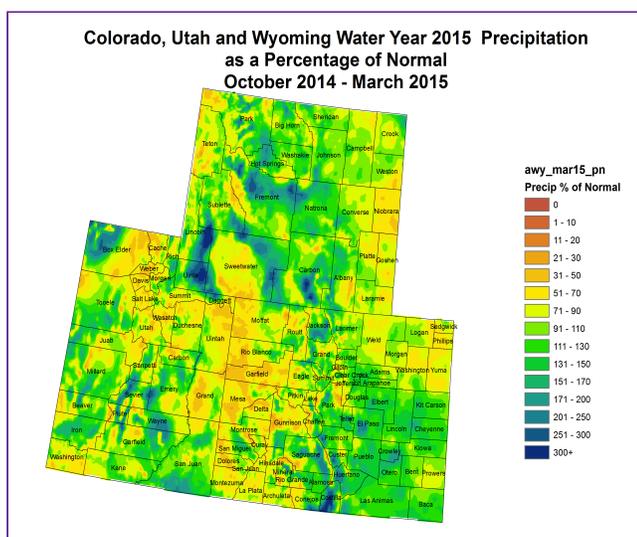
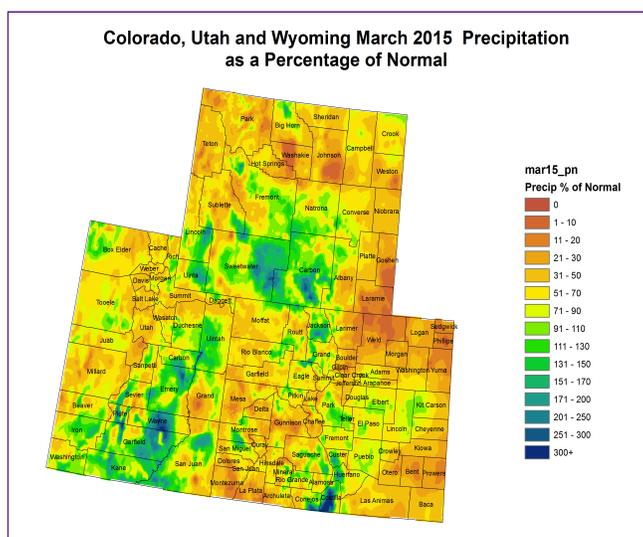
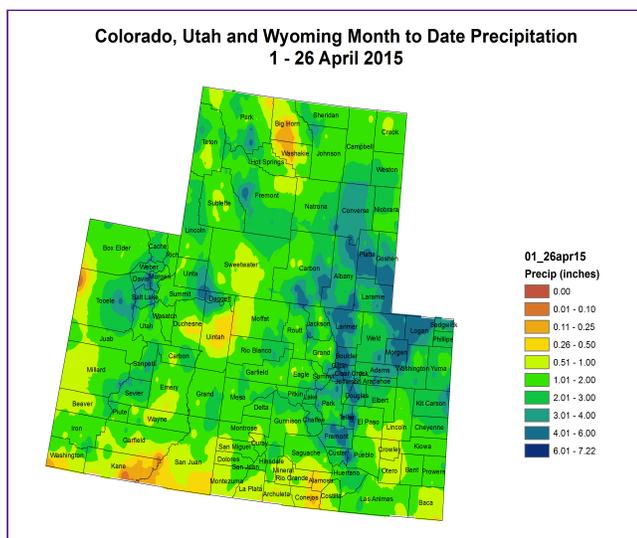
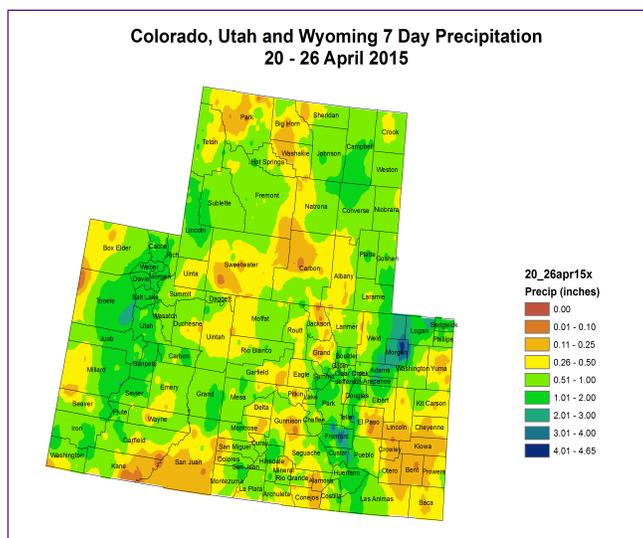


PRECIPITATION



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 Colorado River Basin experienced a surprisingly wet week of weather in some of the lower valley areas that typically are on the drier side.
- The Upper Green River basin experienced 1-2" of precipitation along the border of Lincoln and Sublette Counties. Sweetwater County was drier, mainly with less than half an inch of precipitation.
- The majority of the Wasatch and Uintah Ranges in Utah experienced 0.50-1.00" of precipitation over the past week. Utah

and Sanpete Counties were mainly in the 1-2" range. The lower elevations in the area in the Duchesne River Basin received 0.25-0.50" of precipitation.

- East-central Utah experienced a surprisingly wet week with a wide swath of Grand County experiencing 1-2" of precipitation. Farther south in San Juan County conditions were much drier with the majority of the county receiving less than 0.50" of precipitation.
- The majority of the western slopes in Colorado received between 0.25 and 1.00" of precipitation over the past week. This is not necessarily climatologically abnormal, but the distribution was somewhat surprising. Some of the wetter areas were over Grand Junction and other low elevation areas along the western border. Areas like Steamboat and Avon were on the drier side.
- In southwest Colorado most of the region experienced between 0.50 and 2.00" of new precipitation. The wettest areas were in northern Hinsdale and northwest Montezuma Counties.
- The San Luis Valley was drier than most areas receiving 0.10-0.50" of precipitation.
- From the divide east several areas were bull's-eyed. Eastern Morgan County and central Fremont County received over four inches of precipitation.
- In northeast Colorado totals were generally between 0.50 and 2.00". The driest areas, which had less than half an inch, were along the Larimer-Weld County border, and in Yuma County.
- In southeast Colorado the precipitation was most significant up along the foothills, but conditions were drier over the southeast plains where the precipitation is needed the most. Most of the southeast plains had between 0.10 and 0.25" of rainfall. In the foothills over an inch fell in most areas.

March Precipitation:

- The headwaters of the Upper Green River received below normal precipitation in most areas with a couple areas above normal in Uintah and Lincoln Counties with up to 150% of normal.
- The Duchesne Basin also received a mixed bag of above and below normal March precipitation. Most of the areas above normal are at lower elevations and do not expect as much precipitation in March. The Uintah Mountain Range only received 30-50% of normal March precipitation.
- The Western Slopes of Colorado were well below average for the month of March. In general, areas received between 30 and 70% of normal March precipitation. There were some spotty exceptions including fractions of Routt, Rio Blanco, Eagle, and Pitkin Counties. South central Montrose County and north central San Miguel County received as much as 170% of normal precipitation for the month of March. The driest areas along the western slopes of Colorado with respect to average were in the Gunnison River Basin, and right near the Four Corners.
- Much like in Utah, the central Colorado Rockies experienced a smaller than average elevational precipitation gradient for the

month of March. Valley areas such as the San Luis Valley, the high plains between Cameron and Rabbit Ears Passes, and the high plains between Hoosier and Kenosha Passes experienced above average precipitation for March. In south central Costilla County over 300% of normal precipitation was realized. The higher elevations, however, averaged between 30 and 70% of average precipitation for the month of March.

- Northeast Colorado was dry for the month of March. Areas along the Palmer Divide in Douglas, Elbert, Lincoln, and Kit Carson Counties received near normal March totals at 70-110% of average. Farther north conditions were drier. Much of Weld and Larimer Counties received less than 30% of normal March precipitation.
- In southeast Colorado El Paso and Pueblo Counties received at or near average March precipitation, but farther east where areas are still struggling to come out of drought conditions were drier. Prowers, Bent, and Otero Counties were mostly below 30% of average March precipitation.

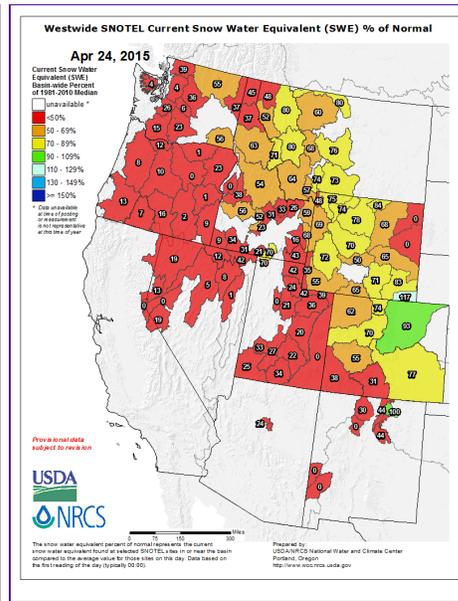
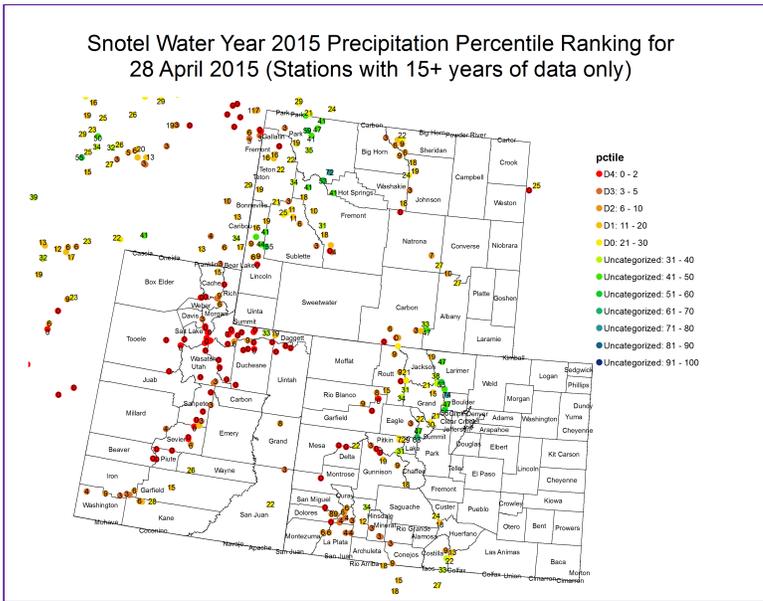
Water Year 2015 Precipitation:

- The Water Year percents of normal have fallen below average for much of the UCRB following a warm, dry winter.
- The Upper Green river basin has seen above normal moisture for the water year through with the exception of south central Sweetwater County which saw 30-90% of normal precipitation.
- Much of Colorado and the UCRB had above average moisture in the mountain valleys, and below average precipitation in the mountains over the month of March.
- The Duchesne River Basin is still near normal for the water year to date in most areas, but parts of northeast Uintah County have seen as little as 30-50% of normal precipitation for the water year to date.
- The headwaters of the Yampa/White have below normal moisture for the water year. Some areas of central Routt County are still holding on to normal precipitation for the water year to date.
- The Upper Colorado has near normal precipitation through Grand/Summit/western Eagle Counties, but dries out considerably west of the headwaters. From Central Eagle down to Mesa County, 30-110% of normal precipitation has fell for the water year through March.
- The San Juan Mountains have seen below normal precipitation for much of the water year. Some areas are near to above normal in Montrose and San Miguel Counties, but the rest of the area is below normal for the water year, mainly 50-90% of normal.
- San Juan County, Utah saw near to above normal moisture with the exception of the northern portion of the county where 50-90% of normal fell.
- The San Luis valley has had well above normal precipitation for the

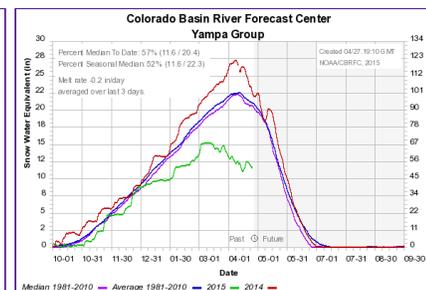
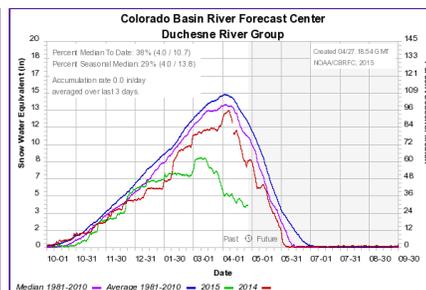
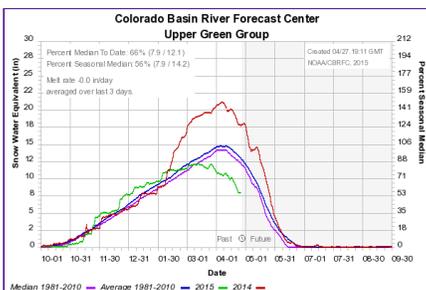
water year to date in some locations. Southern Costilla County has experience over 300% of normal precipitation for the water year to date.

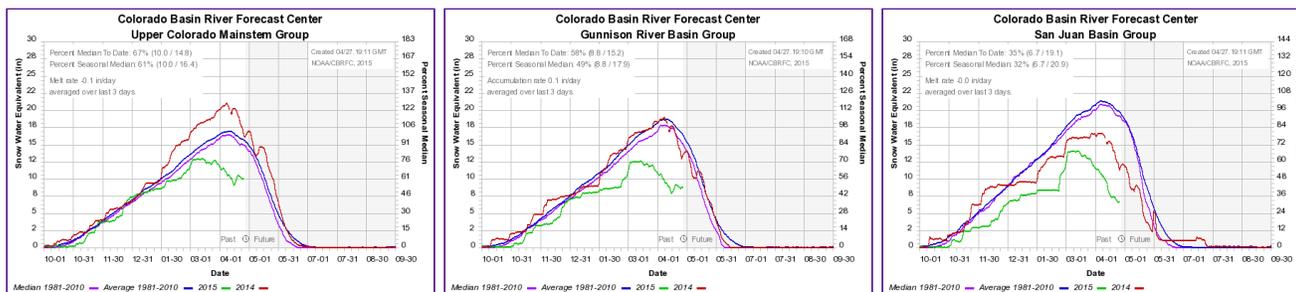
- Much of the Eastern plains are at or above normal for the water year. The driest area is in portions of NE Colorado in Washington/Yuma/Sedgwick and Phillips County which saw 50-90% of normal for the water year.
- The SE plains have seen above normal moisture for the water year, which is much needed and welcomed considering that region has been in drought since September 2010.

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 year to date percentiles are very low if not record low, across much of the UCRB, and are unlikely to rebound with the wet season mostly over for high elevations.
- In the Upper Green the percentiles range from 0 to 55st with the highest (near the median) in northern Lincoln county, WY.
- The Wasatch and Uintahs are still very dry with percentiles ranging from the 0 to 33rd.
- The northern mountains in Colorado continue to struggle west of the continental divide where percentiles range from 0 to 31st.
- The lower elevations of the Colorado and Gunnison are still seeing percentiles below the 23rd percentile, however sites along the divide are more near normal.
- The San Juans are reporting mostly in the bottom 10 percentiles across the board with the exception of one station in northern Hinsdale County in the 34th percentile.
- The Sangre de Cristo mountains in SE Colorado are slightly better with percentiles ranging from 9th to 33rd.
- The South Platte stations are all mainly at or above the median.

Westwide Snow Water Equivalent (SWE) Percent of Normal:

- Snowpack percent of median in the UCRB is now below normal or much below normal in almost all basins. Most of the good moisture over the past two weeks has not fallen in the areas that are farthest behind.
- Snowpack in the Upper Green River basin ranges from 39 to 72 percent of median.
- All basins in eastern Utah are much below normal. This area ranges from 0 to 42 percent of normal. Many SNOTEL sites in Utah have seen the earliest melt out of snow on record.
- Western Colorado ranges from 38 to 70% of the median snowpack for the date. The lowest percent of median is along the San Juan, and the highest is in the headwaters of the Colorado River, still driven by the highest elevations.
- The Rio Grande basin is at 31% of median, the Arkansas is at 77% and South Platte is at 93% of median. The Platte, Colorado and Arkansas basins saw the best increases from the storm this past week.

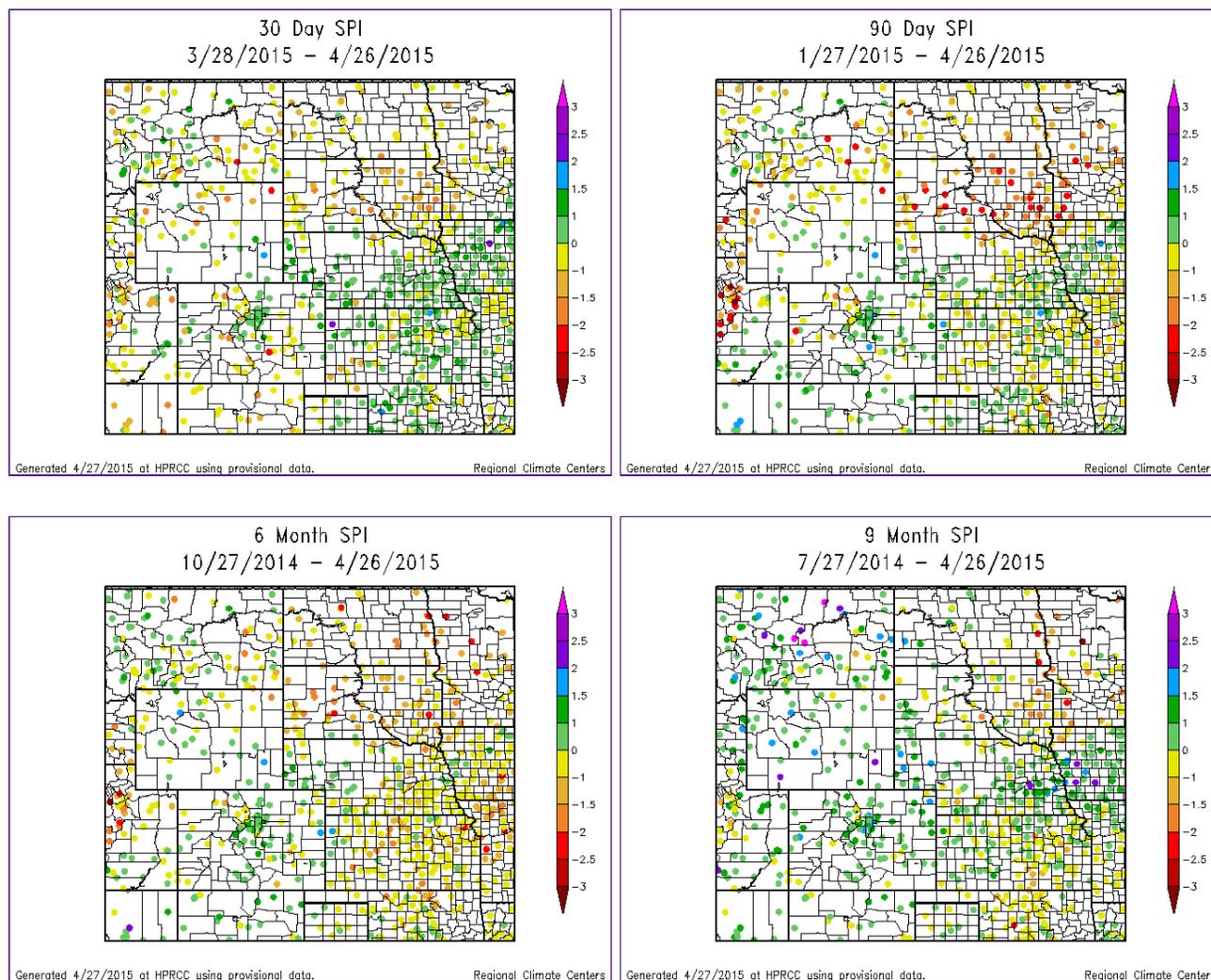
SWE Timeseries Graphs:

- All sub-basins appear to have begun their melt off, though the melt rate has slowed over the past week and a half. Now that normal SWE is on the recession limb, snowpack percentages should be looked at carefully (i.e. current SWE slightly increasing as normal SWE is decreasing)
- The Upper Green basin is at 66% of median snowpack for the date. The peak snowpack was 85% of normal.
- The Duchesne basin is at 38% of median snowpack for the date. The peak snowpack was 63% of normal.
- The Yampa-White basin is at 57% of median snowpack for the date. The peak snowpack was 68% of

normal.

- The Upper Colorado basin is at 67% of median snowpack for the date. The peak snowpack was 79% of normal.
- The Gunnison basin is at 58% of median snowpack for the date. The peak snowpack was 70% of normal.
- The San Juan basin is only at 35% of median snowpack for the date. The peak snowpack was 67% of normal.

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):

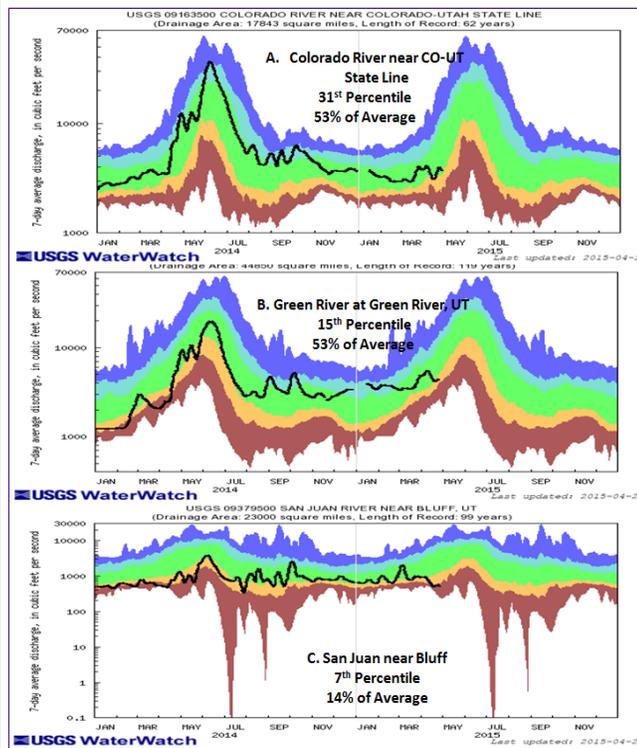
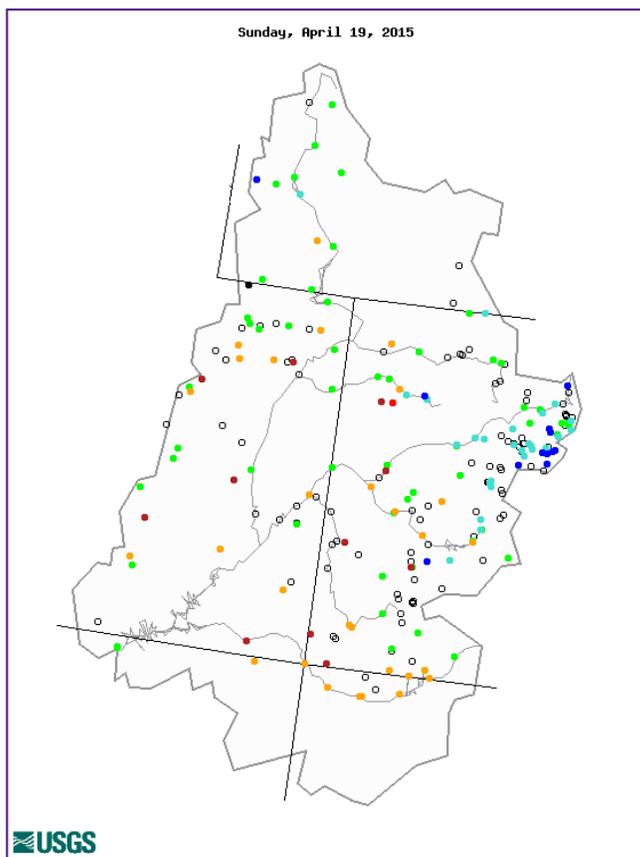
- The Upper Green river basin is showing mostly average SPI's between -1 and 1.
- Northeast Utah is showing mostly very dry SPI's in the -2 to -1 range. There is one rogue 0 to +1 SPI in Duchesne County.

- Southeast Utah is showing SPI's in the -1 to 0 range near the southern border, but a cluster of 0 to +1 SPI's in northern San Juan County and in Grand County.
- Northwest County shows dry SPI's of -2 to 0 in Grand, Jackson, and Routt Counties. Farther west in Rio Blanco, Garfield, and Mesa Counties SPI's are between 0 and + 1.
- 30-day SPI's in southwest Colorado are generally between -1 and 0. There are several worse SPI's in Saguache and Gunnison Counties between -1.5 and -1.
- The San Luis Valley has been a little on the dry side with SPI's between -1 and 0.
- NE Colorado, especially nearer the mountains and foothills, is wet on the 30-day timescale with SPI's between 0 and +1.5. Some areas on the northeast plains such as Adams, Arapahoe, Elbert, and Washington County have been a little drier than average and are in the -1 to 0 SPI range.
- The SE plains are mainly dry from 0 to -1. A couple wet SPI's show up in Kiowa and Prowers Counties.

Long Term (6-month):

- The Upper Green, which has been wet on the 6 month timescale, has become dry. SPI's are between 0 and -1 in this region. The +1 SPI still shows up in Sweetwater County.
- NE Utah dries out even more with SPI's in the Wasatch between 0 and -3 and the Duchesne reporting 0 to -1 SPI.
- Southeast Utah has been in the normal range, and is reporting SPI's between -1 and +1.
- Western Colorado is showing dry SPI's through most of the counties, between 0 and -1. SPI's in Summit and Lake Counties are still wetter, 0 to +1.5. A couple more 0 to +1 SPI's have popped up in southern Routt County, and in western Mesa County.
- East of the divide, northeastern and southeastern Colorado are showing variable SPI's with the recent moisture. The driest areas are in southern Lincoln County and southern Las Animas County where SPI's are between -1.5 and -1. The wettest SPI is between +1.5 and +2. This is the Burlington station. In general, SPI's are between 0 and +1 along the Front Range and in the foothills, and are between -1 and 0 a little farther out on the plains.
- The Rio Grande basin is wet for long term SPI's, 0 to +1.

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.

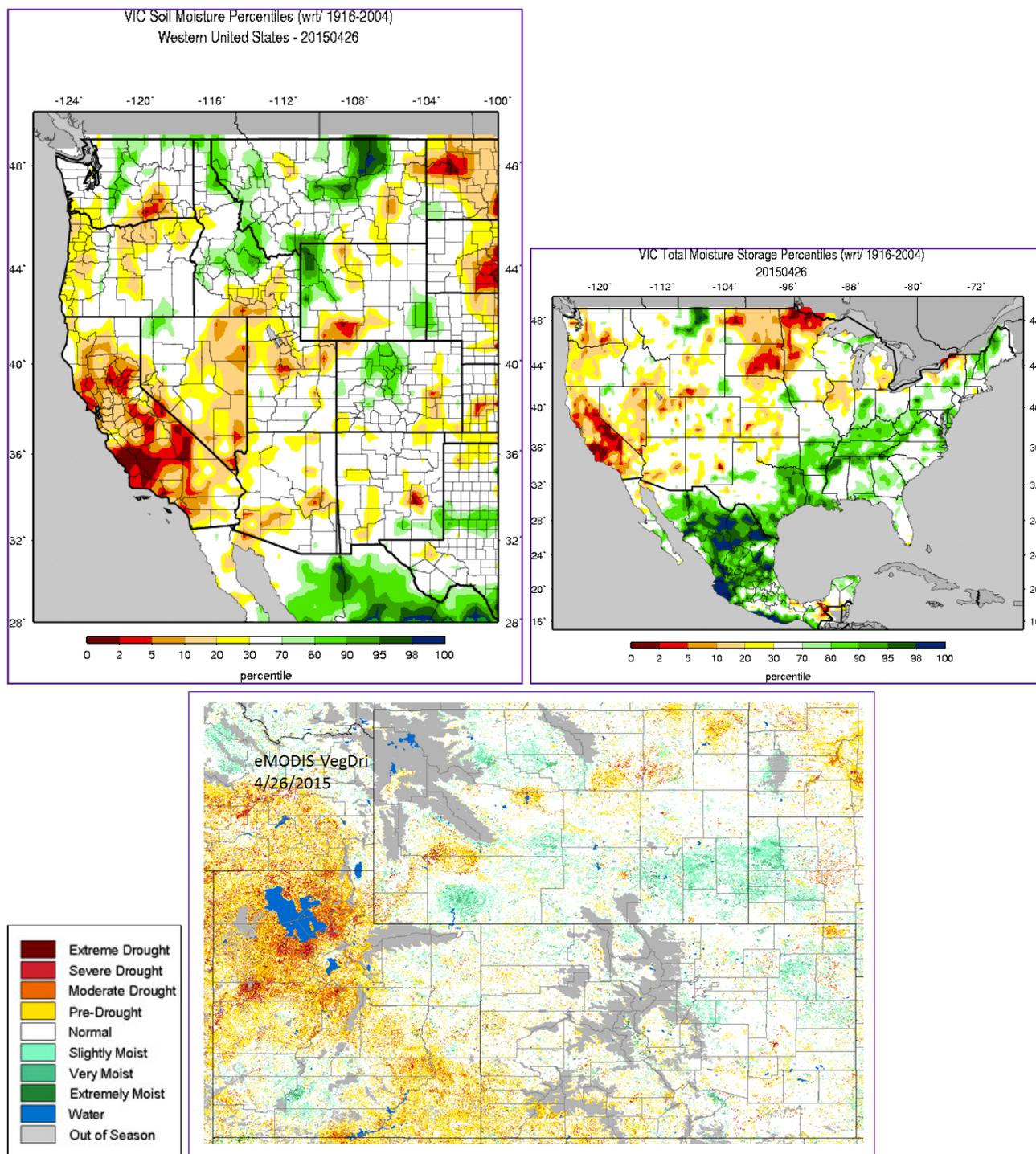
Streamflow Statistics:

- 139 of the 140 gages in the UCRB are now reporting, leaving only one lone ice-affected gage.
- 59% of the gages in the UCRB are reporting in the normal and above range for 7-day average streamflow. gages in the Colorado River Headwaters are reporting the highest 7-day average flow on record.
- 41% of the gages are recording below normal for 7-day average streamflow, 18% in the much below normal. No gages are at a record low.
- Headwater area streamflow is still in the normal range, but has dropped off significantly over the past week with the slowing of the snowmelt process due to cooler temperatures.
- Streamflow on the Colorado River near the CO-UT state line is just

hanging on in the normal range, currently at the 31st percentile, 53% of average.

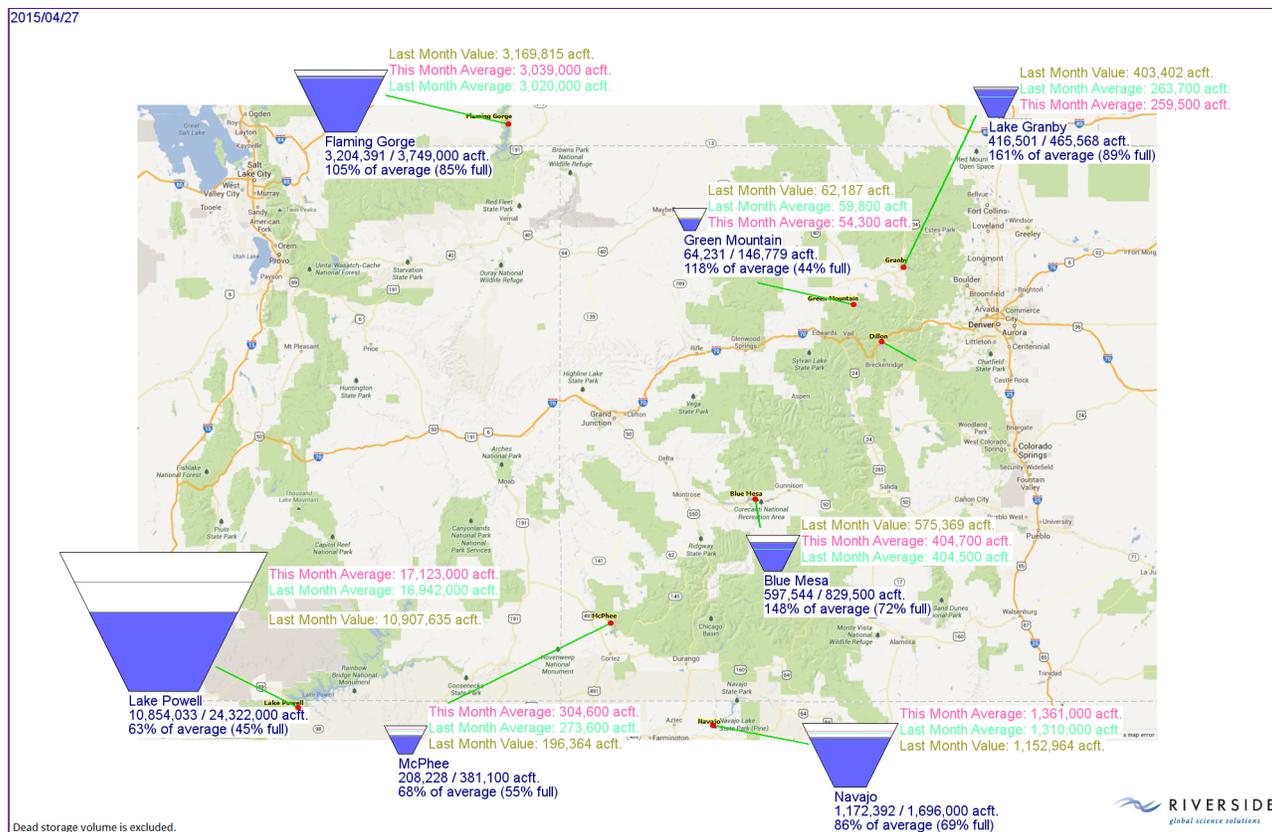
- The Green River at Green River, UT has dropped to below normal at the 15th percentile, 53% of average.
- The San Juan River near Bluff, UT is now much below normal at the 7th percentile (14% of average).

SURFACE WATER



The top left image shows VIC modeled soil moisture as a percentile ranking. The top

right image shows VIC plus SWE total soil moisture storage. The bottom 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:

- Sweetwater County, WY has been shown as dry by the VIC for a considerable amount of time and continues to depict soils in the 0-30th percentile range over much of the south and eastern part of the county.
- There are some very wet soils in the Upper Green River Basin. Near the Wyoming-Idaho state line soil moisture is in the 70-100th percentile range. However, when snowpack is taken into consideration, that area dries out to normal.
- Northeastern UT is now showing drying soils over much of Uintah and Duchesne counties, in the 2nd-30th percentile range.
- Western CO is still showing a large area of above average soil moisture over the 70th percentile. The highest percentiles are in Routt County. This area dries out considerably when the below normal snowpack is taken into account.
- The San Juan Mountain region is mostly in the normal range with some isolated areas above the 90th percentile in Ouray county but again, this area dries out when snowpack is considered and percentiles drop from the 2nd to 30th over much of the San Juans.
- The San Luis Valley is in the normal range.
- The eastern plains are now showing drying soils over much of

eastern Colorado, in the 10th to 30th percentile range. Southern Lincoln county is drier with percentiles in the 2nd to 10th.

- Areas closer to the foothills and continental divide are showing normal to wet soil conditions.

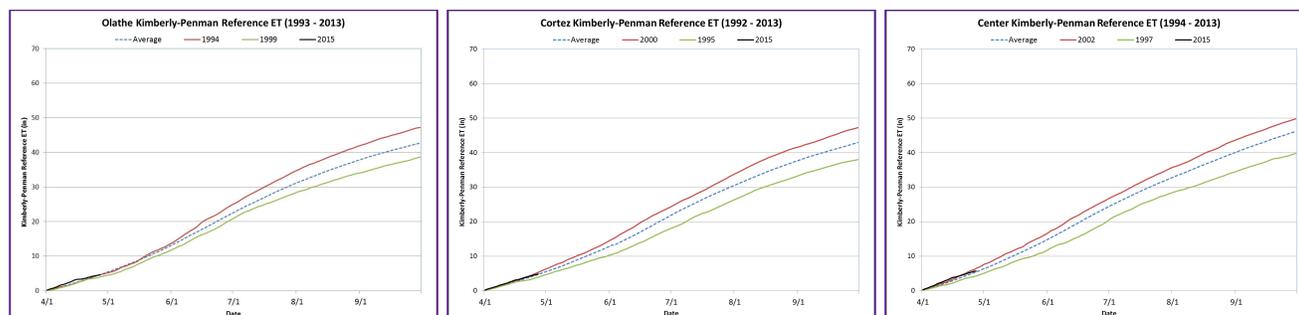
VegDri:

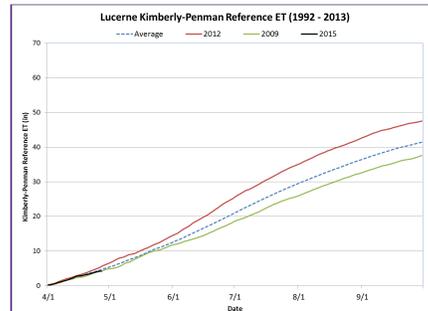
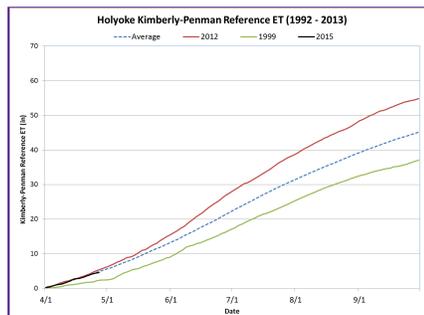
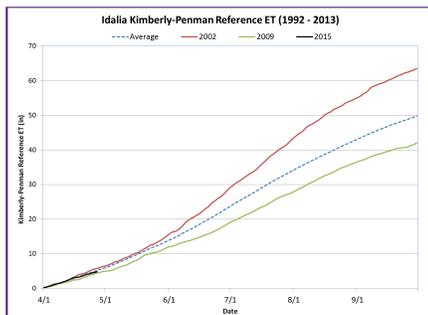
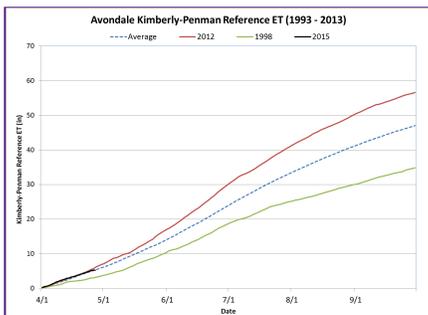
- Contrary to the VIC, the VegDri shows moist conditions over central Sweetwater County. Drier conditions are shown in Uinta, Sublette, and Lincoln Counties where the VegDri depicts primarily pre-drought to moderate drought conditions.
- Vegetative health is depicted in the normal range over Duchesne and Uintah Counties in Utah, but slips into drought conditions farther west up into the Wasatch Range.
- Vegetative health is shown in the pre to moderate drought range in southeast Utah and in southwest Colorado.
- In the areas of northwest Colorado where the VegDri has come back into season vegetative health is primarily depicted in the normal range. In general, conditions deteriorate farther to the south.
- East of the divide there is also a vegetative health gradient from north to south. With the exception of Sedgwick County conditions are shown as moist across northeast Colorado.
- In southeast Colorado conditions are normal to pre-drought in most areas. Unlike west of the divide in Sweetwater County the VIC and VegDri products are in good agreement about the dry spot over southern Lincoln, Crowley, and Otero Counties.

Reservoirs:

- Flaming Gorge is 105% of the April average.
- Green Mtn is 118% of the April average.
- Lake Granby is 161% of the April average.
- Blue Mesa is 148% of the April average.
- Navajo is 86% of the April average.
- McPhee is 68% of the April average.
- Lake Powell is 63% of the April average and is only 45% full.

EVAPOTRANSPIRATION



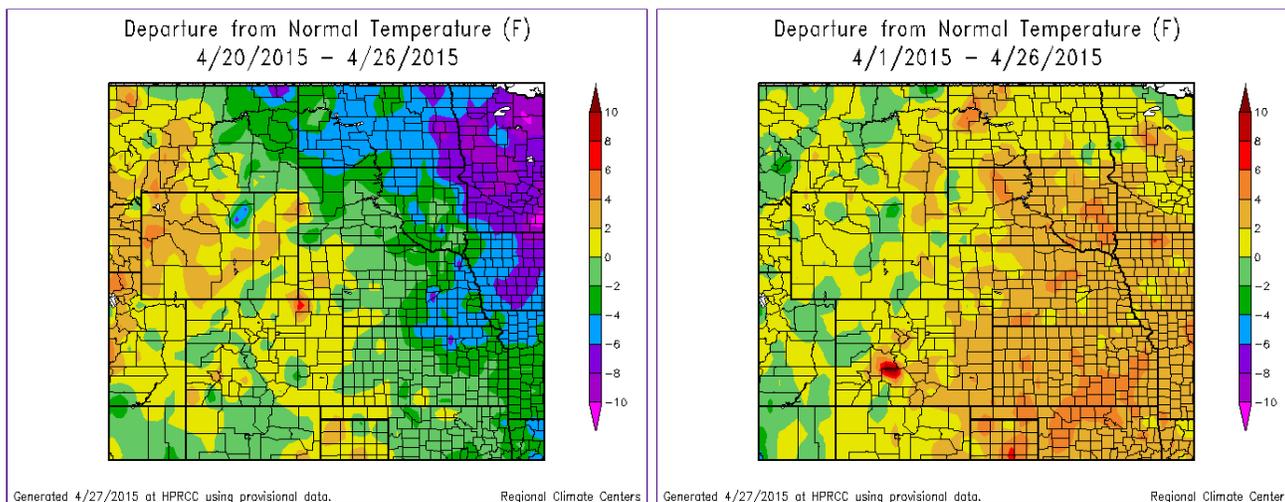


The above images are of reference evapotranspiration (ET) from CoAgMet sites across Colorado. Reference ET assumes the amount of water that will evaporate from a well-irrigated crop. Higher ET rates occur during hot, dry, and windy conditions. Lower ET rates are more desirable for crops. See a [map of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

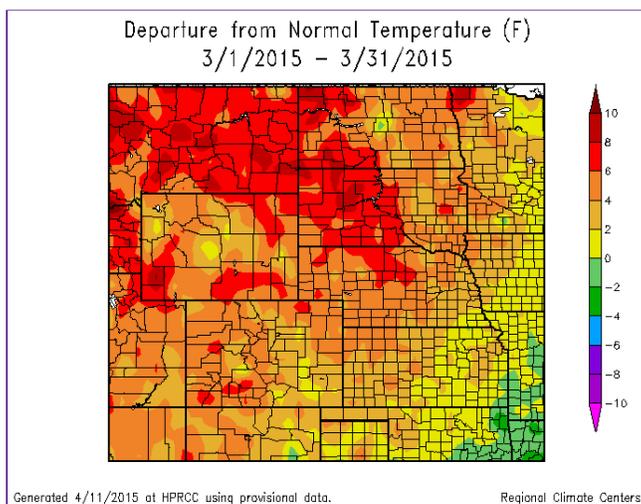
Reference Evapotranspiration:

- Olathe: ET began the growing season above normal, but has fallen back to average over the last two weeks.
- Cortez: ET began the growing season just above normal, but is now trending right along the average year line.
- Center: ET began the growing season at a record high and has slowed considerably. It is now on pace with the average year.
- Avondale: ET began the growing season tracking just above average, but has slowed and is now on pace with the average year.
- Idalia: ET started the growing season about average, and has fallen below average over the last week.
- Holyoke: ET started the growing season about average and has fallen very slightly below the average line.
- Lucerne: ET has started off the growing season tracking right along with the low year of 2009.

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 majority of the UCRB experienced less than a 2F departure from average temperatures over the past week. The main exception to this in the UCRB is near the headwaters of the Green River. Here temperature departures from normal were between +2 and +4 degrees for the week.
- Temperatures east of the divide were primarily between 0 and 2 degrees above average. Temperatures were 0 to 4 degrees below average in east Pueblo County, and west Otero and Crowley Counties.
- There is an anomalous bright spot in eastern Weld County where temperatures were between 4 and 8 degrees above average.
- The San Luis Valley was generally slightly cool with temperatures 0 to 2 degrees below average for the week.

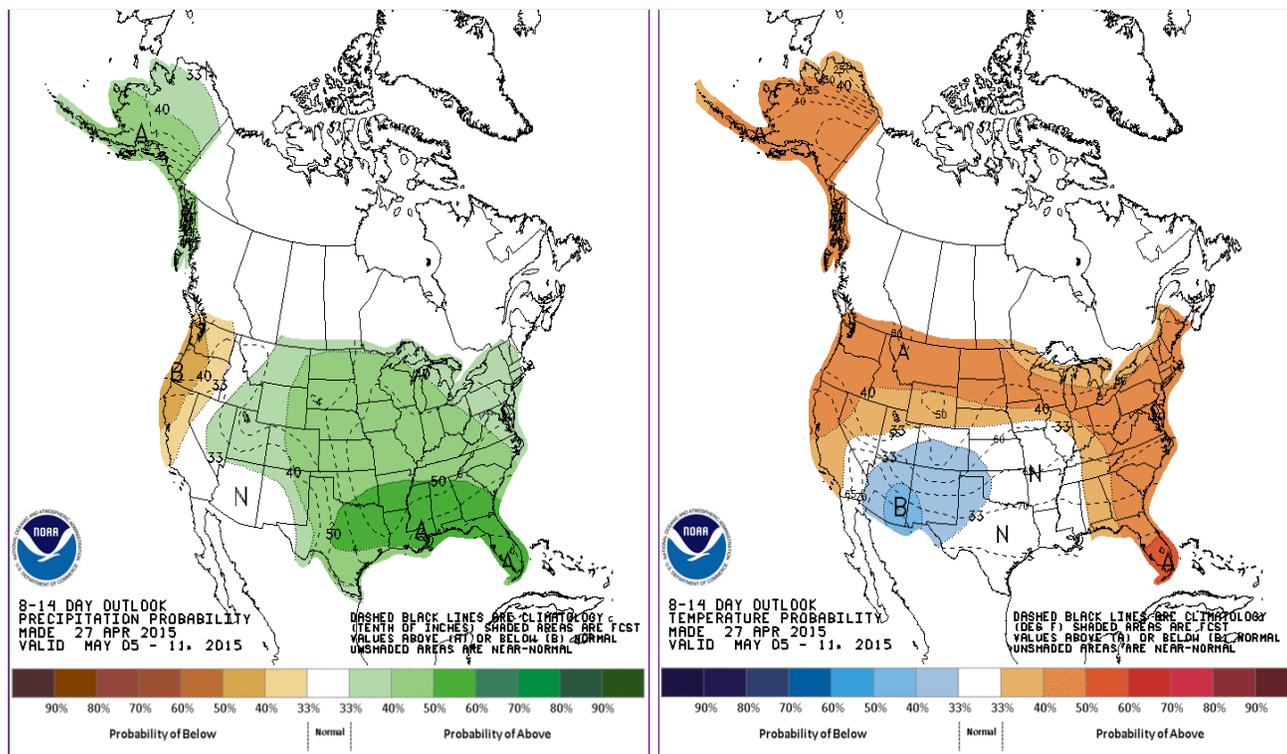
March Temperatures:

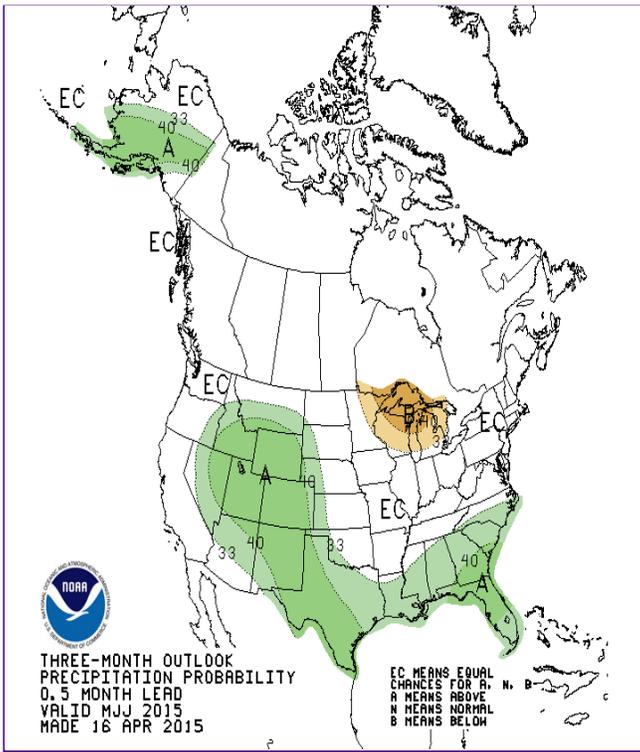
- The month of March yielded above average temperatures for the

entirety of the UCRB and eastern Colorado.

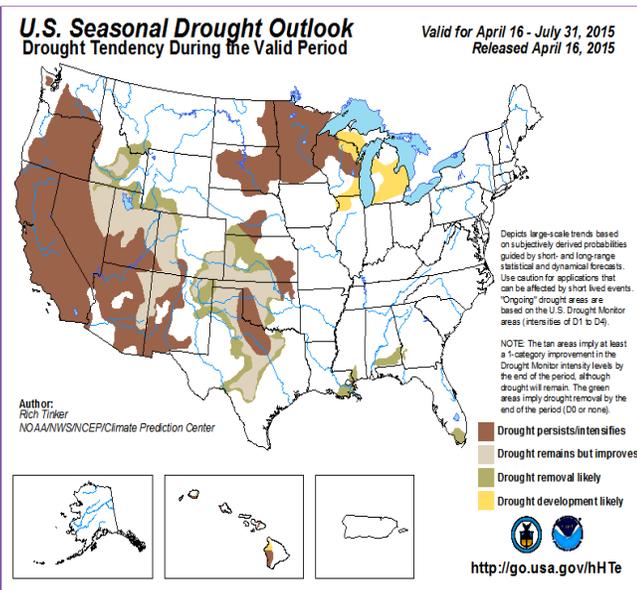
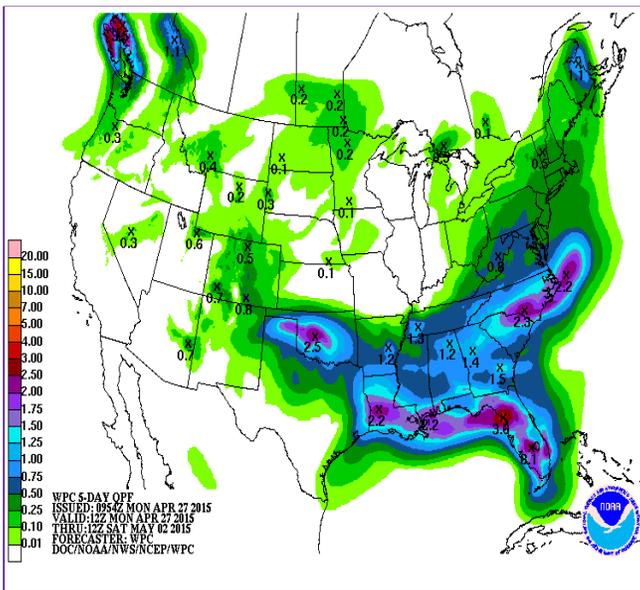
- The Upper Green basin was 4-10 degrees above normal for the month. These were the highest temperature anomalies in the region.
- The Wasatch and Uintah ranges were as well as the Duchesne Basin were 4-6 degrees above average for the month of March.
- The Yampa/White/Colorado/Gunnison basins were 4-8 degrees above normal.
- Southeast Colorado was 4-8 degrees above average for the month of March. The highest temperature anomalies were in the Rio Grande Basin in Hinsdale, Mineral, and Rio Grande Counties.
- The San Luis valley was also warm with temperatures 2-6 degrees above normal for the month.
- East of the divide temperature departures from normal weren't quite as high as west of the divide. Temperatures were 0 to 8 degrees above normal. The highest anomalies east of the divide were in northeast Weld County, and the nearest to normal conditions were in Lincoln, Crowley, and Otero Counties.

FORECAST AND OUTLOOK





The top two images show Climate Prediction Center's Precipitation and Temperature outlooks for 8 - 14 days. The middle image shows the 3 months Precipitation outlook. 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: (4/28)

- Temperatures will rebound to above normal across the UCRB as a ridge moves in over the region and builds to its peak by Thursday.
- Precipitation totals over the next five days are expected to be fairly modest for this time of year with most of the forecast precipitation over southern and Central Colorado on Thursday and Friday nights.

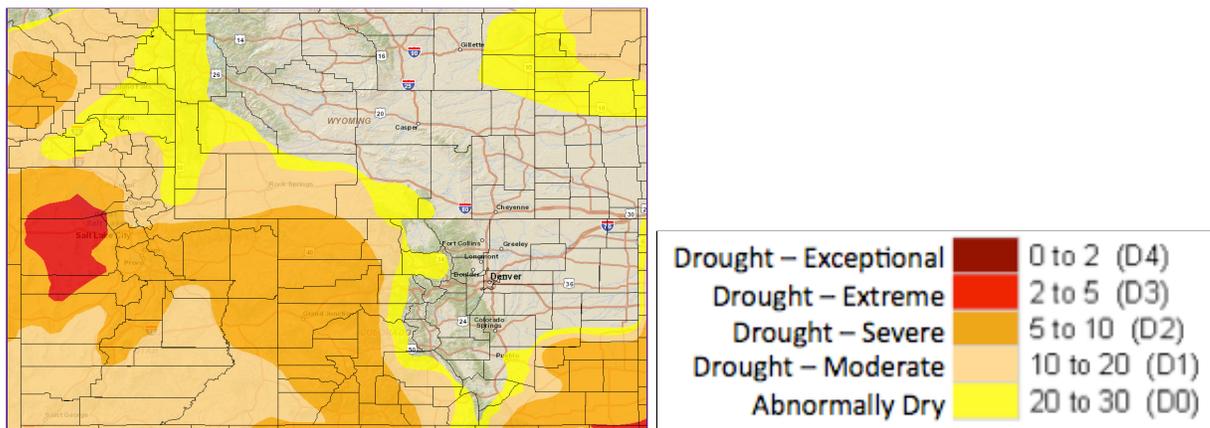
Increases in atmospheric precipitable water can be expected Thursday evening across east and central Colorado with low-level flow out of the southeast.

- The Uintah Mountain Range in Utah is forecast up to three quarters of an inch of precipitation over the next week, but most of the western portion of the UCRB is expected to receive less than a quarter of an inch of new precipitation.
- Early next week in the Monday and Tuesday time frame models are showing increased chances for precipitation across much of Colorado and the UCRB with several spots of low pressure building over the southwestern United States. As of now, most of the precipitation forecast from this change in the flow will fall over eastern Colorado. Totals here are expected to be between a quarter and three quarters of an inch.

Longer Term:

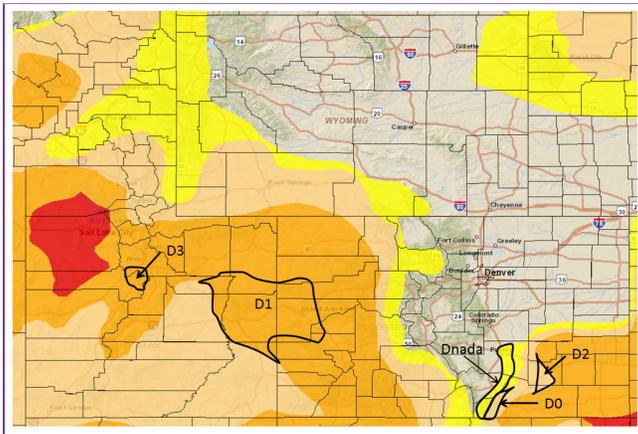
- The 8-14 day precipitation outlook shows increased chances for above average precipitation for the entirety of Colorado and the UCRB. These chances are most highly enhanced eastern Colorado.
- The 8-14 day temperature outlook shows increased chances of above average temperatures for eastern Utah and southwest Wyoming, but increased chances for below average temperatures in southern Colorado, and southeast Utah.
- The Climate Prediction Center 3-month precipitation outlook shows increased chances for above normal precipitation for the entirety of the UCRB, and the area in Colorado east of the divide for the May to July period. These chances are forecast above 40% for the entire region with the exception of the far eastern end of Colorado.
- The seasonal drought outlook indicates that drought is expected to improve across western Colorado and southeast Colorado with some removal likely for southwest Wyoming and small portions of southeast Colorado.

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 for April 28 2015:

While the previous week was not lacking in moisture across Colorado and the Upper Colorado River Basin, most of the areas that have the highest need for moisture were once again left mostly dry. A large amount of area in the low elevations of the D2 chunk over western Colorado and eastern Utah were primed for improvement after receiving 0.50-2.00" of new precipitation this week in addition to the beneficial moisture from last week.

In south and east Colorado the most impressive totals came from a round of convection in Morgan County and from persistent, convergent upslope in Fremont County, which both brought 4+" of rainfall. Unfortunately, the regional precipitation minima was essentially right over the D2 in southeast Colorado. Here totals were only between 0.10 and 0.25", making for just a normal, if not below normal week for this time of year.

Recommendations:

UCRB: Degradation to D3 is recommended for extreme eastern Jaub County and extreme southern Utah County. This recommendation is fairly localized and conservative, but was based on where SPI's, modeled soil moisture, VegDri, and Snotel precipitation numbers all are in agreement that conditions are below the 5th percentile. Based on SPI's and Snotel percentiles this degradation could cover a wider swath of area, so the area mandates a careful look from the drought monitor author.

Improvement from D2 to D1 is recommended for much of the low elevation area in west-central Colorado and east-central Utah. The main justification here is that SPI's are simply too wet on short timescales to merit D2 status. Based on the last two week's precipitation the northern end of this line can be drawn starting in north Carbon County extending into extreme southeast Duchesne County and then continuing through the southern one third of Uintah County. Once crossing the border into Colorado it is recommended that this line continue eastward through extreme south Rio Blanco County before diving south and creating an eastern border through Garfield and central Mesa County. This line can

continue south through western Delta County, but must stay off of the Grand Mesa, where SNOTEL precipitation percentiles are still extremely low. This line can be rounded out and drawn back westward in Montrose County and then through southern Mesa County before crossing the state line and dipping south once more into northern San Juan County and then curving back towards Colorado.

Eastern CO: Degradation of central Otero County to D2 is recommended based on FSA feedback we have had. The line between D1 and D2 currently has the shape it does as a result of one event from last convective season, but the feedback we have received is that there isn't an appreciable difference in conditions from the eastern to the central portion of the county.

A one category improvement is recommended for eastern Huerfano County, central Pueblo County, and southwest Las Animas County based on beneficial moisture from recent storms and strong vegetative health conditions. The benefits of recent rains have been mostly farther north and west than where areas are suffering from drought, so the overall impact of this recommendation is just to tighten the gradient in southern Colorado.

A sliver of D3 slipped into Baca County last week as a result of feedback from Oklahoma and Kansas groups. We do not feel that any part of southeast Colorado fits a D3 depiction at this time.