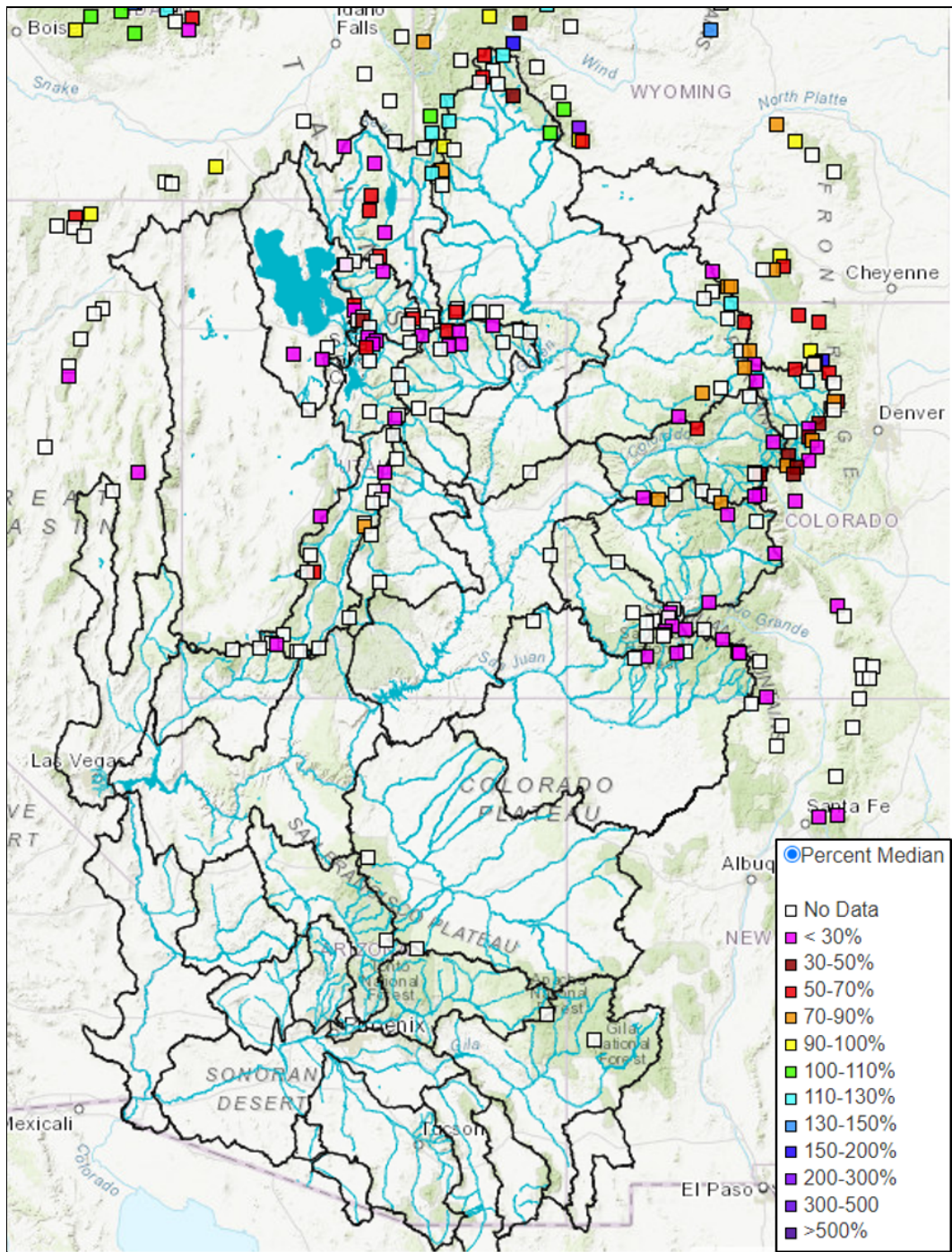
Rapid snowmelt is currently occurring across much of the Upper Colorado River Basin as a result of above normal temperatures (increased solar radiation) and significant dust-on-snow conditions (reduced snowpack albedo) across western Colorado. Spring peak flows have recently occurred or are expected to occur this week across much of the Upper Colorado River Basin, with seasonal peak flows occurring earlier than normal if forecasts verify.

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

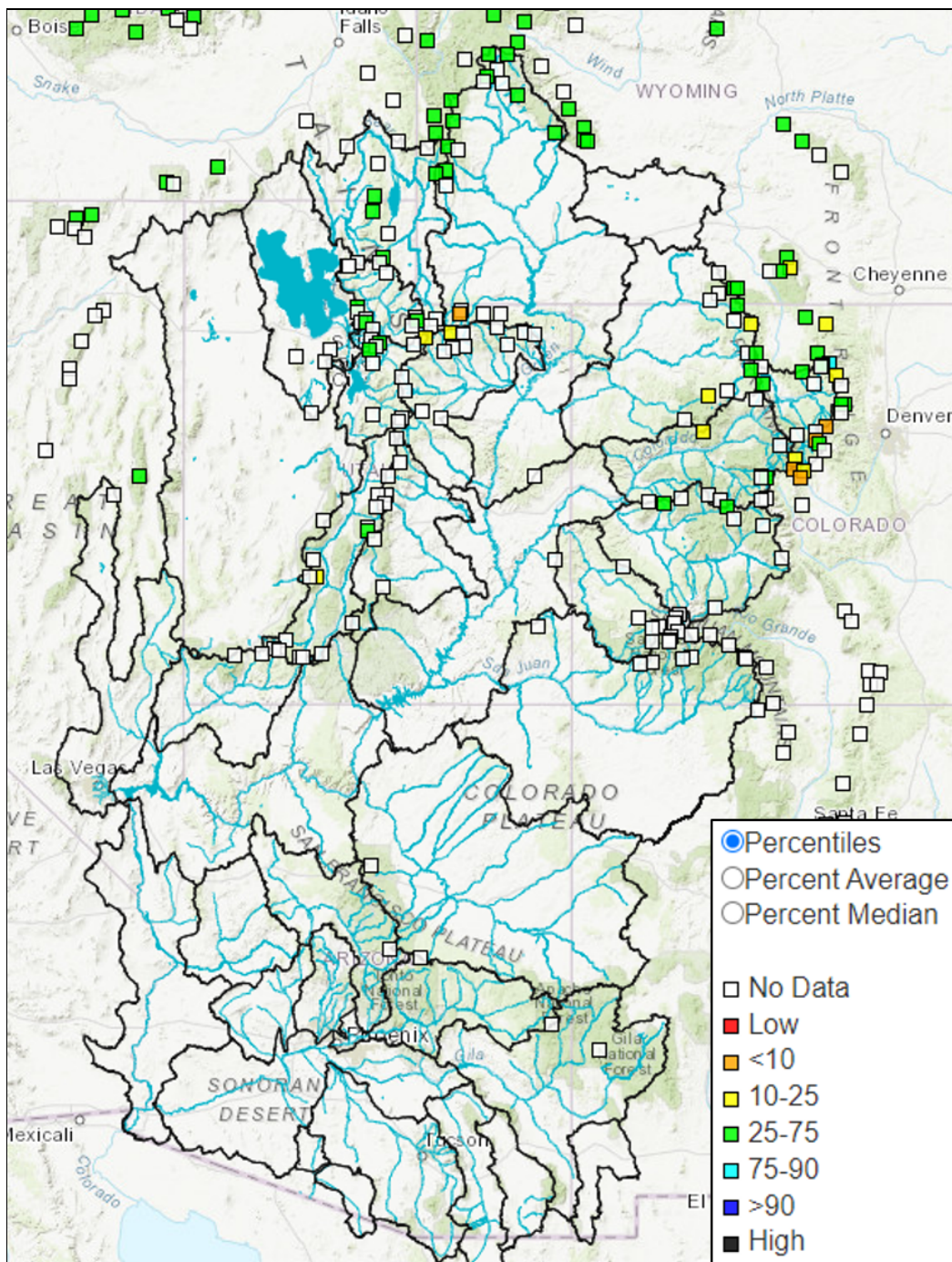


*Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov*

CBRFC hydrologic model percent median SWE - May 17, 2022.



SNOTEL percent median SWE - May 18, 2022.



SNOTEL observed SWE percentiles - May 18, 2022.

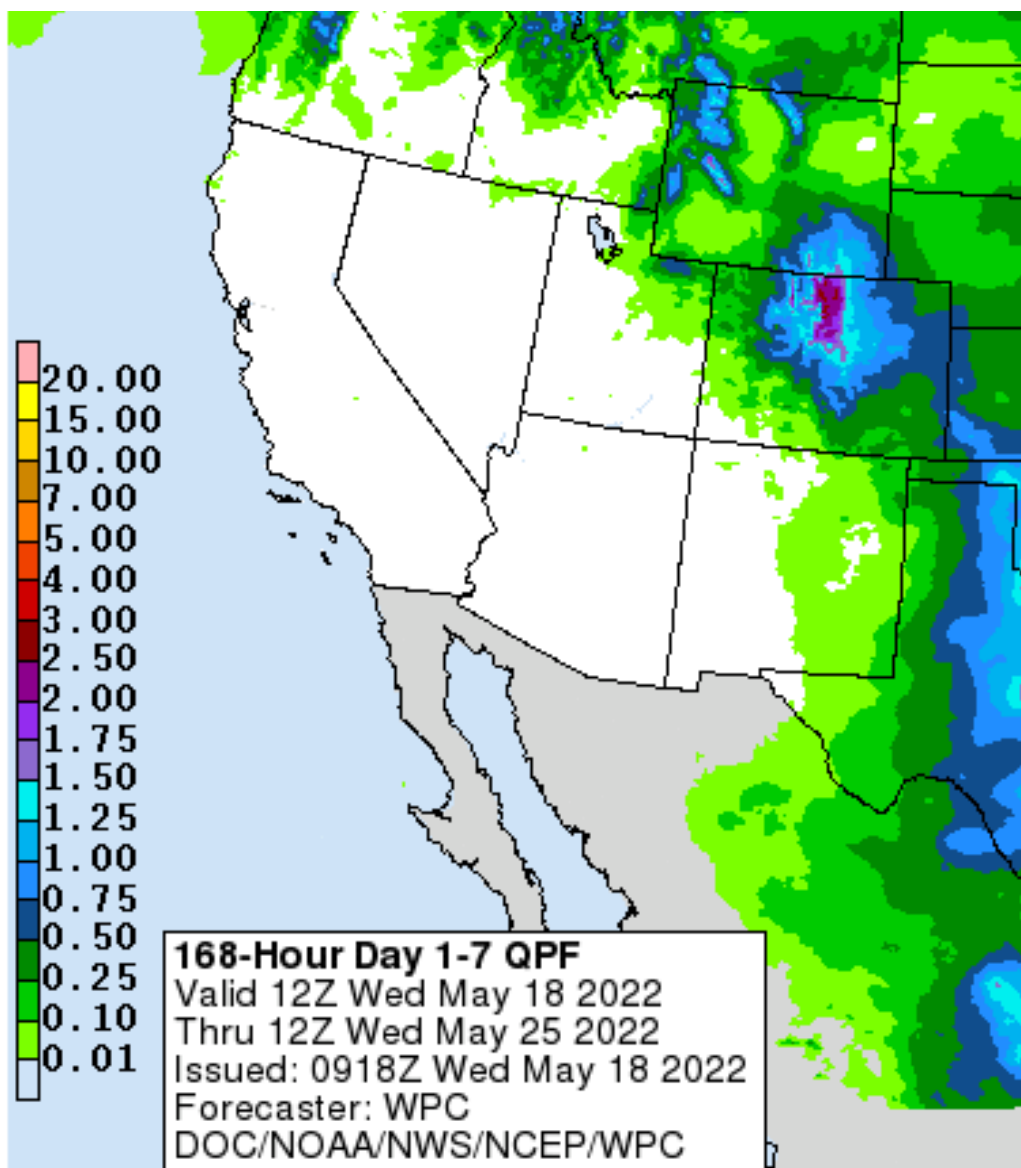
For updated SNOTEL information refer to click [here](#).

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

Upcoming Weather

Warm weather is forecast across the region to start off the forecast period, with temperatures approximately 5-10 degrees above climatology through tomorrow (Thursday). During the day Thursday, a broad trough will deepen over the western US, bringing a shift to below average temperatures across the entire region by Friday, as well as a chance of precipitation to northern areas (Green, White/Yampa, and the Colorado River headwaters). Generally, precipitation totals in these areas are expected to be around 0.25"-0.75", with higher amounts possible across northwest Colorado (headwaters of the White/Yampa/Colorado Rivers).

As the trough moves east over the weekend, a weak ridge is expected to become established over the western US, bringing another round of warmer (near to slightly above normal) and drier weather to the region. By mid-week, model ensembles indicate the possibility of another long wave trough developing across the northwestern US. This will bring a chance of near to slightly below normal temperatures and near to slightly above normal precipitation amounts to northern basins, while southern areas will likely remain hot and dry.



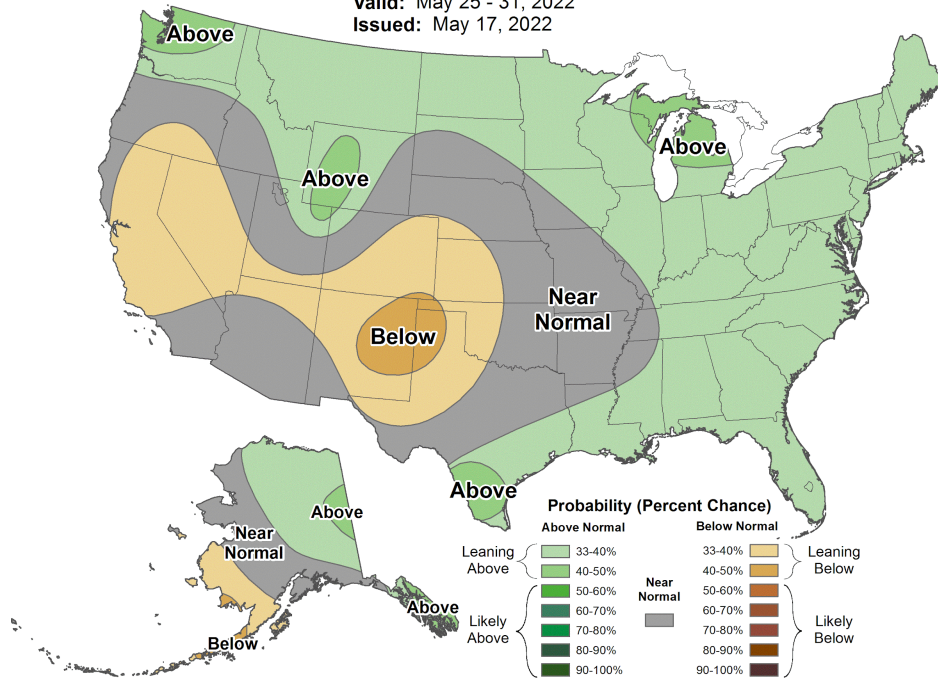
NWS Weather Prediction Center precipitation forecast for May 18-25, 2022.



8-14 Day Precipitation Outlook



Valid: May 25 - 31, 2022
Issued: May 17, 2022



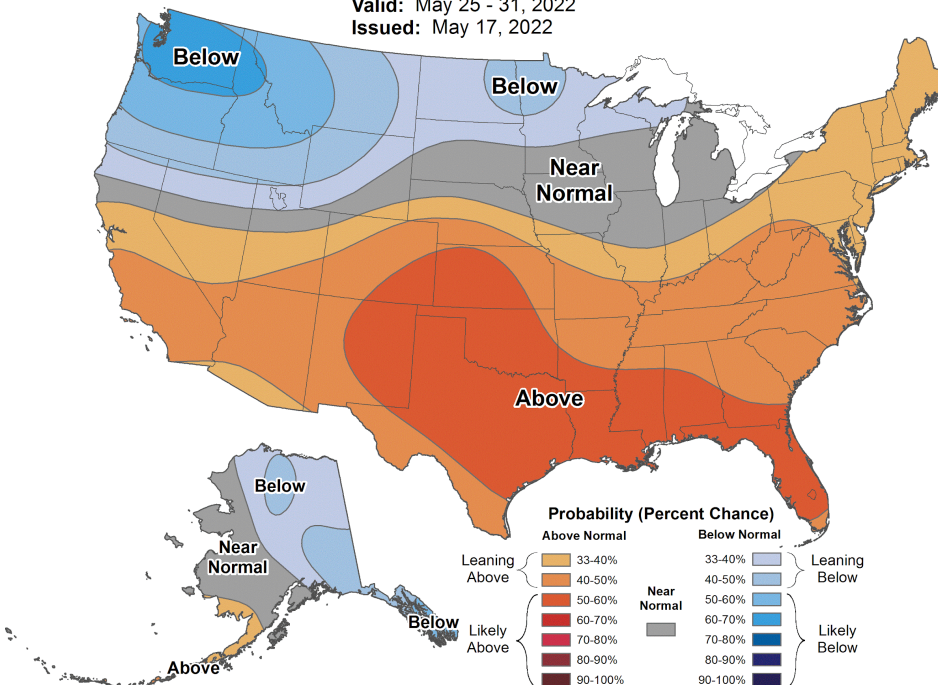
NWS Climate Prediction Center precipitation probability forecast for May 25-31, 2022.



8-14 Day Temperature Outlook



Valid: May 25 - 31, 2022
Issued: May 17, 2022



NWS Climate Prediction Center Temperature Outlook for May 25-31, 2022.

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.

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](#)