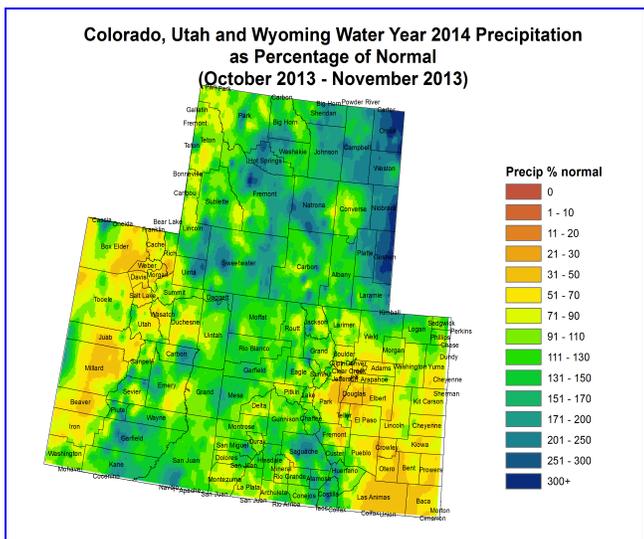
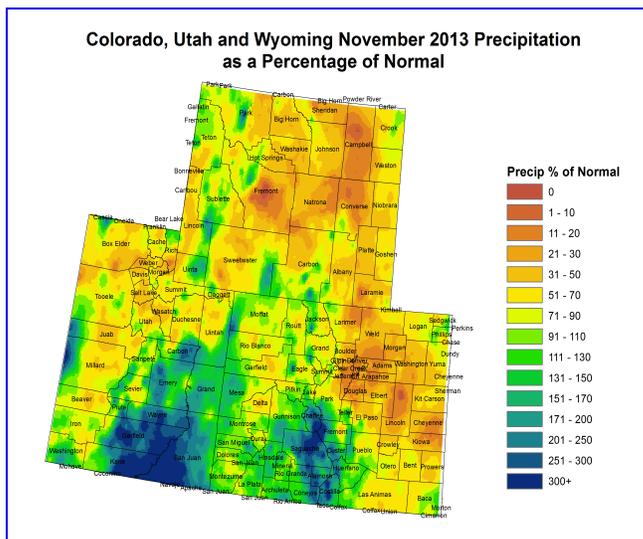
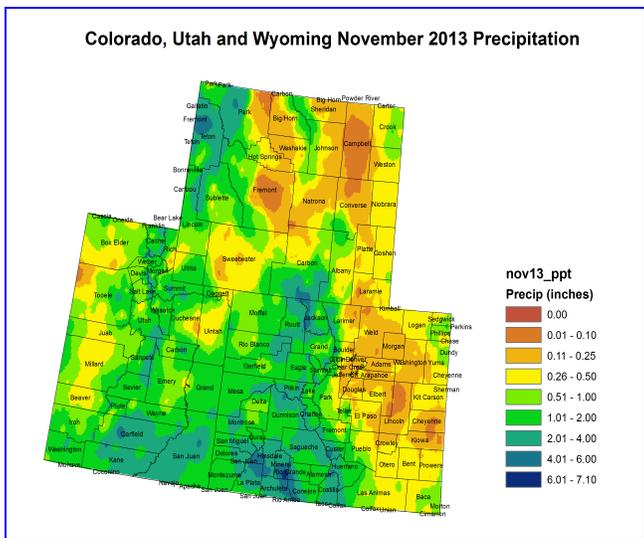
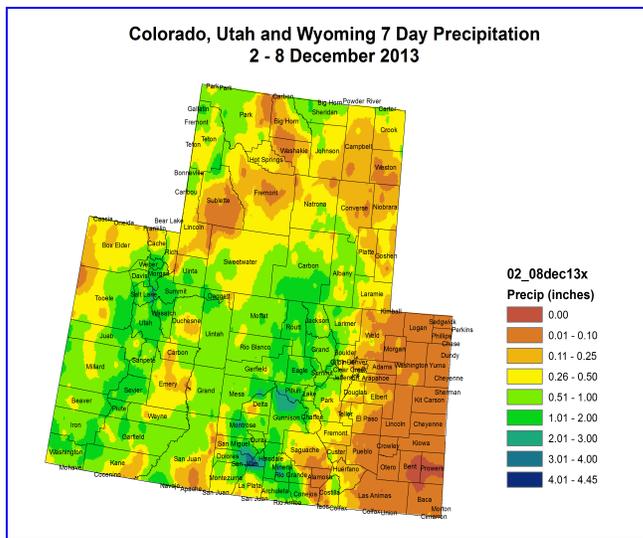


PRECIPITATION



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 Upper Green river basin was fairly dry over the past week with precipitation ranging from 0-1.00" with the highest amounts falling near the southern border of Wyoming.
- Eastern Utah and Western Colorado saw widespread precipitation ranging from 0.51-4.45". The highest accumulations were in the San Juan mountains in Colorado. Isolated areas saw less than 0.50".

- Eastern Colorado in contrast was much drier recording precipitation amounts less than 0.25". The Front Range saw slightly more precipitation over the past week but mainly ranged from 0.25-0.50"

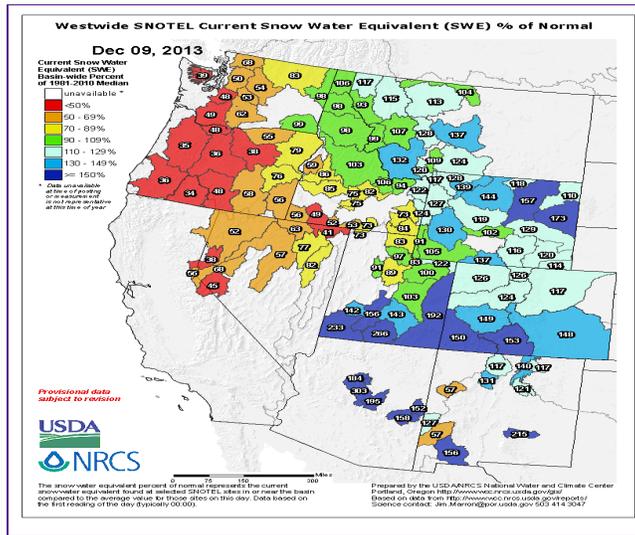
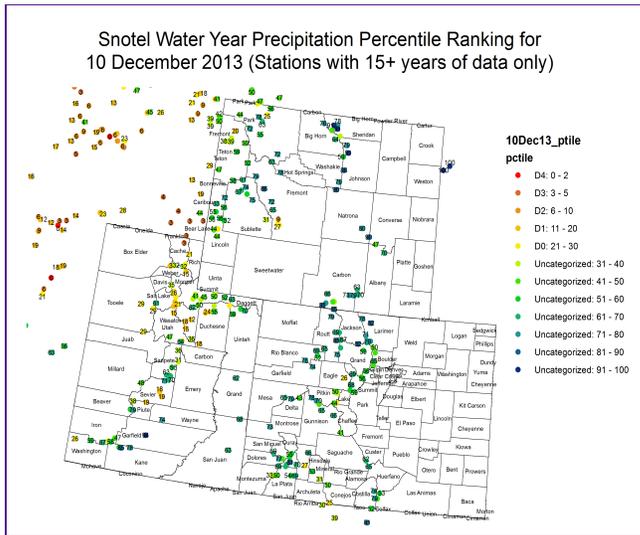
November Precipitation:

- The majority of the northern half of the UCRB received below average precipitation, between 20 - 70% of average for the month, with some isolated areas near or slightly above average.
- The central portion of the basin in western CO and eastern UT, received between 50% - 130% of average precipitation, the higher amounts along the CO-UT boarder and west.
- Most of the Four Corners region and the CO River valley in southern UT were wetter, receiving between 90% and 200% of average precipitation for the month, with southern UT above 300% of average
- The Wasatch range and other higher elevations in central UT received much below average precipitation
- East of the basin, in eastern CO and WY was drier, receiving between 20% - 70% of average for the month.
- The upper Arkansas basin and the Rio Grande basin in southeast CO saw beneficial precipitation, with above average precipitation, to more than 300% of average.
- Southeastern CO was also drier, between 50% - 90% of average.

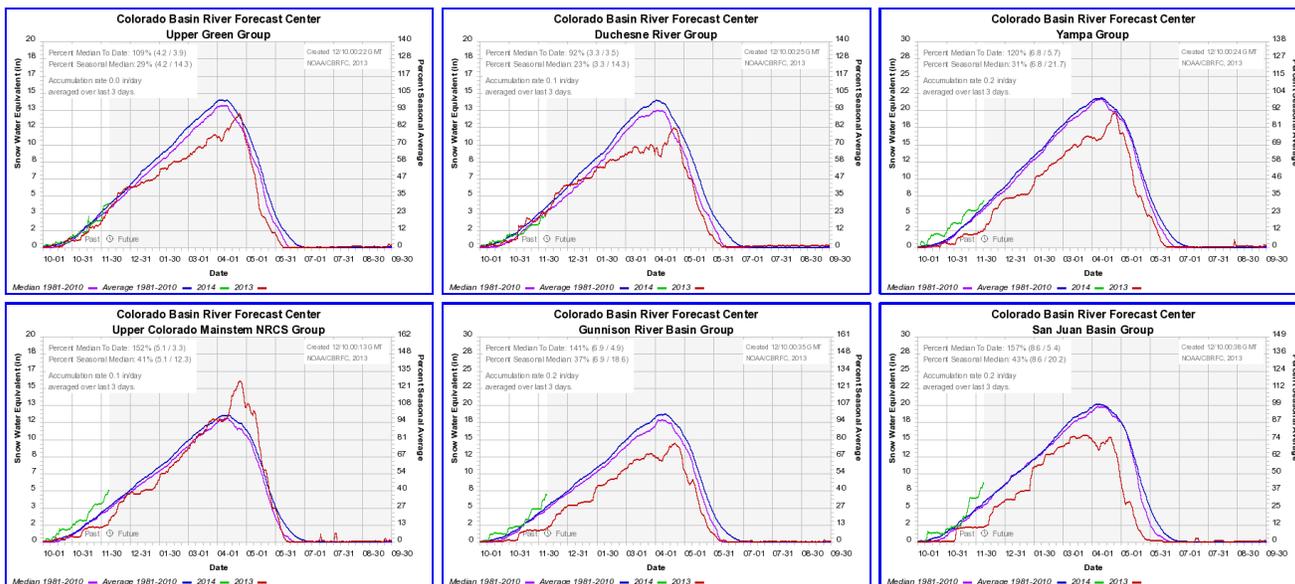
Water Year Precipitation:

- Much of the UCRB has seen near and above average precipitation through the first two months of WY2014
- The Wasatch and southern Duchesne ranges has been drier with 50% - 90% of average.
- Most areas of eastern UT and western CO received between 90% and 130% of average precipitation for WY2013, with some spotty areas less than 70% of average
- Northeast CO was near average 70% to 130% of average.
- The rest of eastern and southeastern CO has been below average, in the range of 30% to 70% of average, with some areas up to 90% of average.
- The upper Arkansas basin and Rio Grande basin are above average for the start of WY 2014 thanks to an above average November.

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:

- Most of the UCRB is showing near and above median percentiles since the beginning of the water year, most sites saw an increase since last week.
- The Green river basin, Yampa, White, Colorado, Gunnison and San Juan basins are mainly showing precipitation percentiles higher than the median, a few isolated sites are less than the median. The Wasatch Range is drier with percentiles ranging from 3-35th percentile.

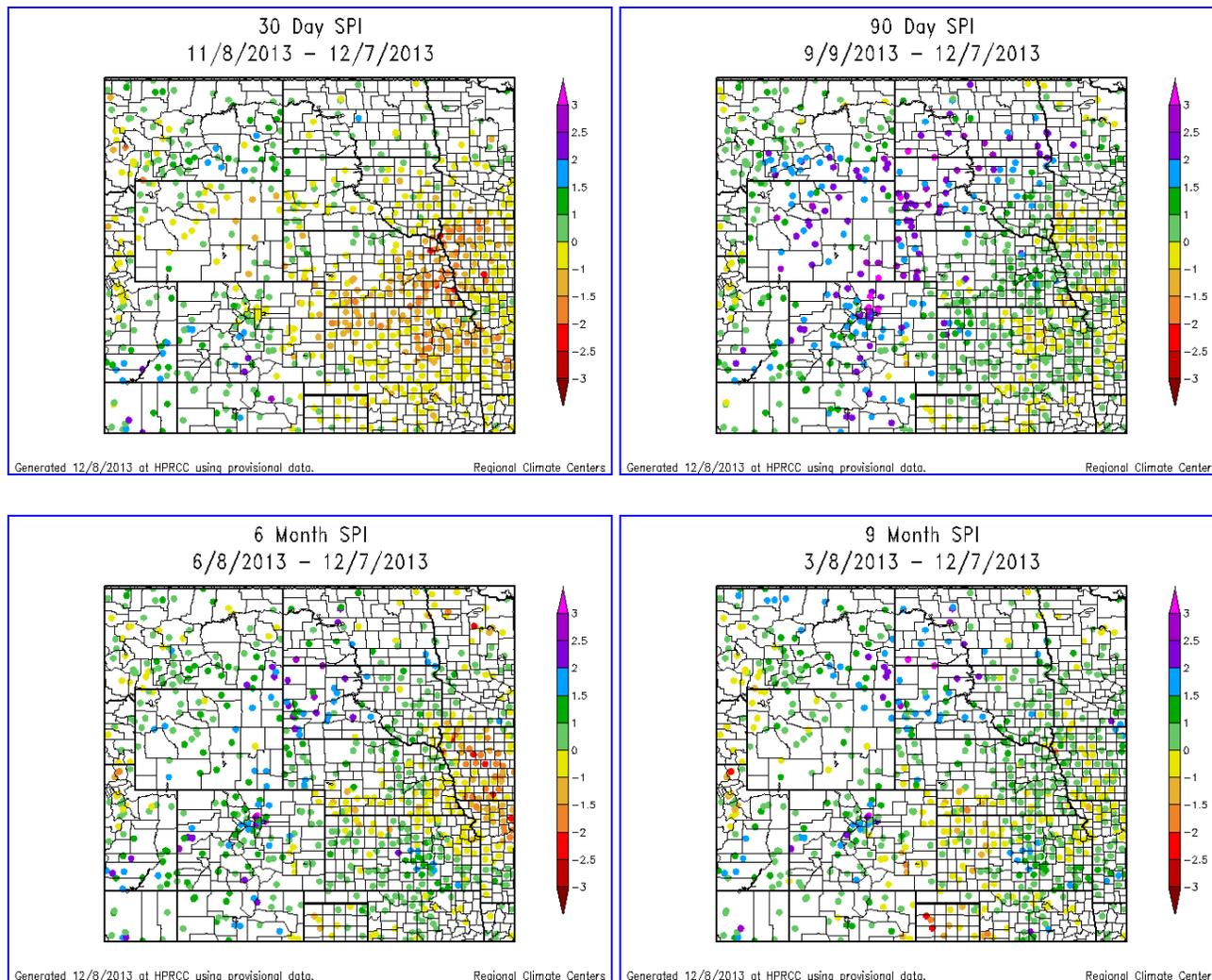
Basin-wide Snow Water Equivalent Percent of Normal:

- Most of the sub-basins in the UCRB are near to above average snowpack
- All of CO and the southern part of the UCRB are showing snowpack above average. Southern Utah and Colorado are showing the highest percents of normal, many in the southern tier of the basin are above 140% of normal.
- All basins except for a few sub-basins in the Wasatch and Uintas have above average snowpack for this time in December.

SWE Timeseries Graphs:

- The Duchesne basin is the only sub-basin below normal at 92%.
- The remaining basins are all showing above average SWE accumulations to date, and have had a slight increase the last week, particularly the southern basins (San Juan/Gunnison/Colorado).

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.

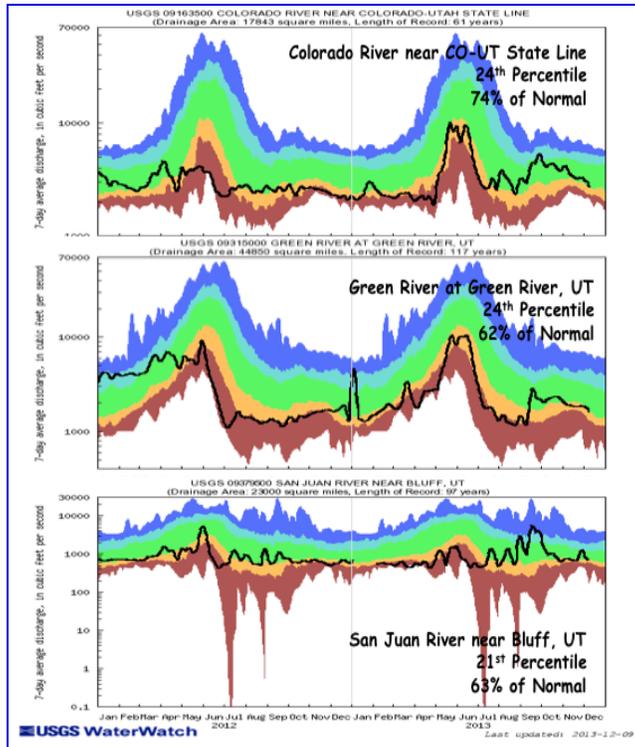
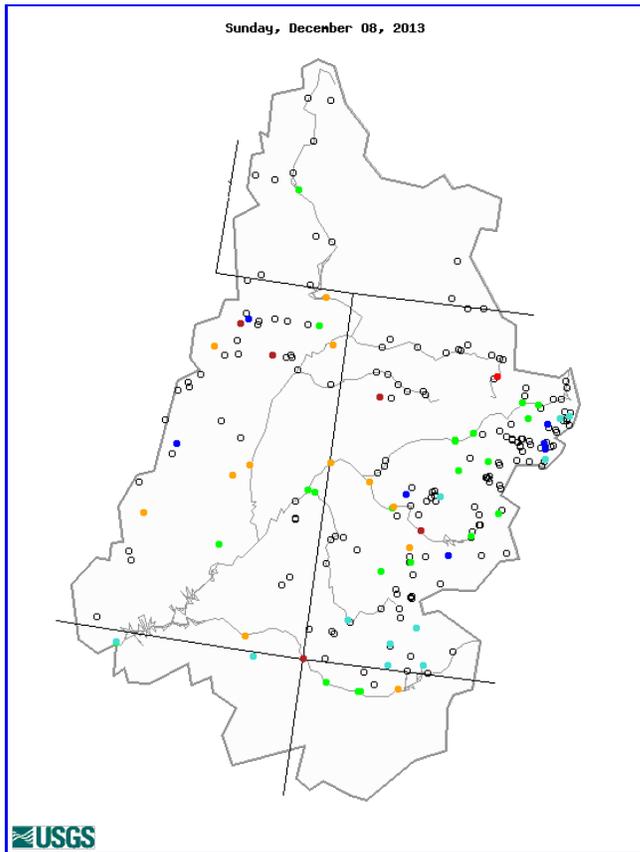
Short Term (30-day):

- The northern portion of the UCRB shows the driest SPI's, mainly from 0 to -1 through the Green and Duschene basins.
- The Yampa, Colorado, Gunnison and San Juan basins are all showing wet SPI's ranging from 0 to +2.5
- The Rio Grande is showing very high SPI's ranging from 0 to +2.5.
- East of the divide in Colorado is drier on the short time scale. SPI's on the plains range from +1 to -1.5 with the driest stations close to the KS/NE borders. The short time scale does indicate some improvement around Crowley, Otero and Bent counties where D4 is still present.

Long Term (6-month):

- The longer timescale of 6 months shows a much wetter depiction than the shorter term.
 - The Wastach range is the driest area on the 6 month time scale with SPI's ranging from +1 to -2.
 - The Green, Yampa, White, Colorado, Gunnison and San Juan basins all show wet SPI values ranging from 0 to +3.
 - The eastern plains are depicted much wetter on the longer time scale with the driest areas in Phillips and Sedgwick counties in NE Colorado and Southern Lincoln, Crowley and Otero counties in SE Colorado. All other areas are showing wetter conditions.
-

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		

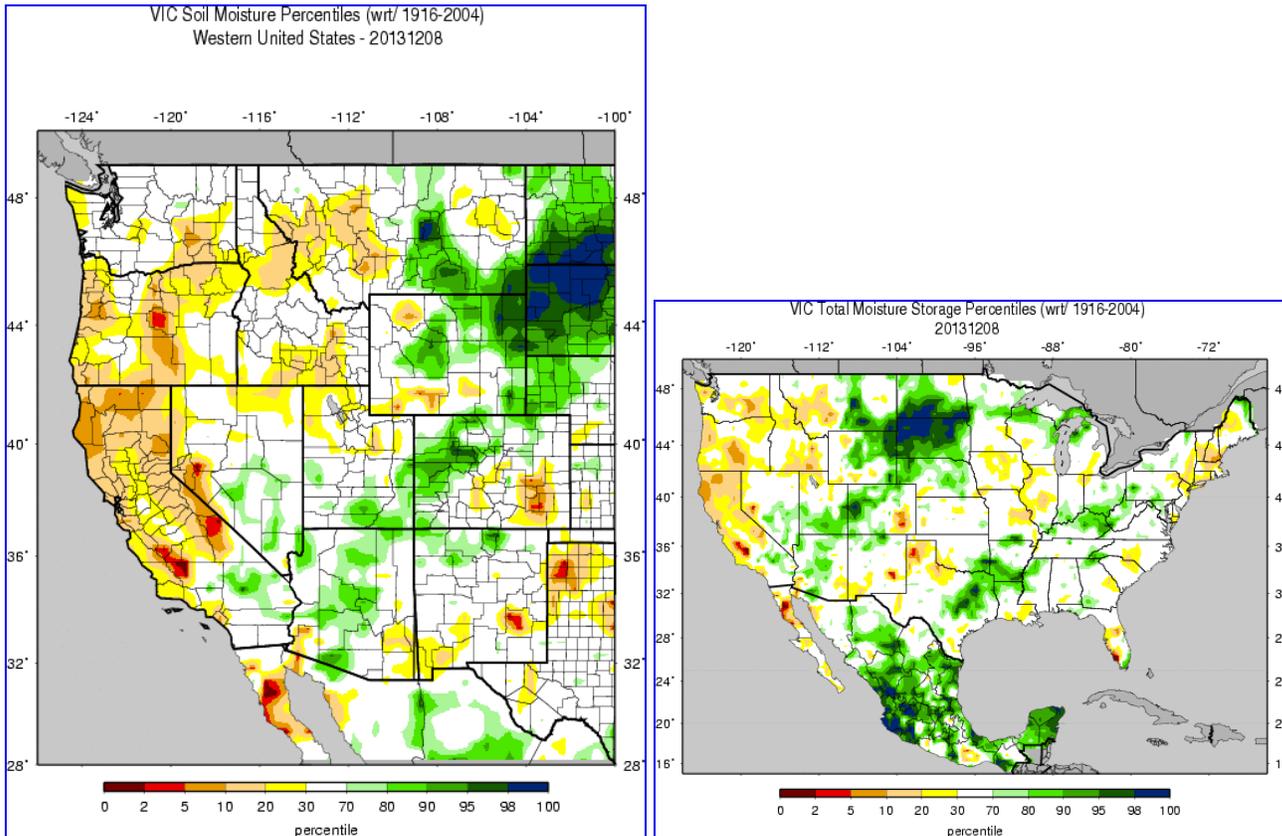
The top left image shows 7-day averaged streamflows as a percentile ranking across the UCRB. The top right image shows 7-day averaged discharge over time at three key sites around the UCRB: The Colorado River at the CO-UT state line; the Green River at Green River, UT; and the San Juan River near Bluff,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

Streamflow Statistics:

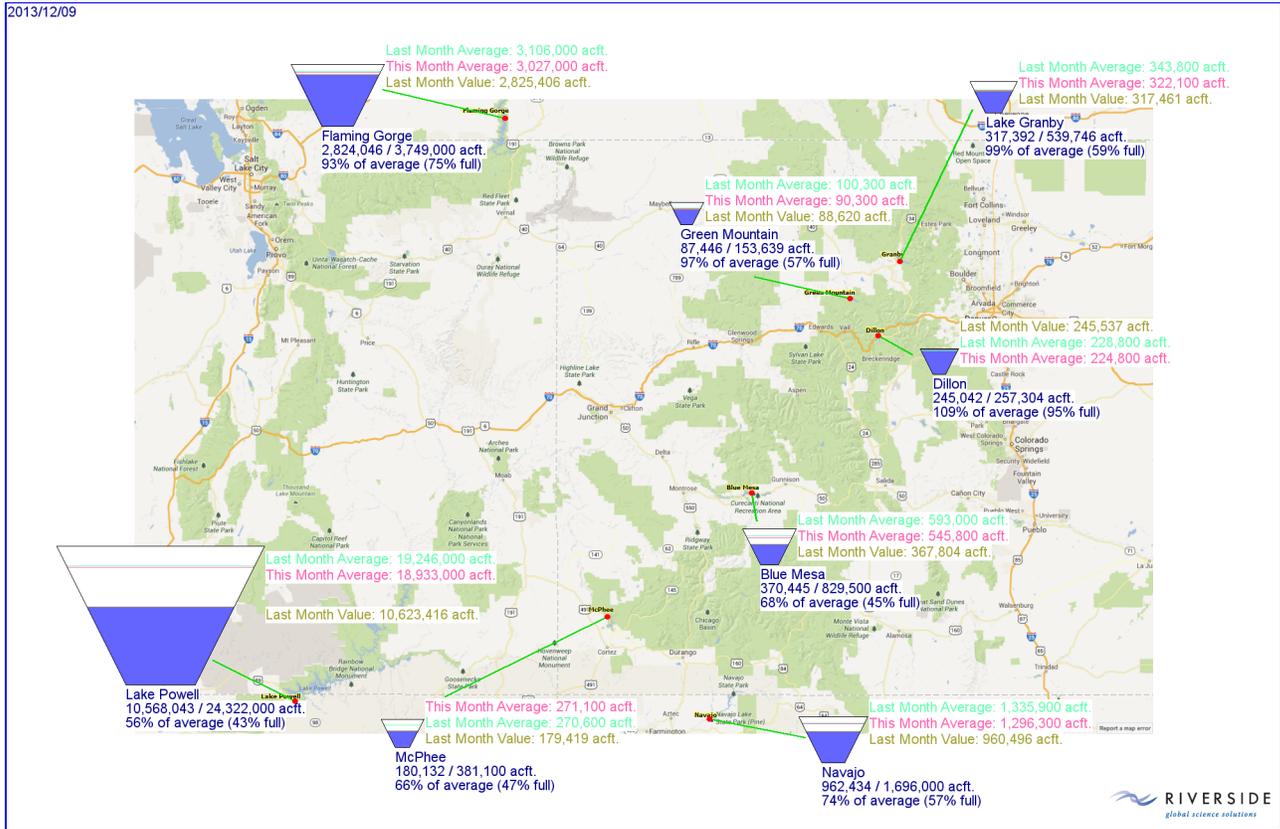
- 57% of gages recording normal and above 7-day average streamflow
- 12% of gages recording much above normal to high flows
- 30% of the gages are recording below the normal range, with only 2% reporting record low flows
- 58 (down from 94 last week) stations currently reporting (not affected by ice).
- The Colorado River at the CO-UT stateline is reporting flows at 74% of normal (24th percentile) and that has been consistently dropping since flows increased with a wet September.

- The Green River at Green River, UT is also below normal at 62% (24th percentile).
- The San Juan river near Bluff is at 63% of normal (21st percentile) after a slight boost in flow in mid-November.

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 (Total storage):

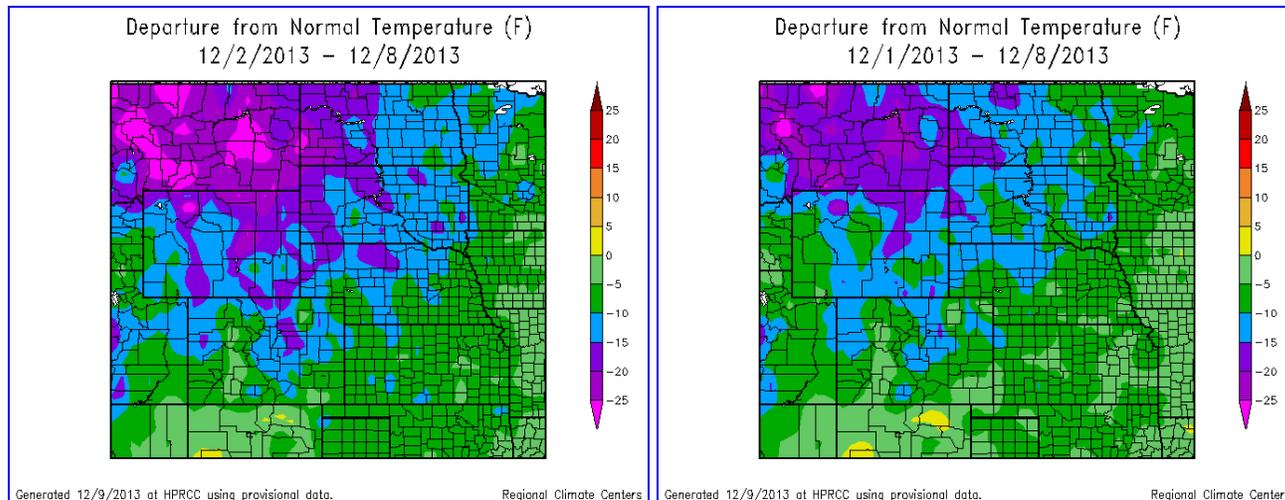
- Majority of the UCRB is showing near normal to wet soil moisture conditions
- Parts of northern UT and southwest WY showing slightly dry soil moisture, with percentiles ranging from the 10th to the 30th
- Soil moisture conditions are at or above the median percentile throughout northwest CO
- Northeastern CO and eastern WY are also showing wet soil moisture conditions
- Southeast CO continues to experience dry soil moisture conditions, with the lower Arkansas basin showing soil moisture percentiles below the 20th percentile and isolated areas down to the 5th percentile.

Reservoirs:

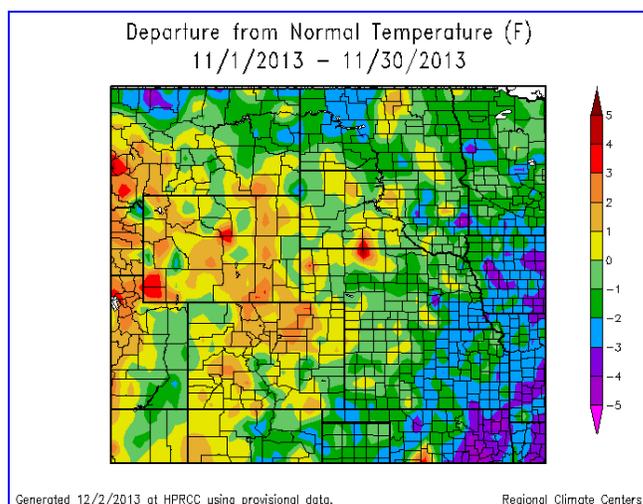
- For November, many reservoirs saw an increase (Flaming Gorge, Granby, Blue Mesa, McPhee, and Navajo), which is not normal for this time of year
- Green Mtn saw normal volume decreases for this time of year while decreases at Dillon was less than average

- Lake Powell had a slightly larger than average decrease for November
- The northern reservoirs are all near their December averages, ranging from 93% (Flaming Gorge) to 109% (Dillon) of average
- The southern reservoirs are all below December average, though they have seen some improvement over the past couple months. They range from 56% (Lake Powell) to 74% (Navajo) of average for December

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:

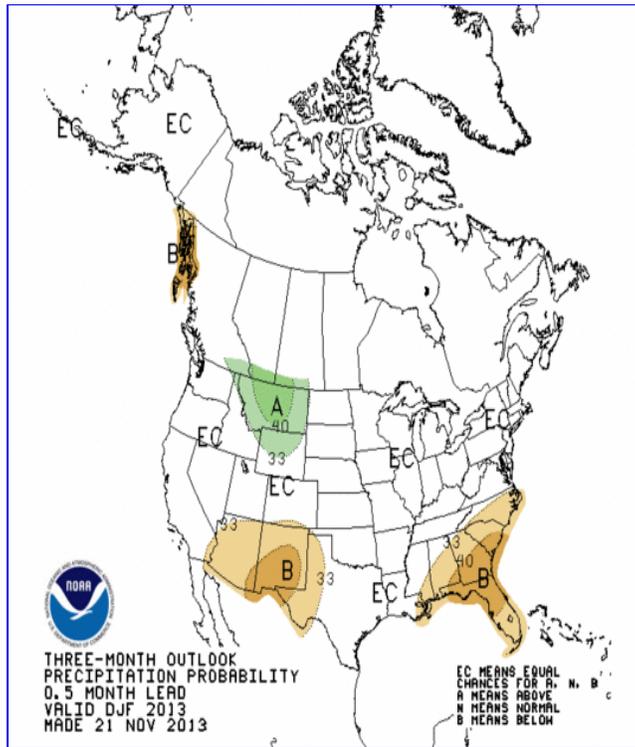
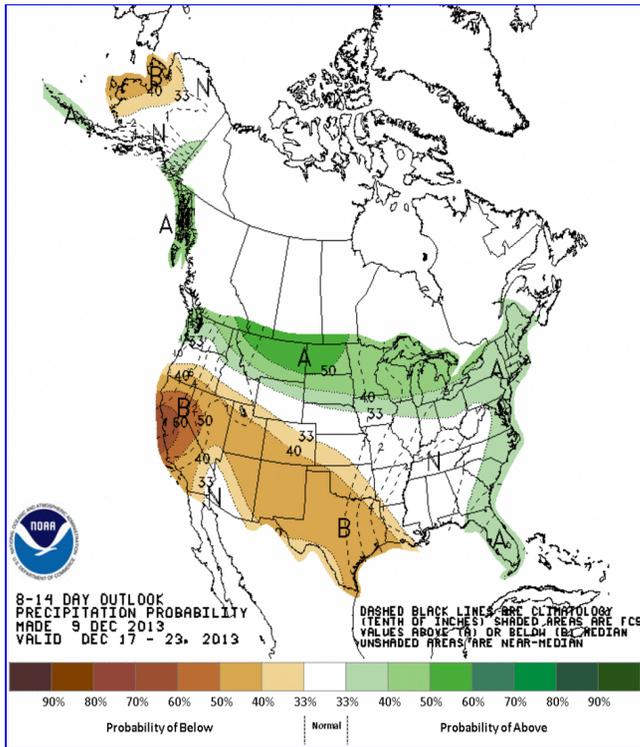
- The entire UCRB saw below normal temperatures for the past week.

- The northern portions of the basin experience temperatures 10-20 degrees below normal over the past week with an extended arctic outbreak.
- The southern portion of the UCRB and eastern plains in Colorado were 0 to 20 degrees below normal with the coolest portions around the Front range foothills.

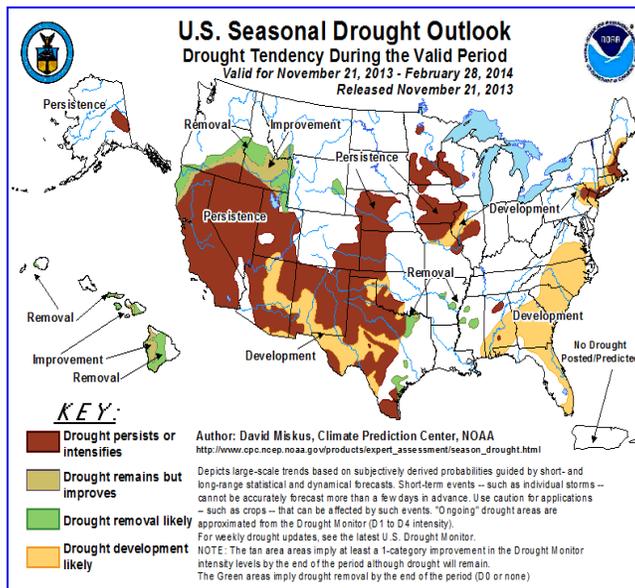
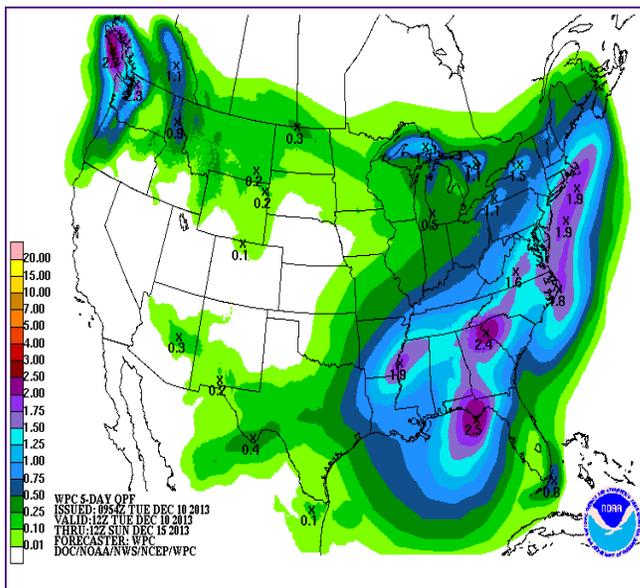
Last Month Temperatures:

- The basin saw a mix of cooler and warmer than average temperatures for the month of November
 - The northern basin saw mostly 0 to 3 degrees warmer than average, with southern Sublette County, WY 0 to 2 degrees cooler than average
 - The eastern and central portions of the basin were 0 to 3 degrees above average
 - Eastern UT and along the CO river Valley saw 0 to 2 degrees cooler than average
 - East of the basin was also a mix
 - Most of northeast CO 0 to 3 degrees above average
 - Southeast CO was 0 to 2 degrees cooler than average, with areas closer to the mountains were slightly warmer than average
 - The upper Arkansas River and Rio Grande River basins were 0 to 2 degrees cooler than average.
 - Most of WY experienced temperatures 0 to 3 degrees warmer than average
-

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:

- Temperatures are expected to return to near normal through the rest of this week while valley locations should expect cooler temperatures

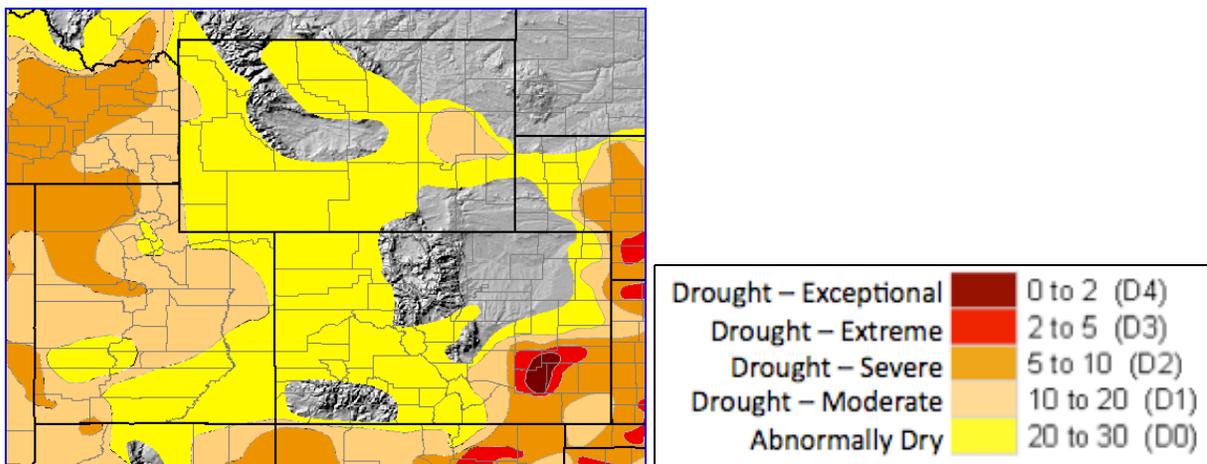
with inversions in place.

- Chance of mountain snow showers tonight through the weekend with little accumulation expected. Snow will be mainly confined to the northern mountains in CO (Park, Gore and Flattops ranges).
- Windy conditions for the Front Range foothills and eastern plains will diminish tonight.

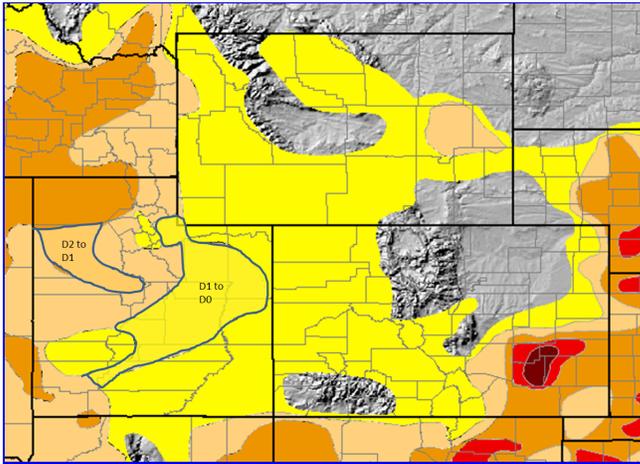
Longer Term:

- The 8-14 day precipitation outlooks shows increased possibility of drier than average conditions for much of Colorado and Utah while southern Wyoming should see normal precipitation over the same period.
- The CPC 3-month outlook shows equal chances for wet, dry, or near average conditions for most of the UCRB, with a slightly increased chance of drier conditions across the southern edge of the basin
- The seasonal drought outlook shows that drought persistence is likely in the areas of the basin that are still in drought

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: December 10, 2013

Recommendations:

The Utah depiction has been the same for some time and it was brought up on our call (CBRFC) that some "cleaning up" should be done to the depiction. We are recommending changes to Utah that are out of our normal area of interest and as such the NIDIS UCRB team defers to both the US Drought monitor author and Utah representatives who may disagree with these changes.

UCRB and Utah: Improvement from D1 to D0 is recommended for Eastern Utah. That area has above normal precipitation for the Water year through November and snotel percentiles in that area are above the median and SPI's are mainly wet. In addition to this, it is suggested that a portion of the D2 in western Utah should be improved to D1, the Westwide drought tracker (WRCC) shows this area mainly wet on longer time scales. That area also received 0.25-2" of precipitation since the first of December.

Eastern Colorado: Status quo is recommended east of the divide in Colorado.