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.

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.

**Snotel and Snowpack**
The above 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).

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.

Surface Water

The top left image shows VIC modeled soil moisture as a percentile ranking. The top right image shows satellite-derived vegetation from the VegDRI product (which updates on Mondays).

The graphs shown below are plots of reservoir volumes over the past full year and current year to date (black). The dashed line at the top of each graphic indicates the reservoir's capacity, and the background color-coded shading provides context for the range of reservoir
levels observed over the past 30 years. The data are obtained from the Bureau of Reclamation. Some of the reservoir percentiles don't line up at the new year due to differences in reservoir levels at the beginning of 1985 and the end of 2014. Dead storage has been subtracted. Note: Lake Granby data are obtained from the Colorado Division of Water Resources, and only goes back to the year 2000.

Evaporative Demand

http://climate.colostate.edu/~drought/current_assessment.php
The above images are available courtesy of NOAA's Evaporative Demand Drought Index (EDDI). Drought classification listed is a function of the depth of reference evapotranspiration accumulated over a given period of record with respect to a climatology of 1981-2010. The drought categories displayed are in line with the US Drought Monitor's Percentile Ranking Scheme. Data used to generate these maps come from the North American Land Data Assimilation System Phase-2 (NLDAS-2) project, which assimilates observations of temperature, wind speed, radiation, and vapor pressure deficit. The date indicates the last day of the period of record, and the week number indicates the window size for the period of record.

Temperature

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.
Outlook
The top two images show Climate Prediction Center's Precipitation and Temperature outlooks for 8 - 14 days. The middle image shows the Weather Prediction Center's Quantitative Precipitation Forecast accumulation for seven days. The bottom left image shows the 3-month precipitation outlook from Climate Prediction Center, and the bottom right image shows the Climate Prediction Center's most recent release of the U.S. Seasonal Drought Outlook.

Summary and Recommendations
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.
Summary: November 21, 2017

In typical La Niña fashion, an active weather pattern was observed over the northern portion of the Intermountain West last week, while the southern portion of the region remained fairly dry. Higher elevations to the north saw between half an inch and three inches of moisture, while the lower elevations in the Upper Colorado River Basin were a bit drier.

Snowpack continues a persistent pattern with high values in the northern portion of the IMW and extending into the northern Rockies and Pacific Northwest. To the south (particularly southern UT and southwest CO), snowpack continues to struggle, with basin-averaged values below 40% of normal. As we progress further into the season, these deficits will be harder to overcome.

Temperatures over the past week have been much warmer than average.
across the entire IMW, possibly reducing the maximum possible benefit of snow accumulations and artificially bumping up the streamflow percentile rankings. Month-to-date, most of the IMW has been 3 to 6 degrees warmer than average, with a north-south gradient setting up - less of a warm anomaly to the north and stronger warm anomalies to the south.

Currently, the area of biggest concern is around the Four Corners region, extending into southern UT and western CO. Short-term SPIs are in the -1 to -2 range, with some of the longer-term SPIs dropping to the -1.5 to -2.5 range (D2 or worse). Modeled soil moisture shows deteriorating ground conditions expanding throughout all of AZ, eastern UT and western CO. When combining soil conditions with snowpack conditions, total moisture storage is below the 20th percentile (D1 or worse) for most of the lower elevations in the Upper Colorado River Basin.

Along the Front Range and eastern plains, an active weather pattern has included foggy mornings, stubborn clouds, a higher number of windy days, and the very occasional precipitation event. Thankfully, harvest of corn is progressing and winter wheat was successfully planted and likely germinated before entering winter dormancy.

**Recommendations**

**UCRB:** We are recommending an expansion of D1 from the Four Corners area and extending north into the far western counties of Colorado and the far eastern counties of Utah (red line). The expansion will connect the two separate D1 areas in Utah, and follows with VIC modeled soil moisture less than the 10th percentile. It includes areas where SPIs at the 30-day, 90-day, and 6-month are below -1.5, and snowpack is much below average. Currently water supply is in good condition and there isn't much to report in the way of impacts. But a D1 is appropriate since dry conditions are expected to continue and when impacts start to pop up, they will likely be justification for D2 levels. In central Utah, the U.S. Drought Monitor author may want to consider filling in that D-nada area with D0 (orange line). While it does look slightly better on some indicators, most indicators seem to point to abnormally dry conditions and snowpack is below the 30th percentile in that region.

**Eastern Colorado:** Status quo is recommended for the rest of Colorado. While southeast Colorado has received very little precipitation since early October, that is the only dry indicator, so a convergence of evidence does not support the introduction of D0 at this time. Reports are that the corn harvest is going well and the dry conditions have helped with that. Winter wheat planting occurred in mid-to-late September, which coincided with beneficial moisture. Most recent report from Bent County was that the winter wheat looks better than average. No other impacts have been reported at this time.