**PRECIPITATION**

The images above use daily precipitation statistics from NWS COOP, CoCoRaHS, and CoAgMet stations. From top to bottom, and left to right: most recent 7-days of accumulated precipitation in inches; current month-to-date accumulated precipitation in inches; last month’s precipitation as a percent of average; water-year-to-date precipitation as a percent of average.

**Last Week Precipitation:**

- The entire UCRB saw precipitation this past week, however the northern and western portions were drier.
- The Green River Basin saw less than 0.25", with the exception of Uinta County, WY, and Summit and Daggett counties in UT, seeing between 0.25 and 0.50".
- The rest of UT mostly received less than 0.10", except for southern Utah, seeing between 0.50 and 1.00" over much of the area. San Juan County, UT seeing up to 2.00" into the Four Corners area and southwestern Colorado.
In western Colorado, Moffat, Rio Blanco, Garfield and Mesa counties missed much of the precipitation that fell, seeing less than 0.25".
The rest of the western slope of Colorado received between 0.50 and 2.00". The highest amounts in the San Juan Mountains, much of this area 1.00" to 2.00".
East of the Divide also saw widespread precipitation, mostly from snow, but rain did fall over the weekend, mainly in southeastern Colorado. Most of eastern Colorado received between 0.25 and 1.00". The Front Range and through the Denver Metro area saw the highest amounts, up to 2.00".
Northeastern Colorado was drier seeing less than 0.25" in Sedgwick, Logan and northern Weld counties.
The Rio Grande Basin also saw very beneficial precipitation last week, between 0.25 and 1.00" of much needed precipitation.

January Precipitation:

The month of January was, overall, a drier month for the UCRB, with some areas above average.
The Upper Green River Basin saw below average precipitation in Sweetwater County, seeing less than 30% over much of the county. Sublette County was closer to average, with the southern portion of the county at or above average. Lincoln and Uinta counties both saw a large area over 200% of average for the month.
The Wasatch and Uintah ranges in Utah saw less than 70% of average over most of the area. The eastern Wasatch range, along the Utah-Wyoming border and western Daggett County saw above average precipitation.
Southern Duchesne and Uintah counties and the rest of eastern Utah saw above average precipitation during January.
Much of western Colorado saw below normal precipitation in January. Parts of Mesa, Delta and Montrose counties were above average for January.
Southwestern Colorado saw a mix of above average and below average precipitation. The San Juan Mountains mainly saw less than 70% of normal precipitation. The Four Corners area and southern portions of Montezuma, La Plata, and Archuleta counties all saw between 100 - 200% of normal January Precipitation.
The Rio Grande basin saw below normal precipitation in the western portion of the basin, and above normal precipitation in the eastern portion of the basin. The Sangre de Cristo mountains received over 150% of normal.
East of the divide saw a north to south gradient. Northeastern Colorado was mainly below 70% of average, with Sedgwick and Phillips county 70% - 90% of average. The Denver Metro area, including Boulder County and south all saw beneficial January precipitation, greater than 100% of average. Baca County and southeastern Las Animas County saw greater than 300% of average for the month.
**Water Year 2015 Precipitation:**

- The Water Year percents of normal in the UCRB are starting dry out a bit after a drier than normal January.
- The Upper Green River basin in Sublette, Lincoln and Uinta counties are still above normal, while much of Sweetwater County is much drier, receiving less than 70% of normal for the Water Year to date.
- The Wasatch and Uintah ranges in Utah are drier, reporting less than 90% of normal.
- With the wet January in southeastern Utah, conditions improved over the area, however much of the area is drier than normal. Exceptions are Carbon, northern Emery, and much of San Juan counties are between 100% and 200% of average for the Water Year.
- Western Colorado is now mostly drier than average for the Water Year. A few spotty areas and along the divide have seen near and slightly above average.
- The Rio Grande basin is showing above normal precipitation along the northern and eastern portions of the basin, in the Sangre de Cristo Mountains. The western portion of the basin is drier than normal for the Water Year to date.
- East of the divide in Colorado, most of eastern Colorado is now reporting greater than 100% of normal for the Water Year. Portions of Weld, Washington, Yuma, Phillips and Sedgwick counties are slightly drier than normal, in the 70% - 90% range.

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**SNOTEL AND SNOWPACK**

The top left image shows the Natural Resources Conservation Service's SNOTEL water-
year-to-date precipitation percentile rankings. The top right image shows sub-basin averaged snow water equivalent accumulations as a percent of average. The images below show accumulated snow water equivalent in inches (green) compared to average (blue) and last year (red) for several different sub-basins across the UCRB (and were created by the Colorado Basin River Forecast Center).

**SNOTEL Precipitation Percentiles:**

- In the Green River Basin, precipitation percentiles are still mostly above the median, and range from the 30th-81st percentile.
- Percentiles in the Uintah Range in northeastern Utah are very low, currently in the 0-24th percentile range with many SNOTEL stations indicating an all-time low.
- The Wasatch Range maxes out only at the 33rd percentile, and also has some stations reporting all-time low precipitation for the water year to date.
- The northern and central mountains of Colorado are in the normal range near the Continental Divide, but SNOTEL stations farther west are struggling to keep up. In the Yampa Basin and Colorado Headwaters percentiles are between 4 and 76 with stations farther south and east doing better than farther north an west.
- Farther south in the Gunnison basin, the headwaters are reporting percentiles between 29th and 62nd while the lower elevations and Grand Mesa are much drier with percentiles between 0 and 22.
- The San Juan basin is still very dry. Percentiles range from 0 to the 34th across the basin.

**Westwide Snow Water Equivalent (SWE) Percent of Normal:**

- Snowpack in the Green River Subbasins ranges from 58 to 83 percent of normal for the season to date with the lowest being the Duchesne River. The northern most subbasin in the Upper Green is the exception, at 117% of normal.
- Snowpack in Northwest Colorado Subbasins ranges from 80 to 92 percent of normal for the season to date. The Yampa is the lowest at 80%. The Colorado River Mainstem is showing 92% of normal, however this number is coming mostly from the SNOTEL sites in Summit County and closer towards the divide. The sites lower in the basin are much lower than average snowpack.
- Snowpack in Southwest Colorado Subbasins is lower, and ranges from 63 to 74 percent of normal for the season to date.
- East of the divide, the Platte River Basin is at 105% of normal, the Arkansas Basin is as at 94% of normal, and the Rio Grande is at 67% or normal.

http://climate.colostate.edu/~drought/current_assessment.php
SWE Timeseries Graphs:

- The Upper Green basin is at 105% of median snowpack to date.
- The Duchesne basin is at 64% of median snowpack to date, and has dropped 6% off the median since last week. This is a result of the snowpack not increasing.
- The Yampa-White basin is at 75% of median snowpack to date. The storm last week helped to increase the snowpack, however it was still below the normal increase for the last week.
- The Upper Colorado basin is at 89% of median snowpack to date.
- The Gunnison basin is at 73% of median snowpack to date.
- The San Juan basin is only at 64% of median snowpack to date. This was an increase from 56% of the median last week.

STANDARDIZED PRECIPITATION INDEX

Standardized Precipitation Index standardizes precipitation accumulations for a specified time period into percentile rankings. -1.0 to -1.5 is equivalent to a D1 to D2. -1.5 to -2.0 is equivalent to a D2 to D3. -2.0 and worse is equivalent to a D3 to D4. 30- and 60-day SPIs focus on short-term conditions while 6- and 9-month SPIs focus on long-term conditions. SPI data provided by High Plains Regional Climate Center.
Short Term (30-day):

- The Green River Basin is showing SPI's moderately below normal from 0 to -2, both of these SPIs are in Sweetwater County, WY.
- The Wasatch Range in northern UT is showing very dry SPI's between -1.5 and -3 on the 30 day timescale.
- In the Duchesne Basin, SPIs are slightly dry between 0 and -1, with a single SPI at +1.
- SPI's in southeast Utah are also slightly dry ranging from 0 to -1.
- Western Colorado is showing dry SPI's across the board up to the Continental Divide. SPI's range from 0 to -2 over much of the area, with an SPI in Gunnison County -2 to -2.5.
- The San Luis Valley is mainly showing wet SPI's between 0 and +1.
- East of the Divide, the Front Range and eastern mountains are showing mostly wet SPI's all the way down to the Colorado-New Mexico state line. SPI's are generally in the 0 to 1 range. Boulder County and the Denver Metro area are showing wetter SPIs from the precipitation last week, between +1.5 to +2.5.
- The eastern plains are a bit drier, with most SPIs at 0 to -1, with a few up to +1. The southeastern plains are now showing wet SPIs between 0 and +1.5, the wettest in Baca County.

Long Term (6-month):

- For the longer term, much of the UCRB is still reporting mostly SPI's between 0 and 1. The Four Corners is the driest area, reporting SPI's from 0 to -1.
- The San Luis Valley is near normal, with SPIs between +1 and -1.
- East of the divide, the NE plains are reporting mainly wet SPI's between 0 and +2.
- The SE plains have made a rebound to near normal SPIs, however many stations are still on the dry side, pointing out the continued drought in the area. SPIs in southeast Colorado are now between +1 and -1

STREAMFLOW
The top left image shows 7-day averaged streamflows as a percentile ranking across the UCRB. The top right image shows 7-day averaged discharge over time at three key sites around the UCRB: The Colorado River at the CO-UT state line; the Green River at Green River, UT; and the San Juan River near Bluff, UT. All streamflow data provided by United States Geological Survey.

Streamflow Statistics:

- Only 86 of the 140 stream gages in the UCRB are reporting. All others are ice affected.
- 33% of the reporting gages are in the above to much above normal range for 7-day average streamflow. 2% of these stations are reporting record high flows. The highest flows are along the upper tributaries near the headwaters of the Colorado River. There is also a high flow in the headwaters of the Gunnison.
- 49% of gages in the UCRB are reporting 7-day streamflow in the normal range of 25-75th percentile.
- 19% of the gages are reporting below normal to low flow.
- The Colorado River near the CO-UT state line is reporting in the 42nd percentile, 85% of normal.
- The Green River at Green River, UT is at at the 82nd percentile,
136% of normal.
- The San Juan River near Bluff, UT is once again below the normal range. Only reporting in the 15th percentile, 44% of normal.

SURFACE WATER

The top left image shows VIC modeled soil moisture as a percentile ranking. The top right image shows VIC plus SWE total soil moisture storage.
The above image shows last month's and this month's current volumes of the major reservoirs in the UCRB, with percent of average and percent of capacity.

VIC:

- Sweetwater County, WY has been shown as dry by the VIC for a considerable amount of time and continues to depict soils in the 2-30th percentile range over much of the eastern part of the county.
- Northeastern UT is showing normal to wet soils, with the exception of Uintah County, which is showing a small area of dry soils between the 10th and 30th percentile.
- There are some very wet soils in the Upper Green River Basin. Near the Wyoming-Utah state line soil moisture is in the 70-100th percentile range.
- Western CO is still showing a large area of above average soil moisture over the 70th percentile. The highest percentiles are in Jackson County.
- The Four Corners Region is showing dry soils in Montezuma and Dolores Counties, CO and San Juan County, UT between the 20th and 30th percentile. The rest of the region is normal.
- The San Luis Valley is in the normal range.
- East of the divide, much of the eastern plains are showing normal soil moisture, the exception is southern Lincoln into Kit Carson counties where soil moisture percentiles range from the 5th to 30th.
- A small area in western Las Animas County is also dry, in the 10-30th percentile range.
Reservoirs:

- Flaming Gorge is 107% of the February average.
- Green Mtn is 94% of the February average.
- Lake Granby is 147% of the February average.
- The data for Lake Dillon are missing this week, but the reservoir has been near full for weeks.
- Blue Mesa is 122% of the February average.
- Navajo is 85% of the February average.
- McPhee is 67% of the February average.
- Lake Powell is 65% of the February average and is only 45% full.

TEMPERATURE

![Temperature Departure Maps](generated_image1)

All images show temperature departures from average over different time periods (last 7 days on top left; month-to-date on top right; last full month on bottom). Temperature departure maps provided by HPRCC ACIS.

Last Week Temperatures:

- The UCRB experienced above normal temperatures last week,
despite the winter storm over the weekend.

- The Upper Green Basin and the Wasatch Range in UT had the highest temperature departures at 5 to 10 degrees above normal for the week.
- The rest of the UCRB saw 0 to 5 degrees above normal.
- The headwaters of the Rio Grande Basin saw 5 to 10 degrees above normal, while the rest of the San Luis Valley was 0 to 5 degrees above normal.
- East of the Divide, temperatures were 0 to 5 degrees below normal for the week.

**Last Month Temperatures:**

- Most of the UCRB saw above normal temperatures for January.
- The Upper Green Basin saw temperatures 2 to 6 degrees warmer than normal in Sublette County and 6 to 10+ degrees warmer than normal in Lincoln, Uinta, and Sweetwater counties.
- The Wasatch and Uintah Ranges in northeastern Utah also saw 6 to 8 degrees warmer than normal.
- The rest of eastern Utah saw temperatures for January 2 to 6 degrees warmer than normal, with an area in western San Juan County 0 to 4 degrees below normal.
- Western Colorado was mainly 2 to 4 degrees warmer than normal, with Moffat and Rio Blanco Counties 6 to 10 degrees above normal.
- The headwaters of the Gunnison River was slightly cooler than normal, 0 to 2 degrees.
- The San Juan Mountains were in the 4 to 6 degrees above normal range.
- The San Luis Valley saw temperatures 2 to 6 degrees warmer than normal.
- East of the divide also saw above normal temperatures over most of the area. The Front Range and west of I-25 mostly saw temperatures 2 to 4 degrees above normal. East of I-25, temperatures were closer to normal, 0 to 2 degrees with pockets up to 4 degrees warmer than normal.

**FORECAST AND OUTLOOK**
The top two images show Climate Prediction Center's Precipitation and Temperature outlooks for 8 - 14 days. The middle image shows the 3 months Precipitation outlook. The bottom left image shows the Hydrologic Prediction Center's Quantitative Precipitation Forecast accumulation for the five days between Tuesday 12Z and ending Sunday 12Z. The bottom right image shows the Climate Prediction Center's most recent release of the U.S. Seasonal Drought Outlook.
Short Term:

- Over the Tuesday to Friday time frame more cold air is expected to drop into the drought monitor region from the northwest. This will bring cooler temperatures to the UCRB, and the area in Colorado east of the divide. This temperature swing will be greatest east of the divide. Tuesday will be the warmest day of this time frame as the push of cold air is expected to reach the northern end of the drought monitor region Wednesday morning.

- The 1-3 day QPF outlook shows the northwest portion of the UCRB staying mostly dry with this push of cold air. The most favorable precipitation will be in the high country of the central Rockies and in the San Juan Mountains in southwest Colorado. Some of these areas will see over half an inch. The foothills east of the divide are in a favorable location of accumulation as well.

- Temperatures will start to rebound across the region Friday, but another system works its way into the region from the Great Basin Friday night into Saturday morning. According to the 4-5 day outlook this moisture should be more uniform across the UCRB with the Rockies, San Juans, Wasatch, and Uintahs all picking up accumulations of at least a quarter of an inch. Currently the big winner of this system is forecast to be the San Juans.

- East of the divide the main impact of this system is currently being forecast as just bringing temperatures back well below normal with just 0.10-0.25" of precipitation expected across the region. This could shift quite a bit with just a small shift in the circulation, so it needs to be monitored closely as we advance toward the end of the week.

- Days 6-7 of the QPF outlook show yet more beneficial moisture for the Rockies, and San Juans. Overall it's looking like a good week for making up a fraction of the current snowpack deficits in the UCRB.

Longer Term:

http://climate.colostate.edu/~drought/current_assessment.php
The 8-14 day precipitation outlook shows slightly increased chances for below average moisture for the UCRB and for Colorado east of the divide. These chances are minimized in southern Colorado.

The 8-14 day temperature outlook shows increased chances for below average temperatures for the entirety of the UCRB and the area in Colorado east of the divide. These chances are most highly enhanced east of the divide, especially in the southeast quadrant of the state.

The Climate Prediction Center 3-month precipitation outlook shows increased chances for above normal precipitation for the entirety of the UCRB, and the area in Colorado east of the divide for the March to May period. These chances are highest in southern and western Colorado, eastern Utah, and southwest Wyoming.

The seasonal drought outlook indicates that drought is expected to persist or intensify in southwest Colorado and eastern Utah. Drought improvement and removal is forecast as likely for southeast Colorado.

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U.S. DROUGHT MONITOR

Above is the most recent release of the U.S. Drought Monitor map for the UCRB region. Below shows the proposed changes for this week, with supporting text.
The UCRB saw cooler temperatures the last week with a winter storm that hit the area late in the week, however with the warmer than normal temperatures early last week, the basin still saw above average temperatures for the week. The storm brought some much needed precipitation to the higher elevations of the Basin in western Colorado, however the lower elevations in western Colorado and eastern Utah missed most of the precipitation. The San Juan Mountains and Four Corners also saw very beneficial precipitation. All of the basins in Colorado had an increase in snowpack over the last week, however most in the UCRB are still below 90% of median for this time of year. The Upper Green Basin and Colorado Mainstem are the only sub-basins in the UCRB that are above 90%. However, the Colorado Mainstem is being driven from the higher elevation SNOTEL sites.

East of the Divide saw a very good week in terms of beneficial precipitation and cooler than average temperatures. Much of the area received better than 0.50" of liquid from the winter storm that hit this weekend, with areas in the Foothills seeing up to 2.00" of liquid. Northeastern Colorado missed the bulk of the storm, but still received up to 0.50" of liquid. The South Platte Basin is now back to above normal for snowpack and the Arkansas River Basin is near normal.

**Recommendations:**

**UCRB:**

The Drought Monitor Author this week is planning an expansion of D0 and D1 in northern Utah and southwestern Wyoming. This is supported by the group.

Status Quo is recommended for the rest of the UCRB. With the expansion of D1 last week and the precipitation, no further degradations are recommended at this time. The snow the last week was not enough to catch up from the recent dryness, above average temperatures and low snowpack for improvements in the area.

**Eastern CO:**

Status Quo: The forecast for the next week could make improvements in eastern Colorado more favorable next week.