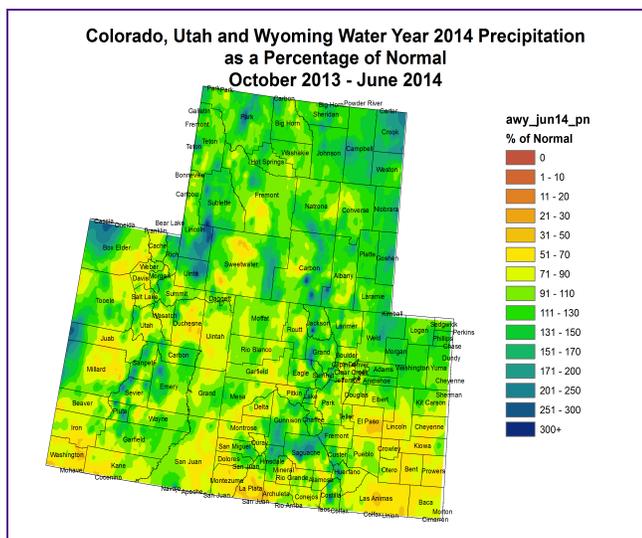
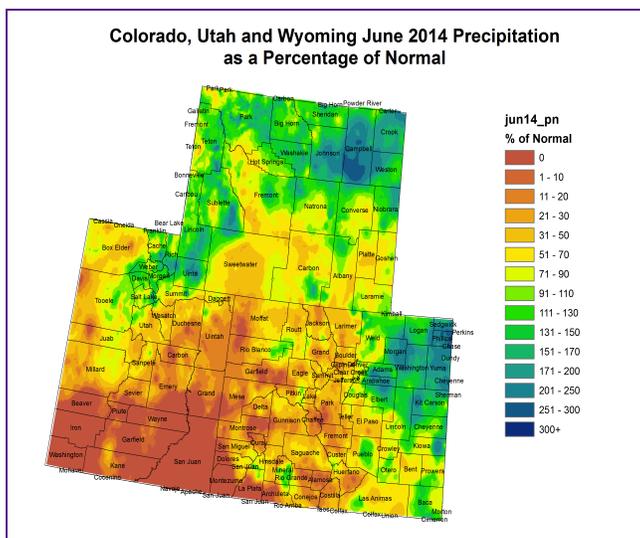
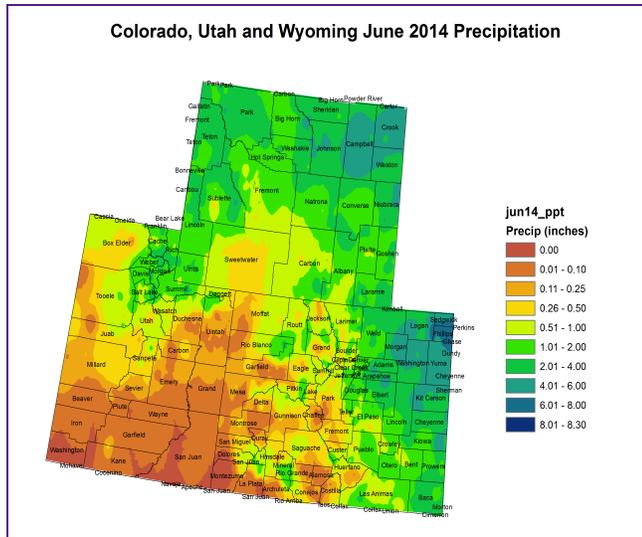
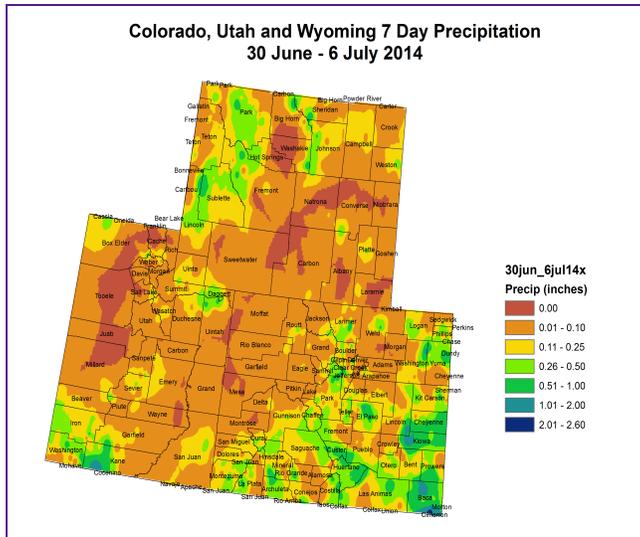


# PRECIPITATION



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 majority of the UCRB was dry over the past week with less than a half an inch of precipitation being reported. Northern Sublette county in Wyoming and the border of Daggett/Uintah counties in Utah picked up the highest amounts totally up to 0.50" with isolated areas up to 1.00".
- It was dry through the headwaters of the Colorado as well with widespread precipitation less than 0.25" falling during the week.
- The Four Corners area did pick up modest amounts of precipitation over the week with up to a half inch in Montezuma/La Plata counties.

- The San Luis valley was dry with less than a 0.10" being reported in the valley, however the surrounding mountains did receive up to 1.00" on both the west and east side of the valley.
- On the eastern plains, the northern tier was mainly dry with some spotty showers out towards the NE border. Eastern Washington, Yuma and Phillips counties picked up around 0.25-1.00" over the past week.
- Farther to the south on the Eastern plains was wetter for the week picking up moisture in much needed areas. Cheyenne and Kiowa counties saw precipitation of 0.26-2.00" with higher amounts in western Kiowa/SE Lincoln counties. Good moisture also fell from Custer county down through Baca county with precipitation in the range of 0.26-2.60". The highest amounts fell in extreme southern Baca county.

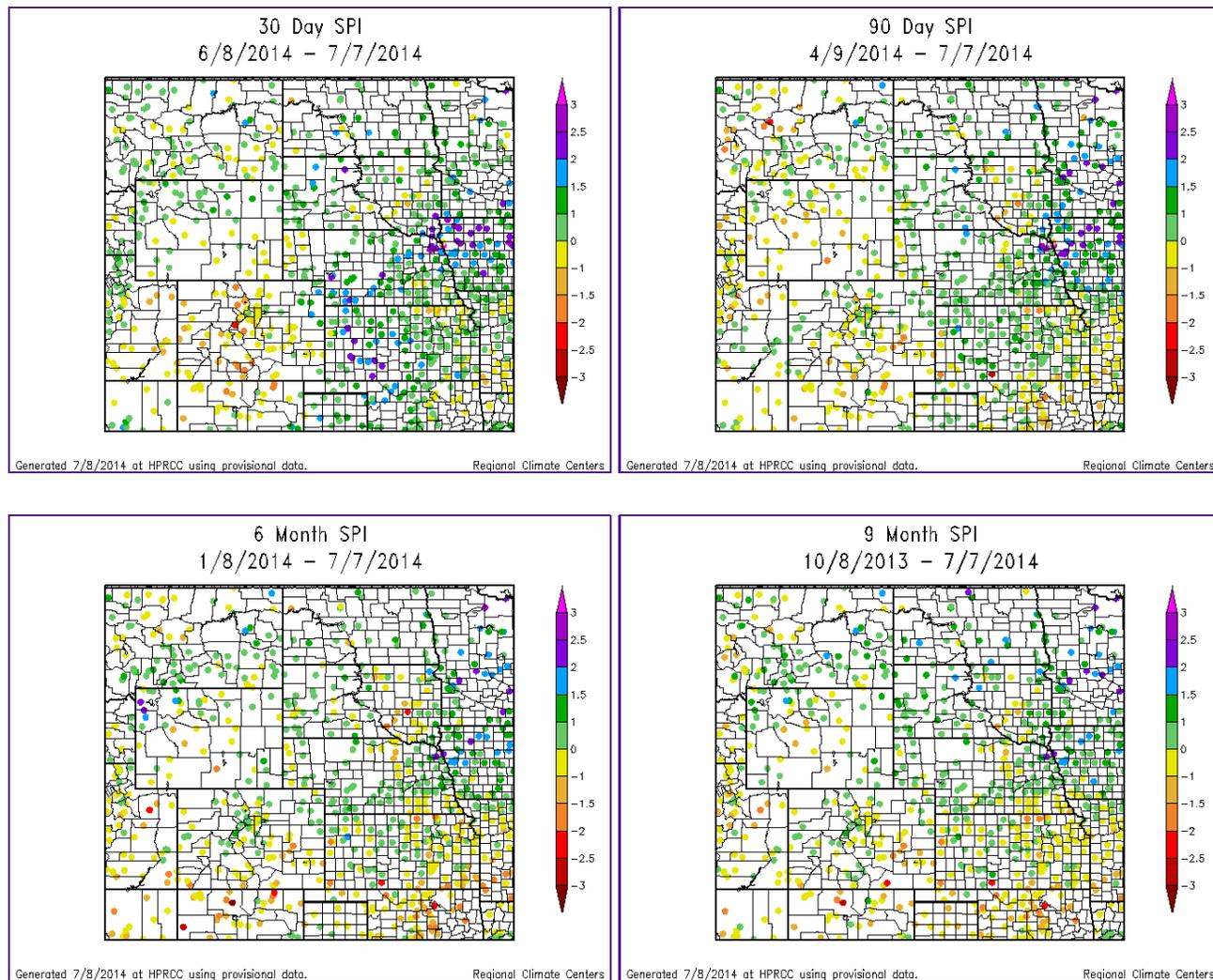
### **June Precipitation :**

- June was dry across much of the UCRB. The Northern portion of the basin wasn't quite as dry with above average moisture falling across Sublette, Lincoln and Uinta counties in Wyoming. Farther south was much below average for the month of June. The Four Corners region saw less than 10% of normal for June.
- Western Colorado and the headwaters of the CO river were also dry for the month with widespread areas receiving less than 70% of normal precipitation for June.
- East of the divide, the NE plains of Colorado benefitted from convective thunderstorms. The NE plains saw widespread above average moisture conditions for June. The SE plains did not benefit as much as the NE plains and the rains were spottier. The SE plains had widespread <70% of normal for the month with isolated areas in Pueblo, Kiowa, Prowers and Baca receiving above average moisture.

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

- For the water year, Much of the UCRB remains in above average moisture since October 1 with the exception of Sweetwater county in WY and the Duchesne basin in Utah which have received <90% of normal for the water year.
  - The Four Corners area is also dry for the water year through June with lower elevations reporting <90% of normal precipitation for the water year.
  - East of the divide, the NE plains are reporting above average moisture for the water year while the SE plains remain dry at the longer time scale. Widespread precipitation <70% of normal has been seen in SE Colorado where drought conditions persist.
-

# 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 short term SPI indicates dry conditions throughout eastern Utah and western Colorado.
- The Upper Green river basin shows a mix of slightly wet and slightly dry conditions (SPI +1 to -1).
- Eastern Utah and Western valleys of Colorado are reporting SPI's in the range of 0 to -1.5 with the driest areas along the Duchesne river basin and along the mainstem of the Colorado River farther to the south.
- The headwaters of the Colorado river are also dry on the short term with SPI's between 0 and -2.5. The lowest SPI is being reported in Lake county.
- The San Luis valley is also reporting SPI's between 0 and -2 on the short

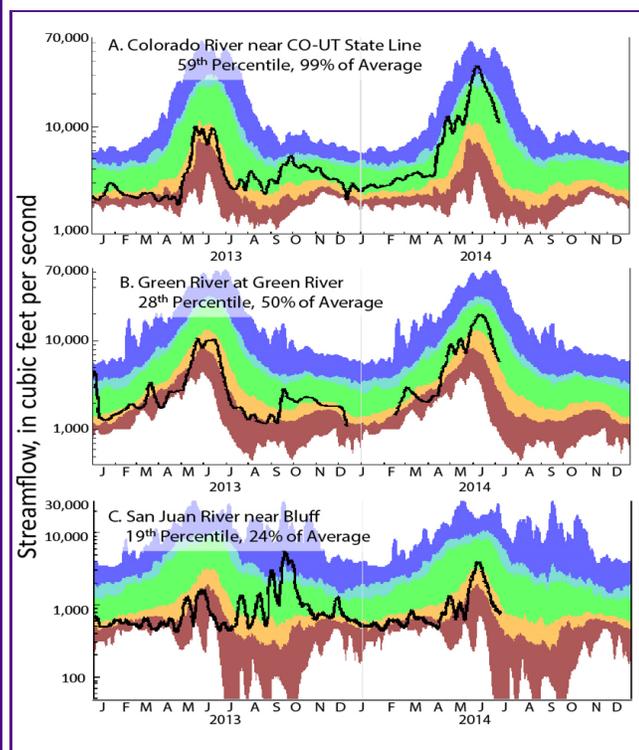
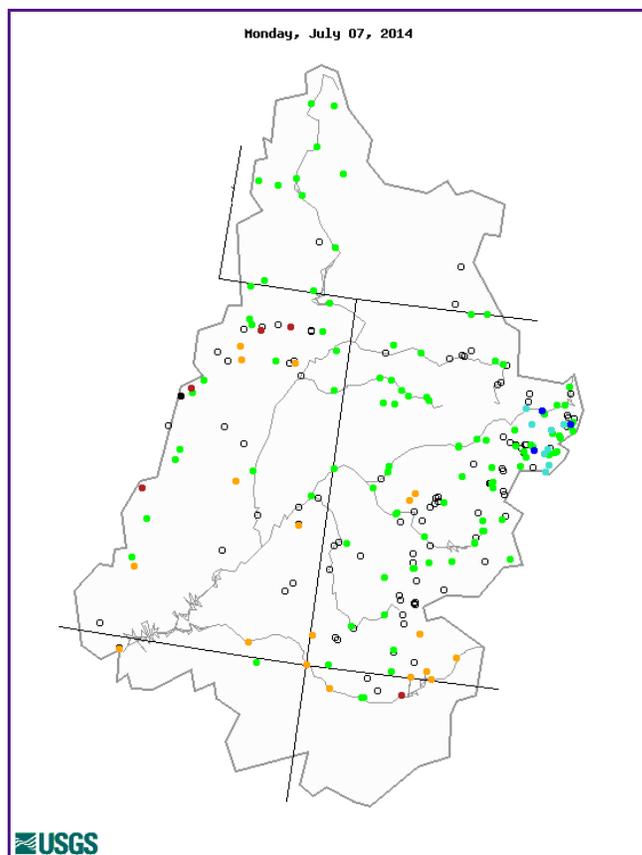
term.

- East of the divide the NE plains are showing wet conditions while farther to the south is slightly dry in the short term with the majority of SPI's between +1 and -1.

### Long Term (6-month):

- The Upper Green river basin shows a mixed bag on the longer time frame with SPI's between +1 and -1.5 with the driest areas in Fremont county.
- Eastern Utah remains dry on the longer term with the driest areas in the Duchesne basin (-1 to -2.5) and around the Four Corners area where SPI's range from 0 to -2.5
- The headwaters of the Colorado are mainly wet on the longer term SPI.
- The San Luis valley is also dry on the longer term with SPI's in the 0 to -1.5 range.
- The NE plains of Colorado remain mainly wet on the longer term, while the SE plains remain dry. The SE plains are reporting SPI's between 0 and -1.5. The driest area is southern Lincoln and Crowley 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		

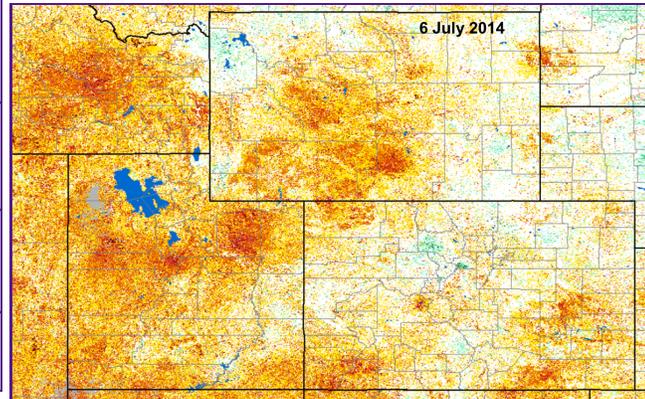
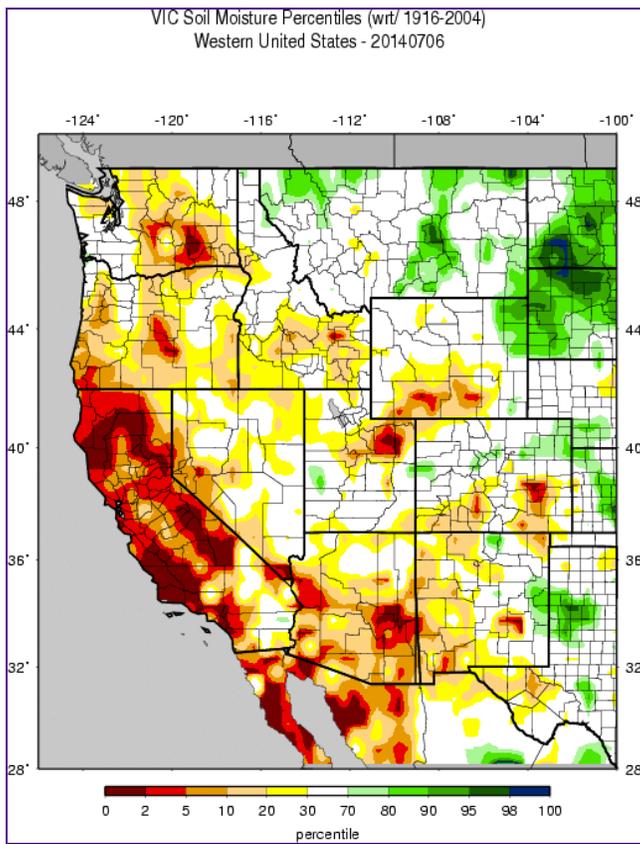
The top left image shows 7-day averaged streamflows as a percentile ranking across the UCRB. The top right image shows 7-day averaged discharge over time at three key sites around the UCRB: The Colorado River at the CO-UT state line; the Green River at Green River, UT; and the San Juan River near Bluff,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

### Streamflow Statistics:

- Most gages have peaked for the water year.
- 83% of the gages in the UCRB are reporting above the 25th percentile (normal and above) for 7-day average streamflow
- 18% of the gages are recording below the 25th percentile (below normal) for 7-day average streamflows
- The lowest streamflows are the San Juan River in SW Colorado and the Duchesne River in NE Utah.
- Flows on all three key gages around the basin have peaked.
- Streamflow on the Colorado River near the CO-UT state line remains in the normal range and reporting in the 59th percentile
- The Green River at Green River, UT is reporting in the 28th percentile and close to the below normal range.
- The San Juan River near Bluff, UT peaked just slightly in the normal range and flows have quickly dropped into the below normal range and is reporting at the 19th percentile.

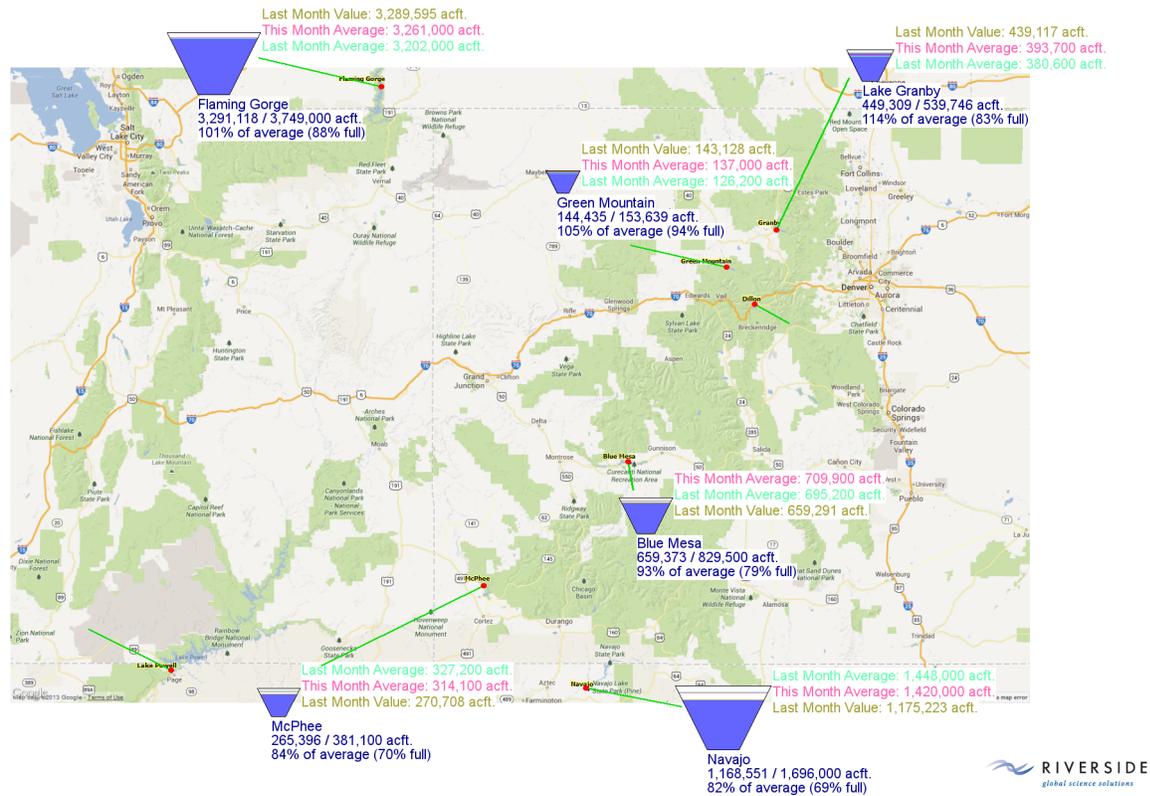
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## SURFACE WATER



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).

2014/07/07



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 mostly drier soil conditions with a few wetter patches in the Colorado headwaters.
- Soil moisture throughout northeast UT and southern WY are between the 0 and 30th percentiles with the driest area in the Duchesne basin just south of the Uintah Mountains. This area is now reading below the 2nd percentile where D3 was expanded last week.
- Sweetwater and Carbon counties in WY also show well below-average soil moisture below the 30th percentile.
- The Four Corners region is reporting soil moisture between the 10th and 30th percentiles.
- Central Saguache County is now showing below the 5th percentile in soil moisture as conditions dry out there.
- East of the basin, most of northern and eastern WY shows near normal to wet soil moisture conditions.
- Northeastern CO is now showing above normal soil moisture conditions.
- Soil moisture on the SE plains continues to report below the 30th percentile over much of the area. Otero, Crowley, and southern Lincoln Counties show soil moisture below the 10th percentile. Southern Lincoln County is reporting below the 2nd percentile. Baca and Prowers County are now in the normal range.

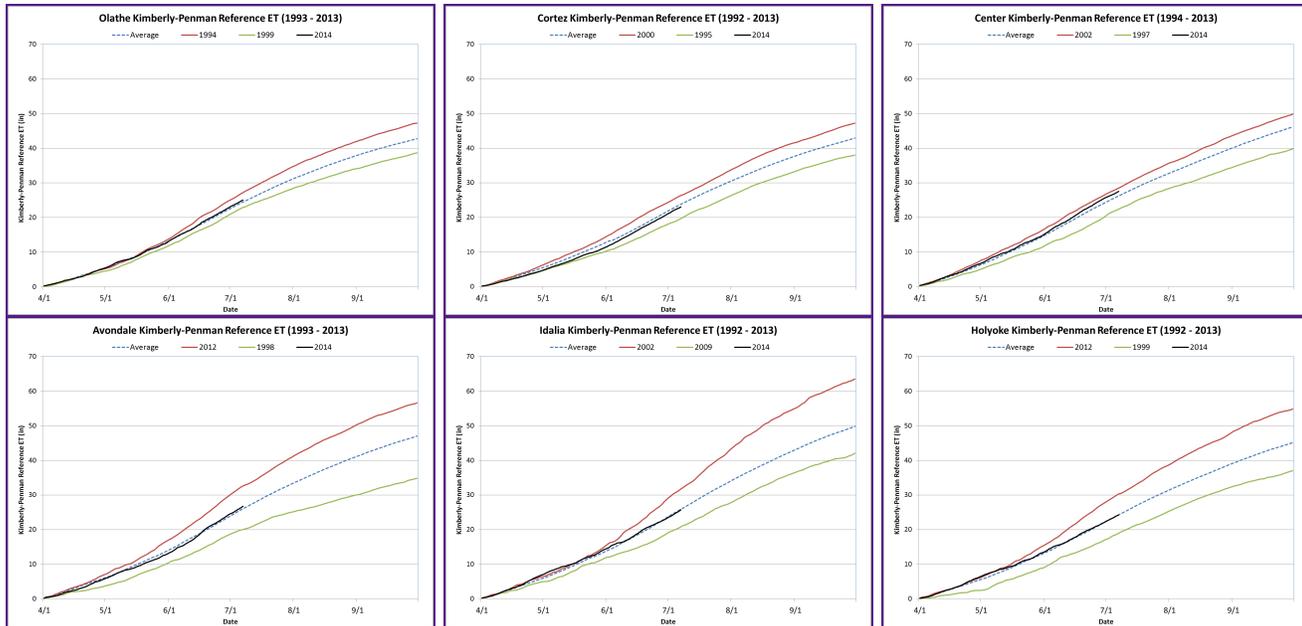
### VegDRI:

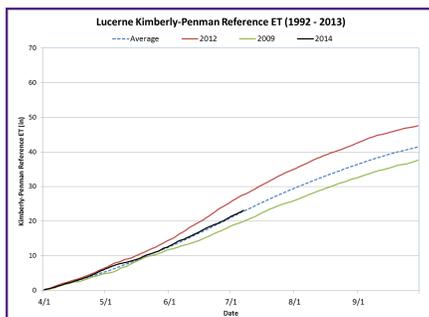
- The VegDri product is shadowing conditions reflected by other indices. VegDri points to dry vegetation conditions in SW Wyoming, particularly in Sweetwater county.
- Duchesne county is depicted very dry by VegDri which is in line with other indices in that area (streamflow, SPI, VIC).
- The Four Corners area is showing drying vegetation conditions.
- East of the divide, the SE plains continue to see dry vegetation conditions, particularly in Southern Lincoln, Crowley and western Cheyenne and Kiowa. Las Animas county also points to very dry vegetation conditions.

### Reservoirs:

- Most northern reservoirs continue to see volume increases since last month.
- Flaming Gorge is 101% of the July average.
- Green Mtn is 105% of July average.
- Lake Granby is 114% of July average
- Blue Mesa is 93% of the July average and is still seeing small volume increases since last month.
- Navajo is 82% of average and showing volume decreases.
- McPhee is 84% of average and showing volume decreases.

## EVAPOTRANSPIRATION



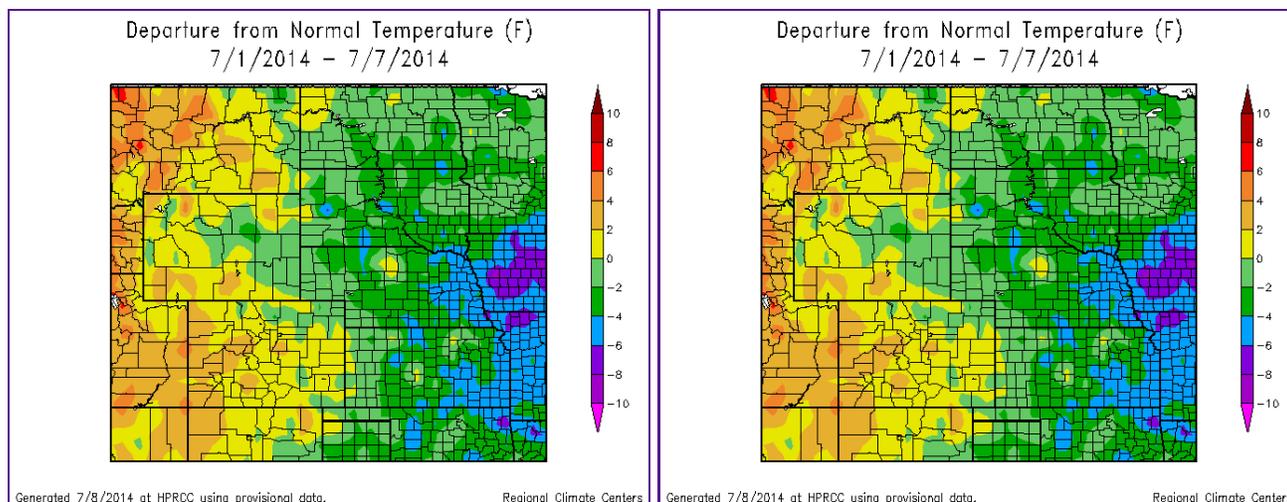


The above images are of reference evapotranspiration (ET) from CoAgMet sites across Colorado. Reference ET assumes the amount of water that will evaporate from a well-irrigated crop. Higher ET rates occur during hot, dry, and windy conditions. Lower ET rates are more desirable for crops. See a [map of locations](#) for the above ET sites.

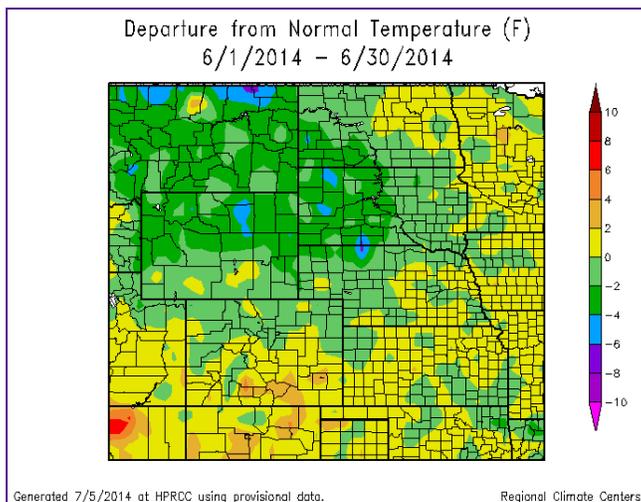
### Reference Evapotranspiration:

- Olathe: ET is tracking slightly above normal for the growing season.
- Cortez: ET is still tracking below normal, but is running closer to normal than it has all season.
- Center: ET has ramped up and is now tracking well above normal for the season since the beginning of June.
- Avondale: ET has been tracking just slightly above normal since mid-June.
- Idalia: ET is tracking along the seasonal average for this point in the growing season.
- Holyoke: ET rates are tracking along the seasonal average this growing season.
- Lucerne: ET rates are tracking along the seasonal average this growing season.

## 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:

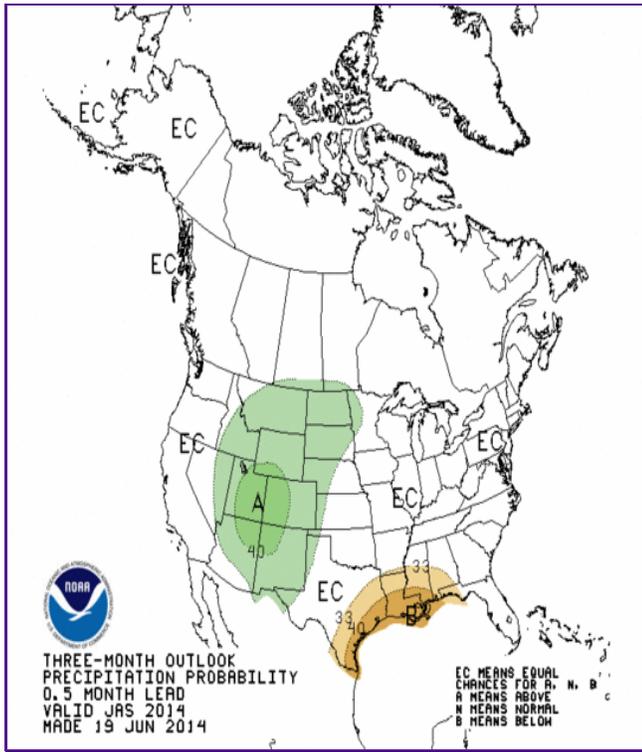
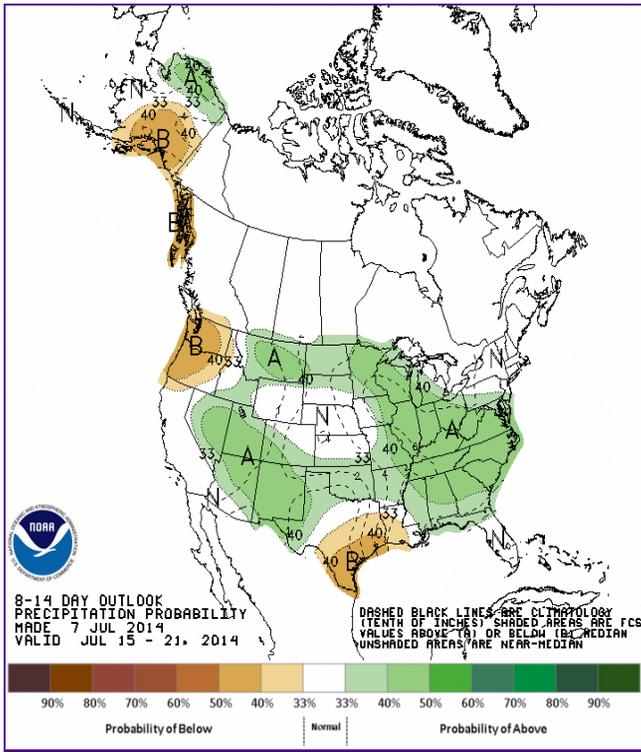
- The UCRB saw slightly warmer than average temperatures over the past week. The northern portion was closer to seasonal temperatures in the range of 0-2 degrees above normal while farther to the south experienced temperatures 2-4 degrees above normal.
- East of the divide saw temperatures in the range of 2 degrees below normal to 2 degrees above normal for the week. The NE plains were cooler than the SE plains although pockets in Prowers, Las Animas and Baca counties were below normal temperatures.

### Last Month Temperatures:

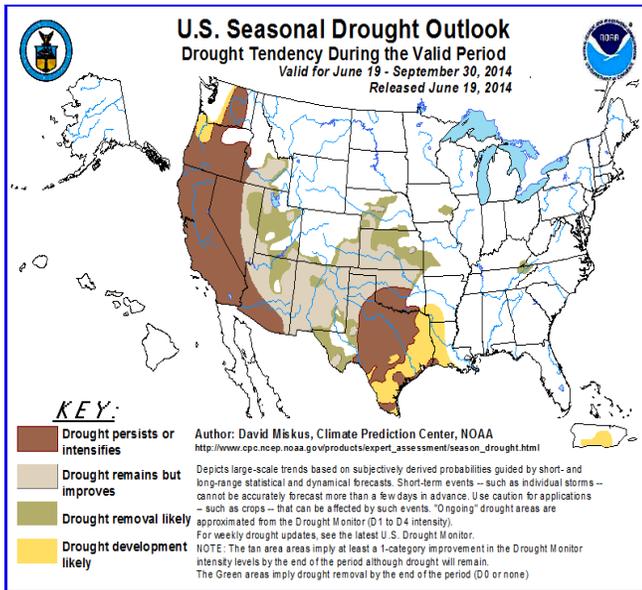
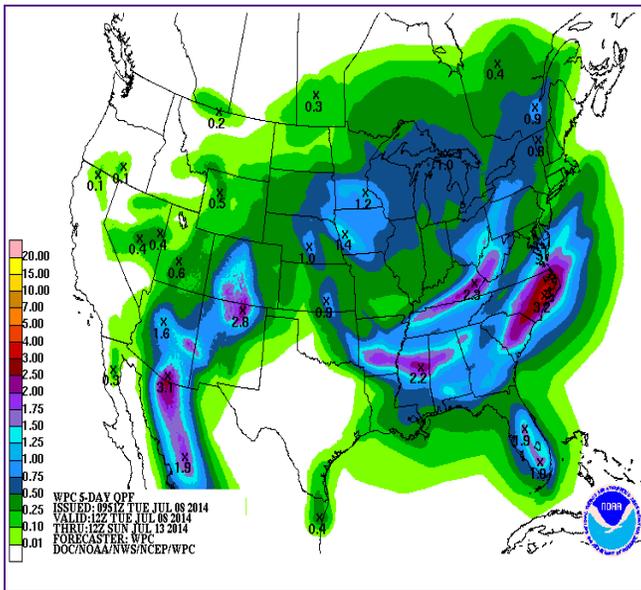
- Temperatures in the southern part of the UCRB basin were slightly above normal and temperatures in the northern and eastern parts of the basin were slightly cooler than normal.
- East of the basin temperatures did not stray far from seasonal normals either. South WY and northeast CO show mainly between 0 and 2 degrees below normal.
- South and southeastern CO saw the warmest June temperatures. Most of Huerfano, Las Animas, and Pueblo Counties showed temperatures 2 to 4 degrees above normal.
- Most of southeastern CO recorded temperatures 0 to 4 degrees above normal for the month of June. Otero and Bent Counties were the most above normal in the region.

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## 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:**

- The SW monsoon is starting to ramp up in the region. The UCRB will see chances of shower activity increase over the next 36 hours with moisture peaking on Wednesday followed by some drying.
- Another shot for moisture is in the forecast in the latter part of the

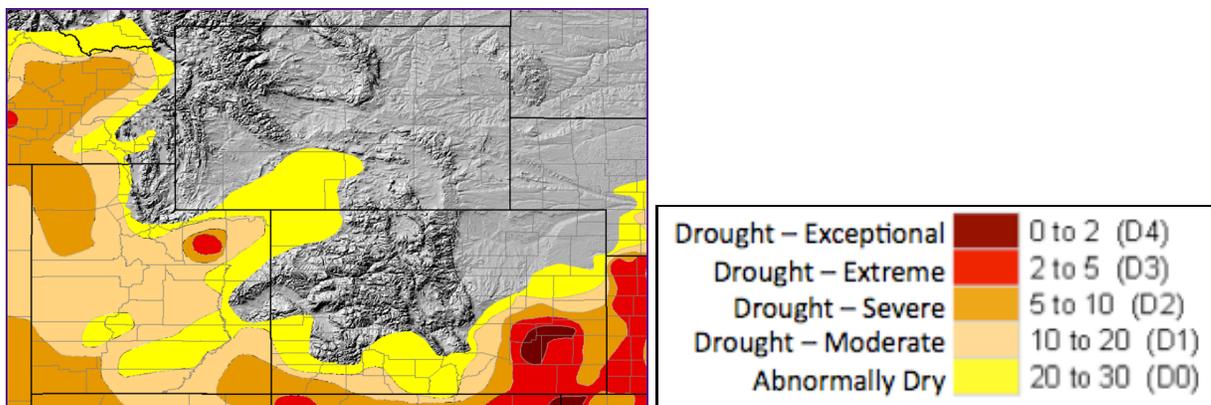
weekend.

- East of the divide will also keep chances of showers and thunderstorms into early next week. Some local heavy rainfall is possible with some of these storms.
- The 5 day quantitative precipitation forecast has highest moisture centered over the San Luis valley with those areas expected to see >1.75" of precipitation.
- Much of the high country is forecast to see shower activity totaling 1-2" over the 5 day period.
- The eastern plains are forecast to receive 0.25"-0.50".

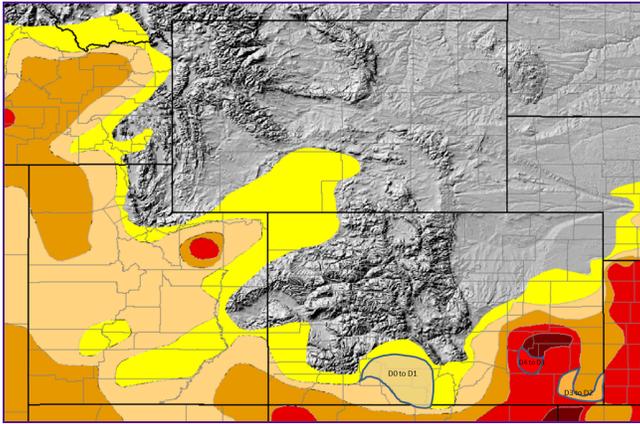
### Longer Term:

- The 8-14 day precipitation outlook shows 40% or greater chance of above average precipitation with the first monsoonal surge of the season slated to arrive early next week. East of the divide predictions are for equal chance of above and below average precipitation.
- The 8-14 day temperature outlook (not pictured) shows increased chances for below average temperatures over much of Colorado with Eastern Utah and SW Wyoming expected to see normal temperatures.
- The CPC 3-month outlook shows higher chances for wetter than normal conditions over the UCRB in Utah, Colorado, and Wyoming for the July-September time period.
- The seasonal drought outlook indicates no areas in the UT, WY, or CO where drought is anticipated to develop or intensify. Drought conditions are likely to improve in UT due to the combination of El Nino development and the North American Monsoon. In drought-stricken SE-CO drought is likely to continue, but improve.

## 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: July 8, 2014

A fairly quiet week over the UCRB with most storms isolated to the southern portion of the basin, but not producing much in the way of moisture. East of the divide again saw spotty, convective precipitation which was heaviest in Washington, Yuma, Cheyenne, Kiowa, Prowers and Baca counties.

## Recommendations\*\*

### UCRB

Status quo is recommended for the UCRB.

### Rio Grande Basin:

The San Luis valley is showing very dry short term SPI's (<-1.5), degradation from D0 to D1 is recommended in that area based on SPI and VIC soil moisture.

### Eastern Colorado:

Improvements are recommended to the D4 area in mainly Otero county where good moisture has fallen over the past month. The NE corner of the county is recommended to stay in D4, however other areas have seen some improvement from the exceptional drought category. Conditions in western Kiowa county are still very bad with little vegetation on the ground. Dust storms continue to kick up in windy conditions.

Improvement to the D3 in Baca county is also recommended based on June precipitation that has fallen in the area and continues through early July. Improvement from D3 to D2 is recommended for much of Baca county based on precipitation, SPI and reports that wheat harvest is looking better than it has in Baca for several years. This improvement directly conflicts with conditions over the border in both Kansas and New Mexico where gradients will be tight.

