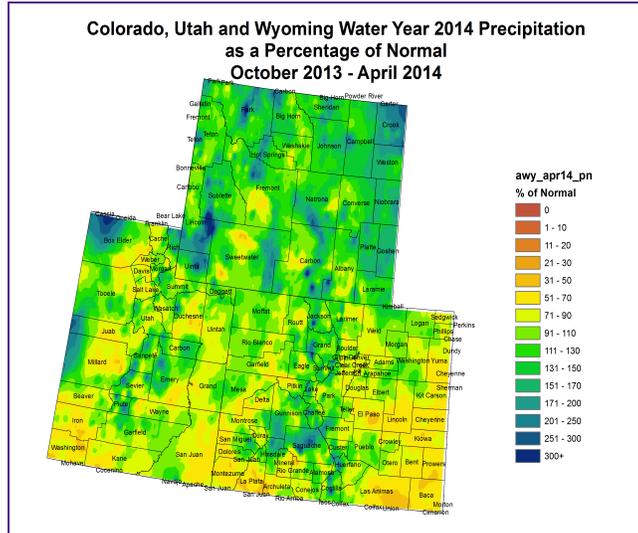
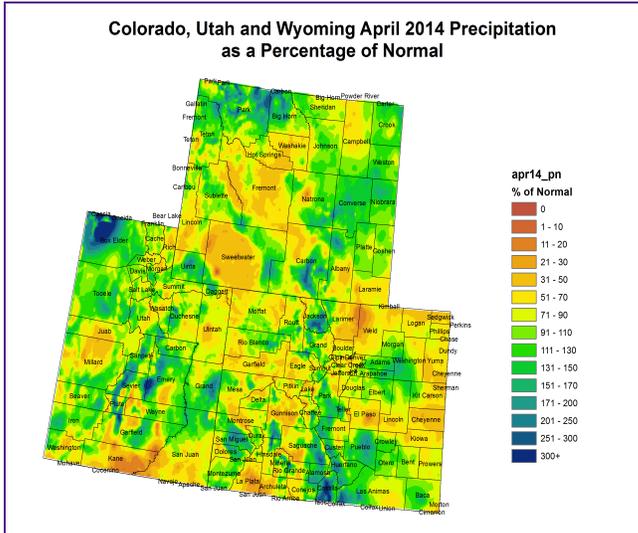
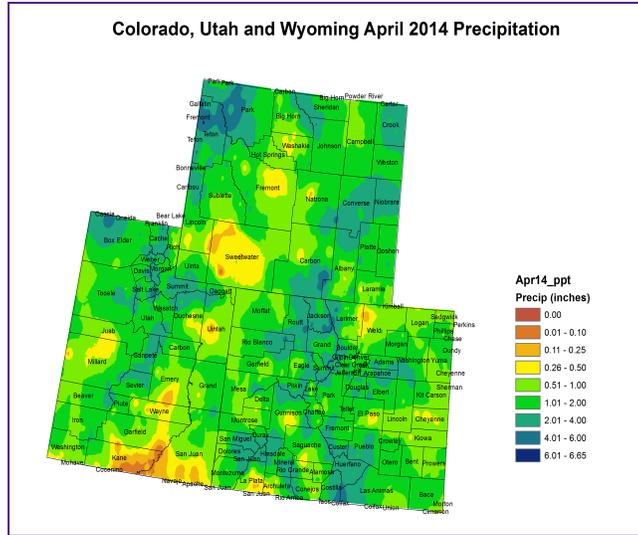
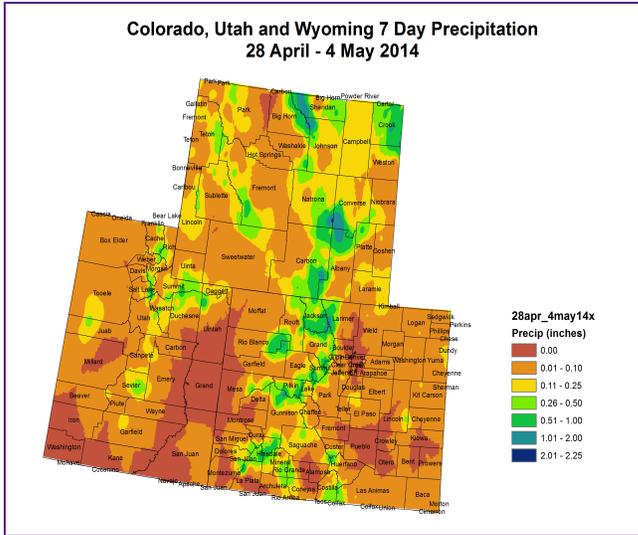


# PRECIPITATION



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:

- Most of the UCRB was relatively dry last week, with the exception of some isolated precipitation in the higher elevations
- Most of the higher elevation locations in the UCRB received between .10 and .50 inches with some isolated amounts up to 1 inch
- The lower elevations received less than .10 inches, with large areas of eastern UT receiving no precipitation for the week

- East of the basin, precipitation amounts through much of eastern WY ranged between .10 and 1 inch
- The Front Range and eastern plains of Colorado received less than .10 inches of moisture

### **April Precipitation:**

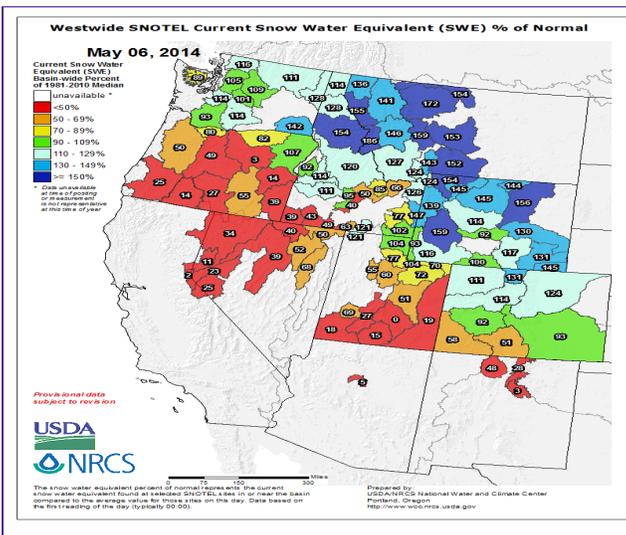
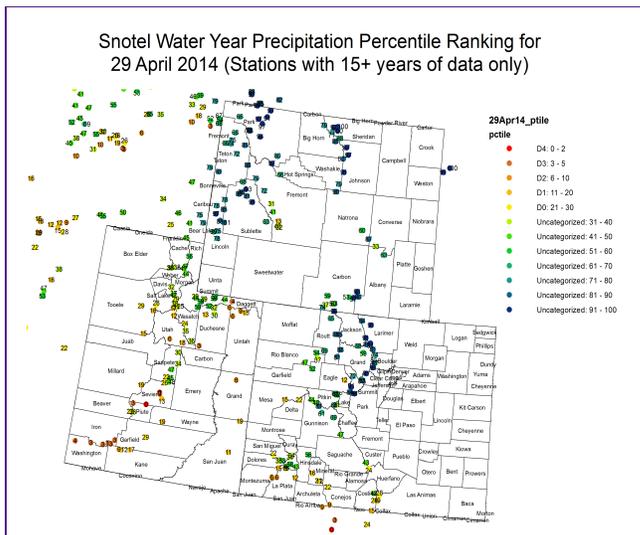
- April precipitation throughout the UCRB was mixed, ranging from 30% of average to over 170% of average
- Wetter than average areas during April include much of the Wasatch range in UT and the northern higher elevations of the basin in WY
- Drier than average areas include Sweetwater County in WY, and the lower Colorado River valley just above Lake Powell
- East of the basin, much of eastern WY received above average precipitation for the month
- The northern Front Range and far eastern plains of Colorado were drier than average, mostly between 30% and 70%
- The Sangre de Cristos were much wetter than average, receiving between 90% to 200% of average precipitation
- Parts of the Arkansas valley and parts of the central plains (around Adams and Arapahoe counties) were near average for April

### **Water Year Precipitation (Oct-Apr):**

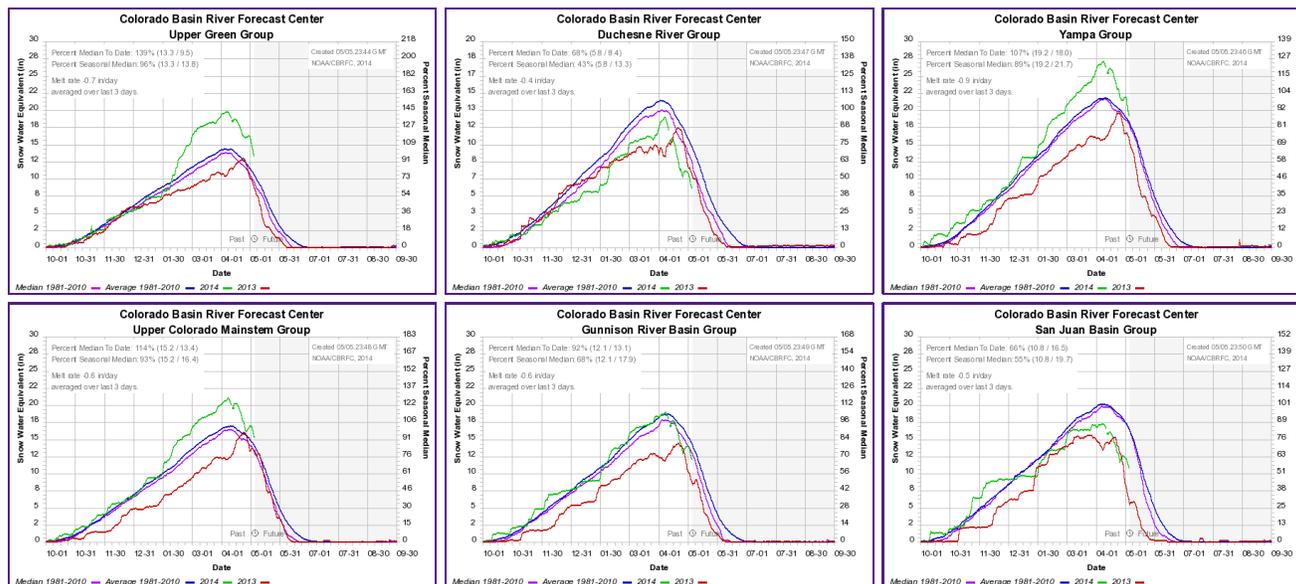
- Most of the northern and higher elevations of the UCRB have received near to above average precipitation for the water year
- The Four Corners region and areas around the Duchesne basin in northeast UT have been drier than average, mostly receiving less than 70% of average precipitation since October
- Most of Wyoming has received from 90% of average to 200% of average precipitation
- The Wasatch range in central UT has been mixed, receiving between 50% to 130% of average
- The northern, central, and southern CO mountains have all been above average for the water year
- East of the basin, the CO Front Range and most of northeast CO have received near to above average precipitation
- The far eastern CO plains and much of southeast CO has been drier than average, mostly receiving less than 70% of average

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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:**

- SNOTEL precipitation is at or above the median (50th percentile) for the northern and eastern part of the UCRB with drier percentiles along the western and southern portions of the basin.
- Percentiles in the Upper Green region are mainly above the 75th percentile.
- In the northern and central CO mountains percentiles are at or well above the median. Most SNOTEL sites along the Continental Divide are reporting precipitation above the 70th percentile.
- The Wasatch range in northern Utah is near the median. The Uintah range in northeast UT is slightly drier with percentiles ranging from 3rd to 50th. The lowest values are being reported on the southern and

eastern portions of the range.

- Percentiles in the San Juans range from single digits in the lower elevations of the SW side of the range to near median on the NE side of the range.
- In the Rio Grande Basin, percentiles are mainly below the 25th percentile.
- While the headwaters of the Arkansas basin are reporting above the median, the southern basins (Custer, Huerfano, Costilla counties) are reporting mainly below the 30th percentile with a few sites slightly better.

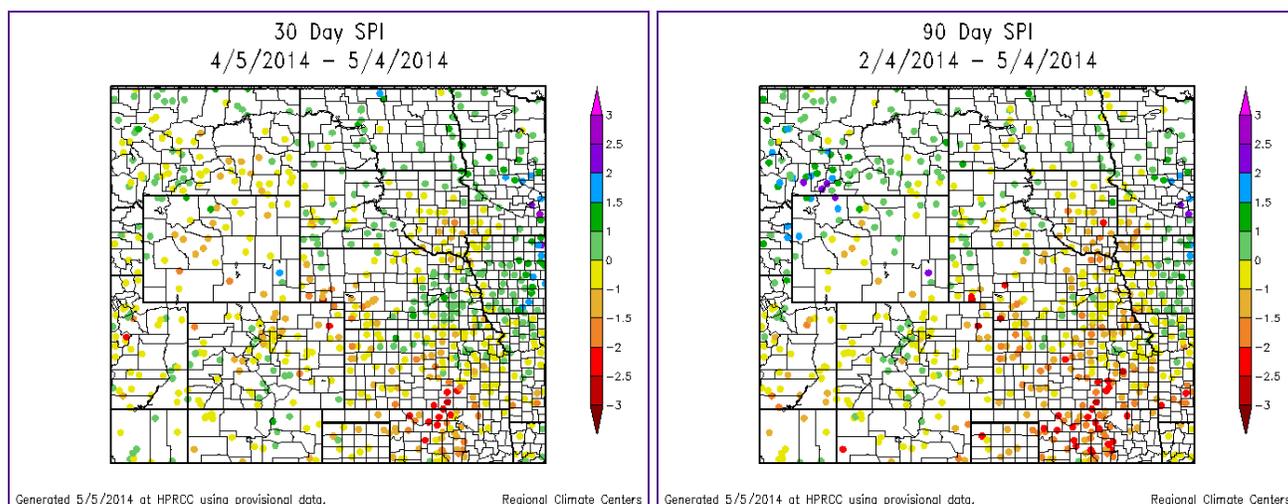
### Basin-wide Snow Water Equivalent (SWE) Percent of Normal:

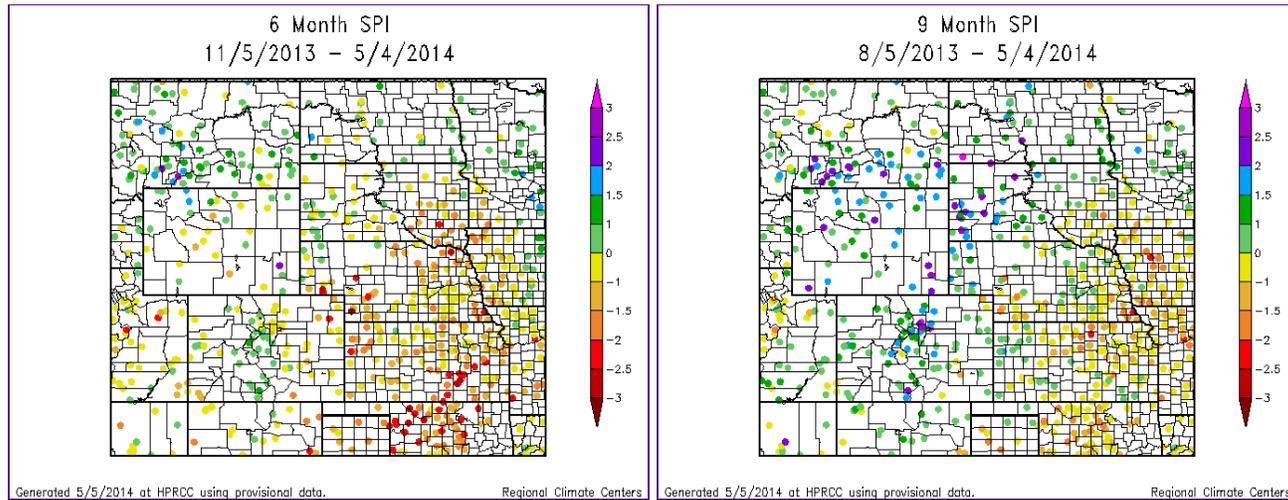
- In the UCRB, the CO and WY sub-basins show above normal snowpack, while the UT sub-basins show below normal snowpack
- The southern sub-basins in UT range between 0% to 50% of normal, while the northern sub-basins range between 60% to 104% of normal
- The northwest CO and southwest WY sub-basins range between 100% to 159% of normal
- East of the basin, all of the WY sub-basins and the northern CO sub-basins are above normal. The southern CO sub-basins range from 51% to 93% of normal

### SWE Timeseries Graphs:

- All sub-basins peaked in snowpack around the second week of April and have seen large amounts of snowmelt since
- The Upper Green, Yampa-White, and Upper Colorado sub-basins peaked well above average and remain above average
- The Gunnison sub-basin peaked just above the median seasonal peak and remains near the median
- The Duchesne and San Juan sub-basins peaked below their normal seasonal peaks with 90% and 86% of the average peak, respectively

## 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):

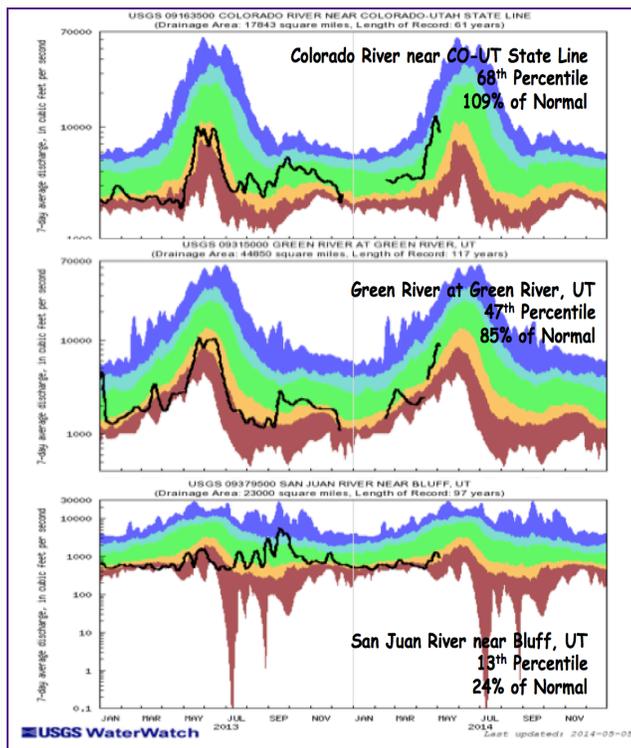
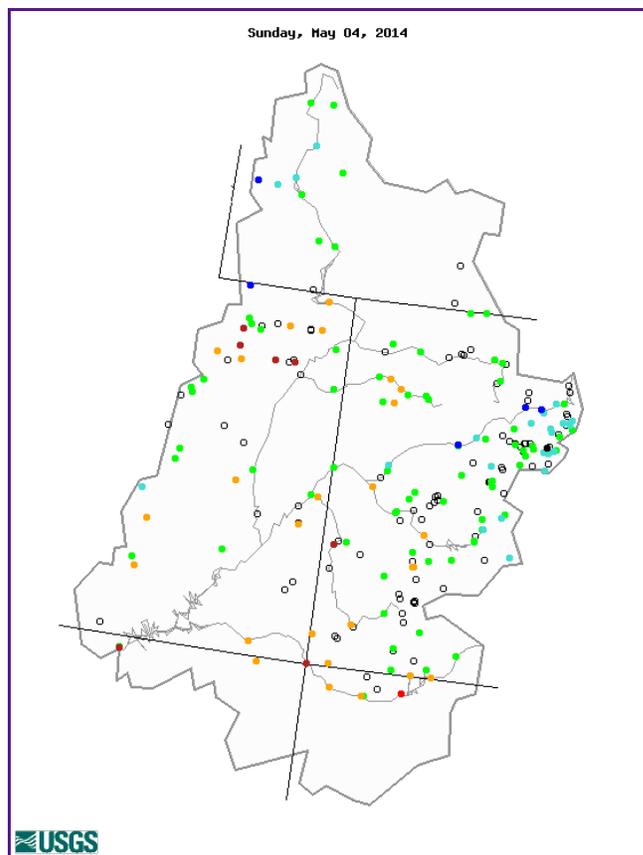
- Most of the UCRB is showing dry short-term indicators, with most SPIs between 0 and -1 with a few scattered areas showing drier indicators as low as -1.5 or -2
- East of the basin, much of northern CO (extending to far northeast CO) and southern WY are drier, with SPIs between 0 and -2.5
- The southern Front Range is near average (SPIs between -1 and +1) with slightly drier SPIs in southeast CO

### Long Term (6-month):

- The Upper Green is reporting wet SPIs on the west side of the basin while farther to the east is slightly drier with SPI's in the 0 to -1.5 range
- Eastern and northern UT are mostly drier, with SPIs ranging between 0 and -2.5
- The driest areas are the Duchesne basin and the Four Corners area
- Most of the higher elevations of CO are showing wet SPIs above zero however the western valleys are drying out with SPI's between 0 and -1
- The Four Corners area is showing dry SPIs between 0 and -1.5
- East of the basin, the Foothills are showing near normal SPIs between -1 and +1
- Eastern CO shows long-term dryness, with SPIs in NE Colorado reporting 0 to -2.5. Farther to the south in the lower Arkansas basin, SPIs range from 0 to -2, with the driest SPIs in Lincoln, Otero and Las

Animas counties

# STREAMFLOW



Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

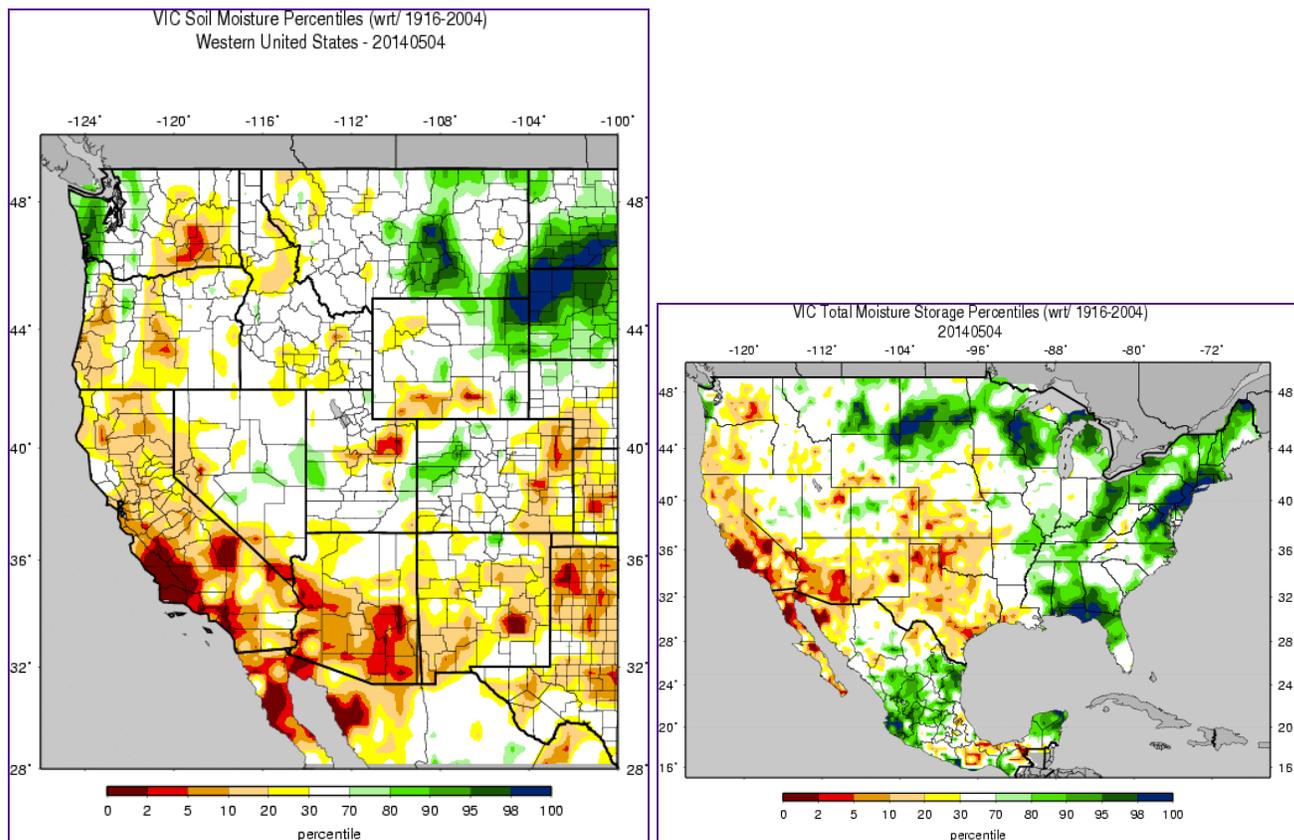
The top left image shows 7-day averaged streamflows as a percentile ranking across the UCRB. The top right image shows 7-day averaged discharge over time at three key sites around the UCRB: The Colorado River at the CO-UT state line; the Green River at Green River, UT; and the San Juan River near Bluff,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

### Streamflow Statistics:

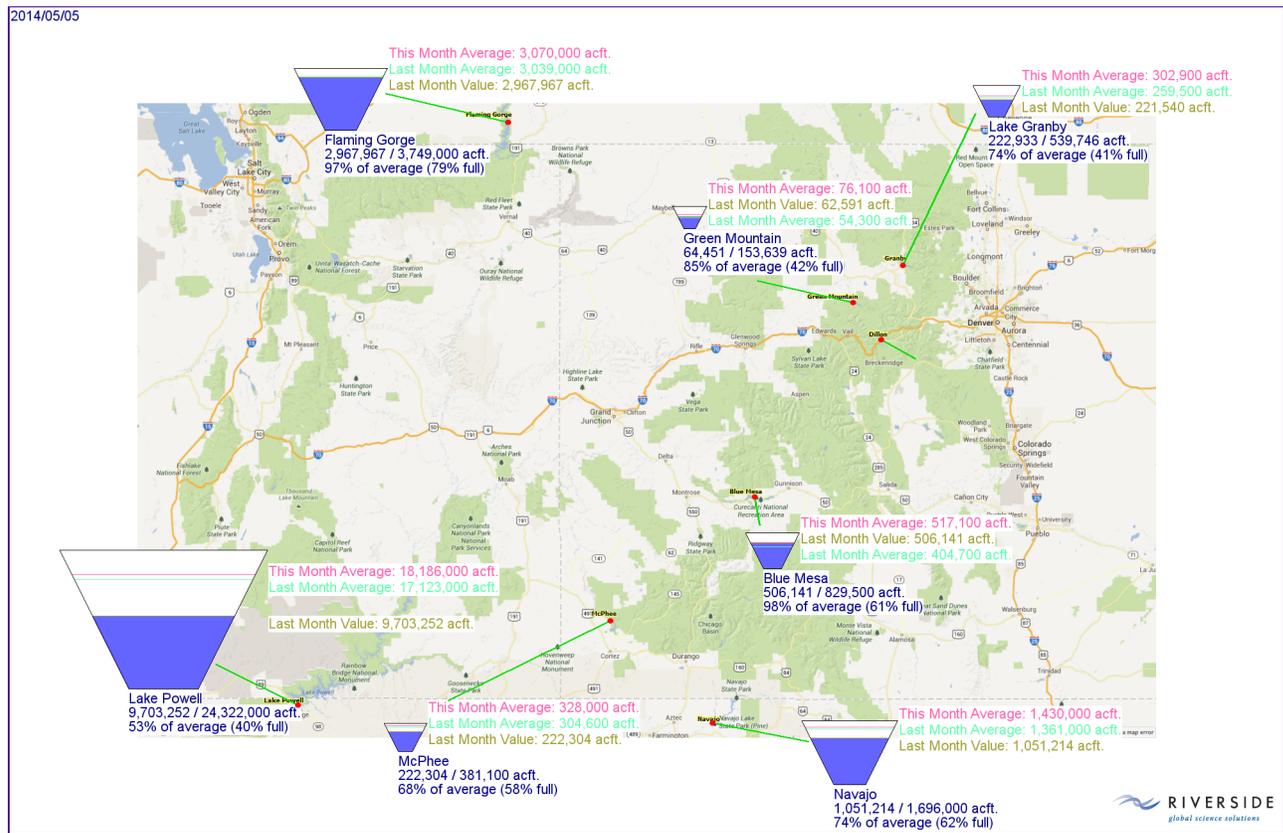
- 78% of the gages in the UCRB are reporting above the 25th percentile (normal and above) for 7-day average streamflow. 6% of gages are reporting much above normal or high flows for the 7 day average.

- 22% of the gages are recording below the 25th percentile (below normal) for 7-day average streamflows
- Streamflows continue to increase as a result of snowmelt, but the increase slowed significantly this week, with an overall drop in above normal flows and an increase in below normal flows
- The lowest streamflows are the San Juan river in SW Colorado and the Duchesne River in NE Utah
- Flows on the Colorado River near the CO-UT state line are in the near normal range, currently at the 68th percentile
- Flows on the Green River at Green River, UT are also in the near normal range, at the 47th percentile
- The San Juan River near Bluff, UT is currently flowing in the below normal range, at the 13th percentile

## 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 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.

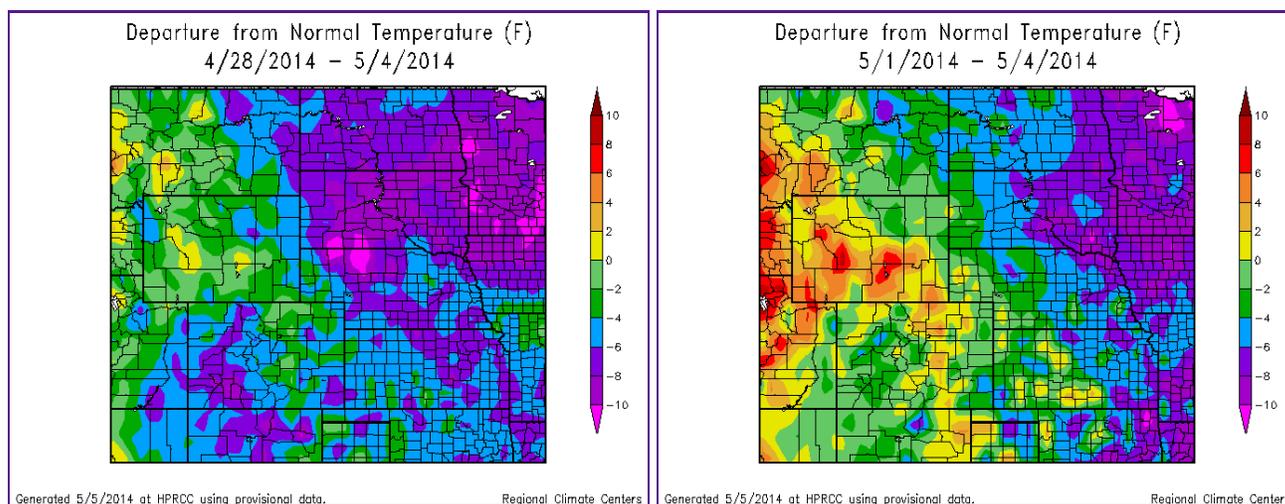
**VIC:**

- The UCRB is showing a mix of wetter and drier soil moisture conditions
- Soil moisture throughout northeast UT and southwest WY are between the 2nd and 30th percentiles with the driest area in the Duchesne basin just south of the Uintah mountains.
- The Four Corners region is showing drying soil moisture, with much of the region between the 20th and 30th percentiles.
- Western CO continues to show wetter soil moisture conditions, above the 70th percentile
- East of the basin, most of northern WY shows near normal to wet soil moisture conditions
- Soil moisture is near normal along the Continental Divide and across most of the Front Range
- Soil moisture on the plains is drying rather quickly with little moisture and high winds. The driest area is centered over southern Lincoln county and extends NE and south to the borders. These areas are reporting soil moisture between the 2nd and 30th percentiles

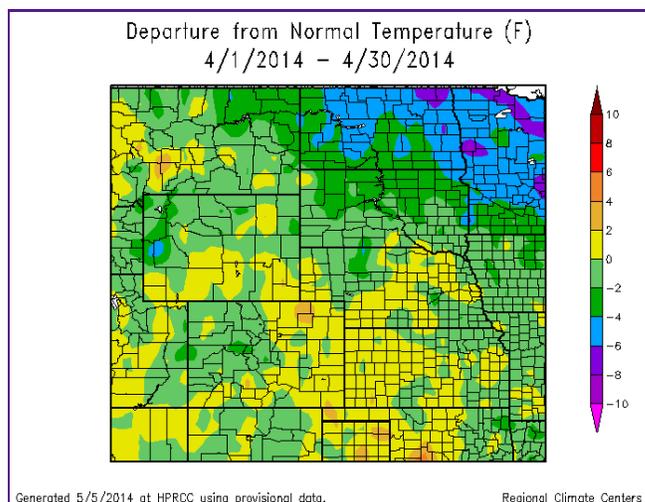
**Reservoirs:**

- Green Mountain, Dillon, Flaming Gorge, and Blue Mesa are near or above their May average volumes
- Lake Powell, McPhee, Navajo, and Granby are all below average, ranging between 53% to 74% of their May average volumes
- Granby's drop in volume through the late winter and early spring has been due to sending water to the Front Range reservoirs, not due to any losses from the system
- Most of the reservoirs are now increasing in volume as a result of increased runoff from snowmelt
- Dillon continues to decrease in volume at this time

## 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.



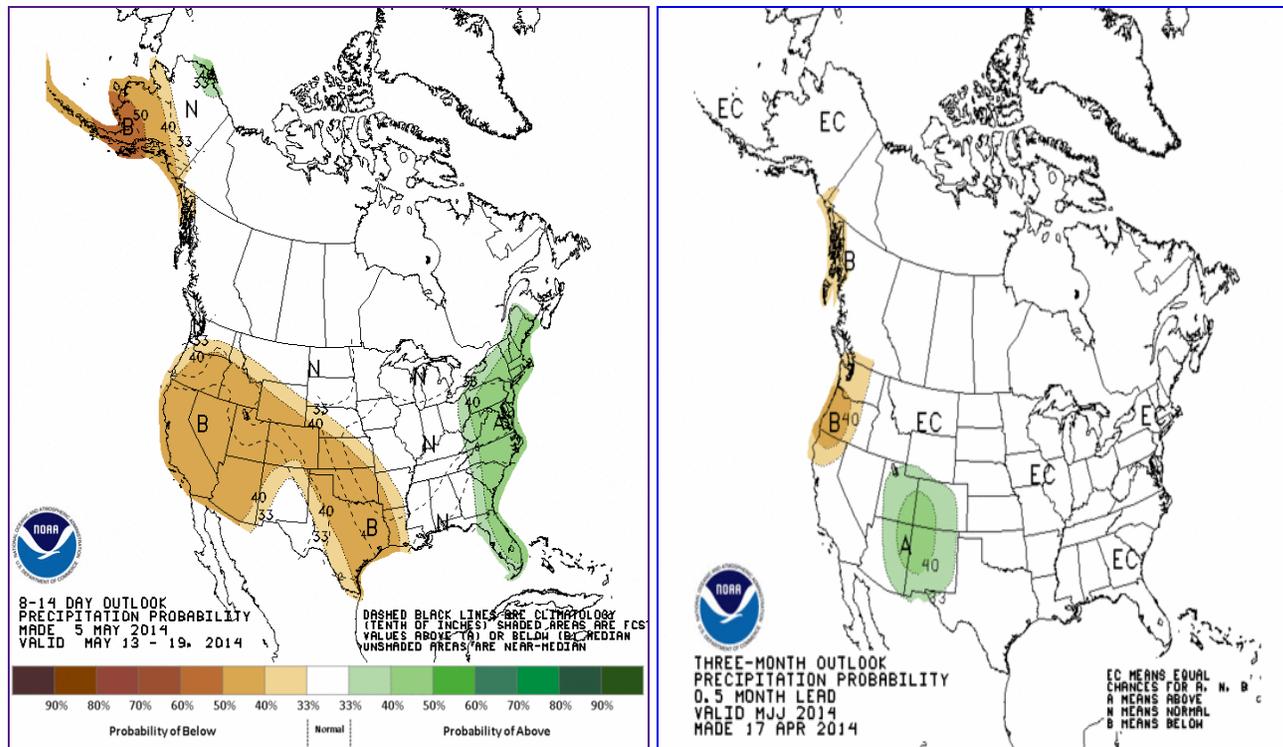
**Last Week Temperatures:**

- The UCRB experienced cooler than average temperatures last week
- Most of the basin saw temperatures between 2 and 8 degrees colder than average with the northern part of the basin seeing less cool temperatures
- East of the basin, temperatures across eastern WY and eastern CO were also 2 to 8 degrees below average

**Last Month Temperatures:**

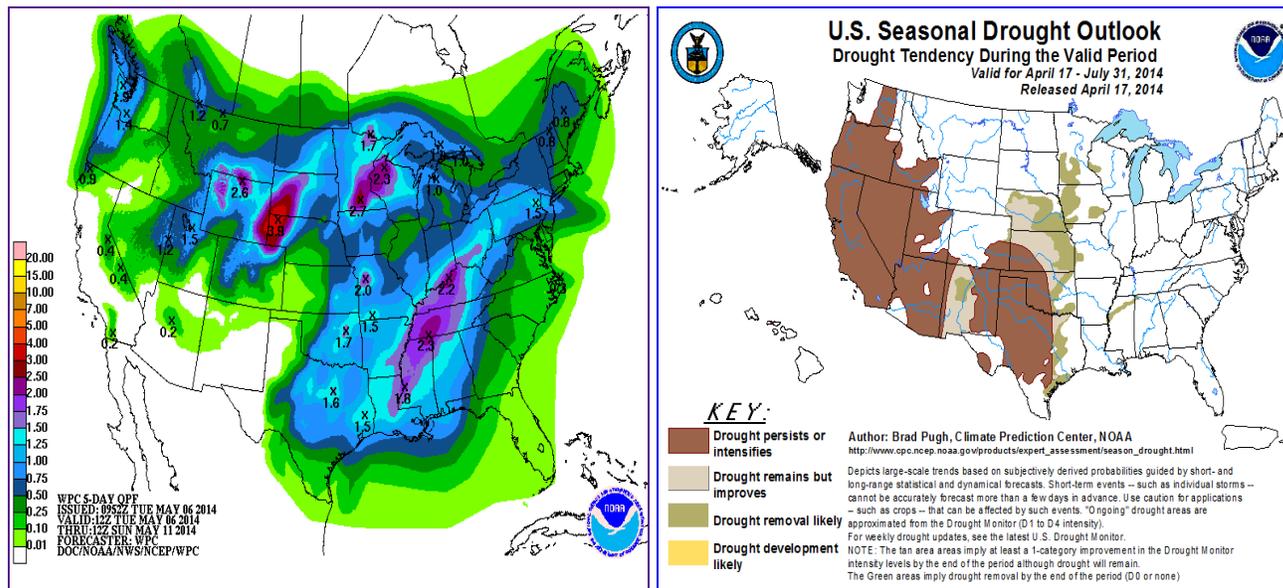
- Most of the UCRB saw near normal temperatures for the month of April
- Eastern UT, western CO, and northwest WY temperatures were 0 to 4 degrees below average
- Central UT, southwest WY and parts of the Four Corners saw temperatures 0 to 2 degrees above average
- East of the basin, most of eastern CO saw temperatures very near to slightly warmer than average, with cooler than average in northeast WY

**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.



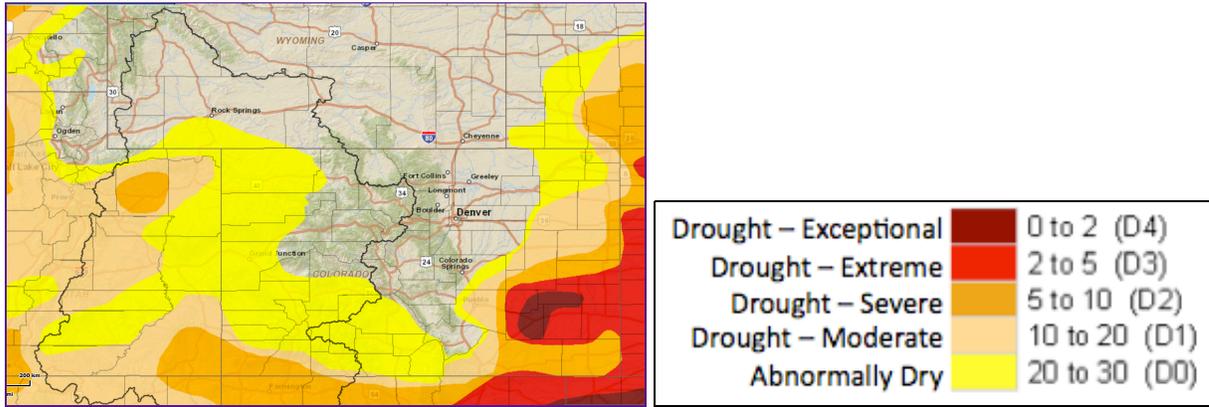
**Short Term:**

- Mild and dry conditions will move out as a trough and cold front move through the area on Wednesday
- Cooler conditions, and a chance for showers (and snow for the higher elevations) is expected mid-week
- A return to warmer and drier conditions (with the chance for isolated showers) is expected for the weekend

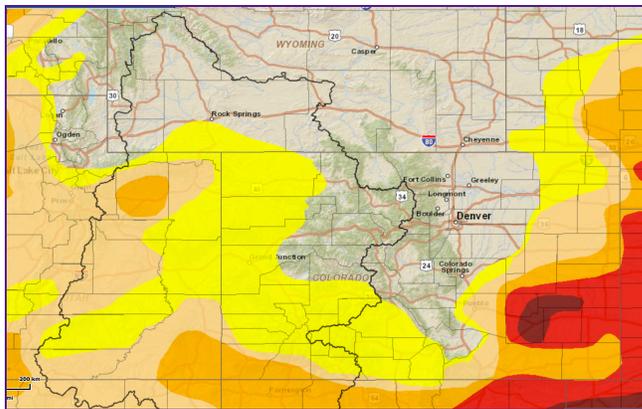
**Longer Term:**

- The 8-14 day precipitation outlook shows increased chances of drier than normal conditions across the entire region
- The 8-14 day temperature outlook (not pictured) is showing probability of warmer than average temperatures across the UCRB and CO
- The CPC 3-month outlook shows higher chances for wetter than normal conditions over the UCRB in Utah and Colorado as well as much of eastern Colorado for the May, June and July period.
- The seasonal drought outlook shows a probability of drought persisting across the western portion of the basin and across southeast CO and northern UT

**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 6, 2014**

Cool and dry conditions led to an overall decrease in runoff throughout the basin. However, the basin is still in its peak runoff season, with rapid snowmelt and volume increases in the reservoirs. The biggest area of concern remains to be eastern CO, which continues to see below average precipitation (with higher winds exacerbating the situation).

**Recommendations\*\***

**UCRB:** Recommendations were made last week, and very little has changed from last week to now. So status quo is recommended for the UCRB this week.

**Eastern Colorado:** Status quo is also recommended for the rest of Colorado this week.