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.

**WYTD Precipitation:**

- Parts of the Upper and Lower Green basins in southwest WY and northeast UT are near to above average for the water year
- Parts of the northern CO mountains show near average precipitation for the water year
- Much of western CO and eastern UT are between 30% and 90% of average
- Near average precipitation for much of northeast CO
- Much of the Arkansas basin (in southeast CO) below 50% of average precipitation since October
April Precipitation:

- Above average precipitation fell across most of the northern part of the UCRB (with the exception of Sweetwater County, WY which was between 30% and 100% of average precipitation)
- Southeast UT and southwest CO were drier in April, receiving less than 50% of average precipitation in many areas
- Northern CO and southeast WY were above average for the month, receiving over 130% of average precipitation in some areas
- The Front Range mountains and foothills received near average April precipitation
- Southeast CO was drier, seeing less than 30% of average precipitation in many locations

Last Week Precipitation:

- Precipitation was mainly confined to the northern portion of the UCRB with southwest Wyoming receiving between 0.25"-1.00".
- Northern Utah, mainly the Wasatch range, picked up similar amounts ranging from 0.50"-2.00".
- Precipitation in Colorado was confined to the NE plains, which received 0.25"-2.00". The highest amounts were seen over Sedgwick, Phillips, Logan and northern Washington and Yuma counties.
- The northern and central mountains of Colorado also picked up between 0.25"-1.00" in the higher terrain.

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:

- Precipitation percentiles near the median around the Duchesne basin in northeast UT
- Wasatch range and central UT percentiles are lower, ranging from the single digits to the 20s
- Western WY percentiles are just below the median with percentiles dropping to single digits and teens just to the east in Sublette county.
- Northern and central CO mountains showing improvement with percentiles ranging from the teens to median and slightly above.
- San Juans in southwest CO are now mainly in the single digits with a few sites reporting in the low teens.

Basin-wide Snow Water Equivalent Percent of Normal:

- Percents of normal will be highly variable during the melt season. Compared with normal melting rates, faster melting or further accumulations can cause anomalously small or large values in percents of normal

SWE Timeseries Graphs:

- The northern areas reached around 90% of normal peak snowpack values, while the southern areas reached less than 80% of normal peak seasonal snowpack
- All graphs show later peak than last year and later peak than normal
- The sub-basins are melting at a rate around 0.1"/day over the past 3 days. The Upper Colorado, Gunnison and Yampa-White sub-basin saw a slight increase in SWE over the past 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- and 90-day):**

- Wetter SPIs in the northern and central CO mountains
- Drier SPIs in southwest WY and northern UT
- Near normal to slightly below normal SPIs around the 4 corners area.
- Eastern Colorado split with wetter SPIs through Elbert, Lincoln, and Kit Carson and drier SPIs to the north and even drier in the Arkansas basin to the south.

**Long Term (9-month):**

- SPIs between +1 and -1.5 in southwest CO and southeast UT
- SPIs between 0 and -2.5 throughout southeast CO
- SPIs between +1 and -1.5 in northeast CO
- 1 to +1 SPIs in northwest CO, northeast UT, and southwest WY
- Mixed wet and dry SPIs in northern UT

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:

- 62% of gages recording normal to above normal 7-day average streamflows
- 38% of gages recording below normal or low 7-day average
streamflows
- Increase in flows across much of the basin due to warmer temperatures ramping up snowmelt.
- 137 gages now reporting
- All three key gages in the basin have increased in flows this past week
- Despite an increase in flows they are still lower than normal for this time of year, partially due to later melt out and low snowpack in some areas. The Colorado River at the CO-UT state Line is reporting flow in the 28th percentile (63% of normal), the Green River at Green River, UT is in the 15th percentile (53% of normal) and the San Juan River near Bluff, UT saw a slight uptick in flow but is still reporting much below normal in the 7th percentile (18% of normal).

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 above left image shows the percent of average volumes of the major reservoirs in the UCRB. The above right image shows the percent change in volume over a specific time period for the reservoirs.

**VIC:**

- Drier soil moisture conditions over southern WY
- NE Utah showing soil moisture below the 30th percentile.
- Soil moisture below the 20th percentile for much of southwest CO.
- Soil moisture below the 10th percentile for much of southeast CO
- Near average to slightly below normal soils in NE Colorado.

**VegDRI:**

- The driest vegetation areas are showing up in SE Colorado, Southern Wyoming and NE Utah.
- Western Colorado and eastern Utah are also showing poor vegetation health in the range of pre- to moderate drought conditions.

**Reservoirs:**

- Flaming Gorge is slightly above normal volume for May
- Rest of reservoirs below May average (ranging from 49% at Granby to 97% at Green Mountain)
- All reservoirs saw increases in volume for May. Green Mtn saw the largest increase with 18.7% while Lake Powell saw the lowest with only 0.1% increase.

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**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.

**Last Week Temperatures:**

- Temperatures above average for the entire UCRB and east of the divide in Colorado.
- Temperatures over the northern portion of the basin ranged from 6-9 degrees above normal with the southern part of the basin was a little cooler ranging 3-6 above normal.
- Temperatures over eastern Colorado were much above normal for the week experiencing 6-12 degrees above normal.

**Last Month Temperatures:**

- Temperatures throughout the UCRB were cooler than average for the month of April
- Near average to 3 degrees colder than average for the southern half of the basin
- Temperatures 3 to 6 degrees colder than average for the northern half of the basin
- Eastern CO was 3 to 9 degrees below average for the month of April

**FORECAST AND OUTLOOK**

The top two images show Climate Prediction Center's Precipitation outlooks for 8 - 14 days (top left) and 3 months (top right). 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.
This Week:

- Mostly sunny and dry conditions will continue throughout the week
- Little or no accumulating precipitation is expected outside of a few isolated afternoon showers

Longer Term:

- Dry conditions are expected to persist well into the weekend with little change in the weather pattern
- The 8 - 14 day outlook shows that below average precipitation conditions are most likely
- The three month outlook through August shows drier than normal conditions are likely

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.

Summary: May 21, 2013

Warming temperatures continue to aide in quickly melting the mountain snowpack throughout the UCRB. San Juan basin snowpack has mostly melted out, and it's possible that the streamflows in that region have peaked already (earlier and much below normal peak streamflows). Streamflows around the rest of the basin continue to rise, and reservoir volumes are also increasing. Beneficial moisture has continued to accumulate over much of eastern CO though southeastern CO is still struggling from long-term dryness and persistent lack of precipitation. The area is currently under a warming trend. A return to warm and dry conditions is expected for much of the region.

Recommendations

**UCRB:** Degradation of the D1 area in SE Utah (San Juan county) and possibly over the border into NE Arizona. Indicators for this area are very similar to the surrounding D2 area.

**Eastern CO:** Phillips, Sedgwick and Logan counties again received beneficial moisture totaling 0.5-2" over the past seven days.Trimming of the D3 along the NE boarder of Colorado is suggested, although adjustments may be restricted by the D4 across the border in Nebraska.