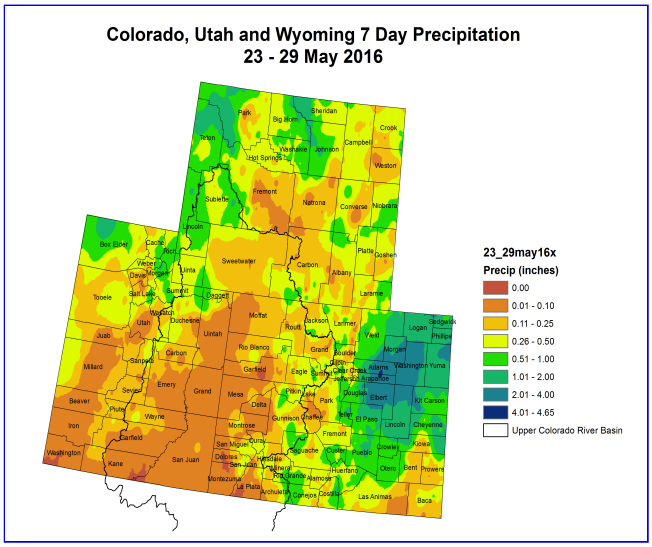
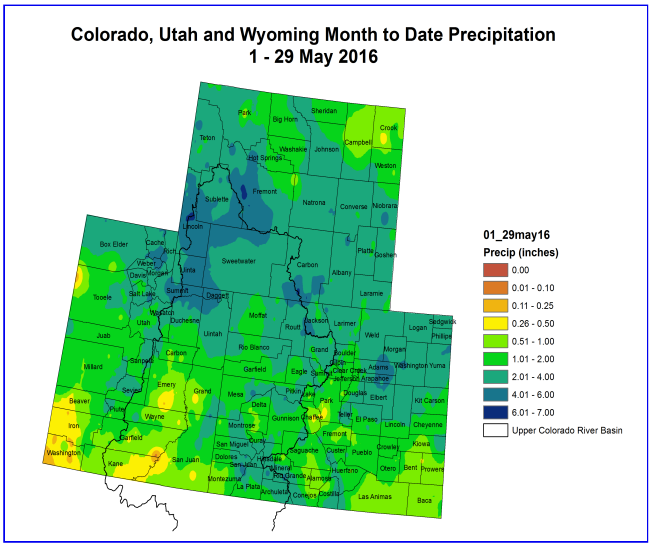
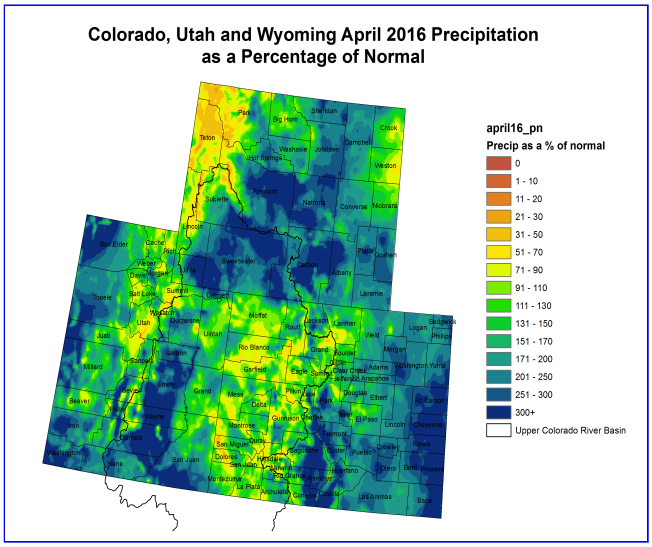
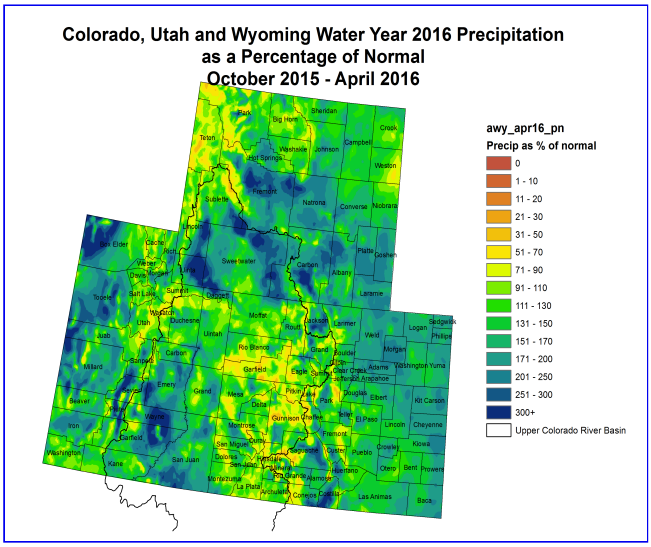
PRECIPITATION



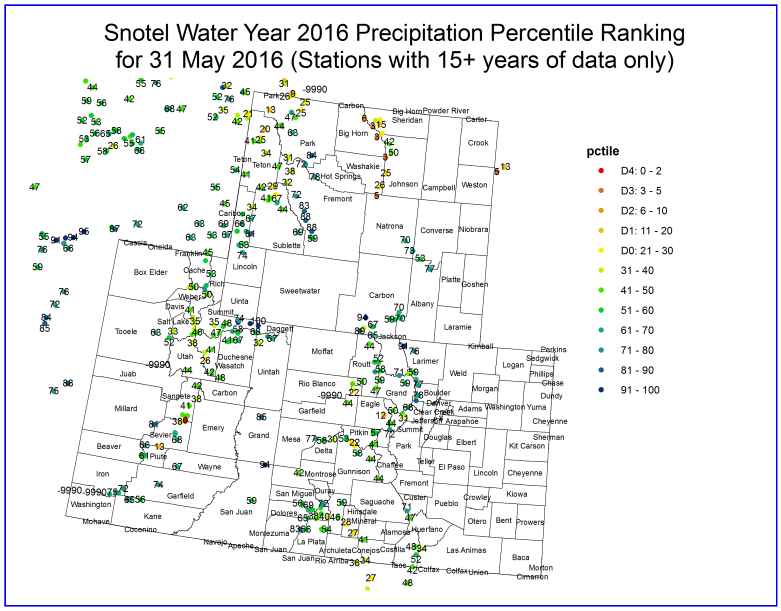


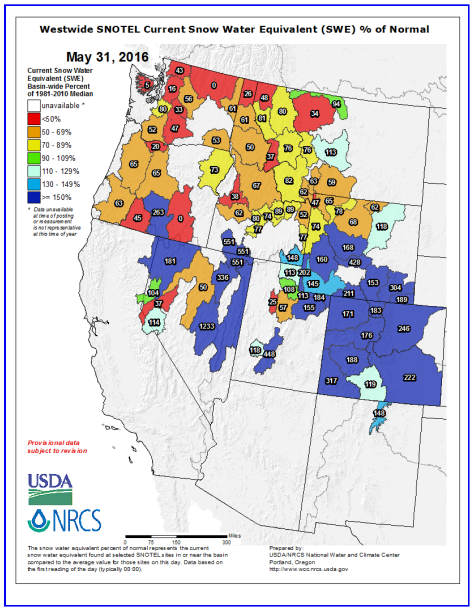




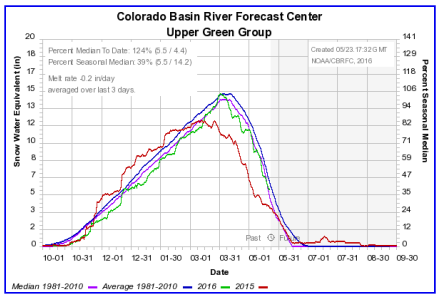
The images above use daily precipitation statistics from NWS COOP, CoCoRaHS, and CoAgMet stations. From top to bottom, and left to right: most recent 7-days of accumulated precipitation in inches; current month-to-date accumulated precipitation in inches; last month's precipitation as a percent of average; water-year-to-date precipitation as a percent of average.

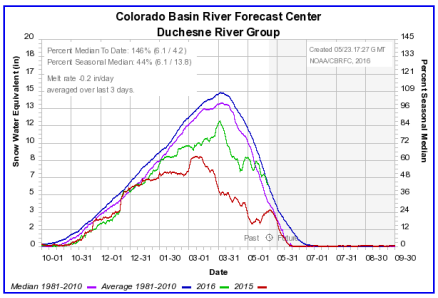
SNOTEL AND SNOWPACK

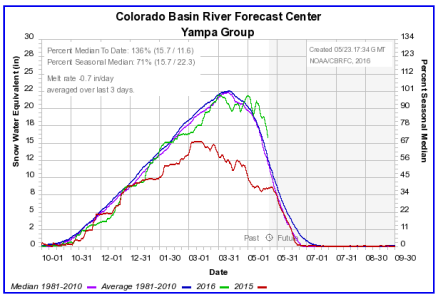


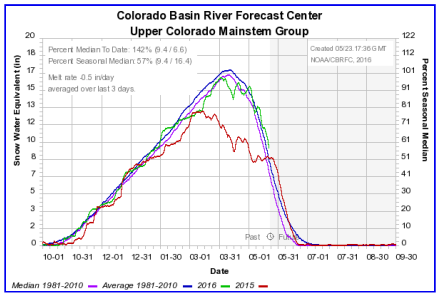


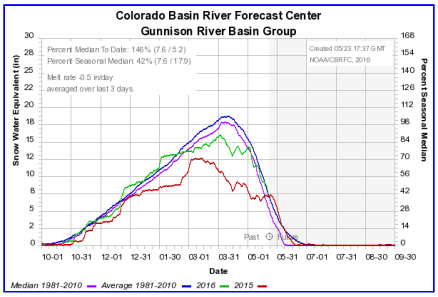
The top left image shows the Natural Resources Conservation Service's SNOTEL water-year-to-date precipitation percentile rankings. The top right image shows sub-basin averaged snow water equivalent accumulations as a percent of average. The images below show accumulated snow water equivalent in inches (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).

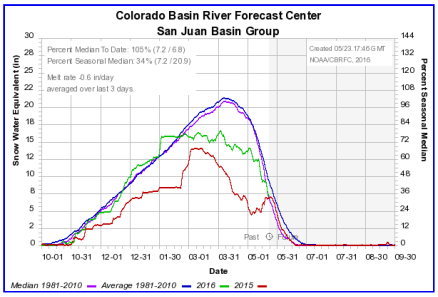




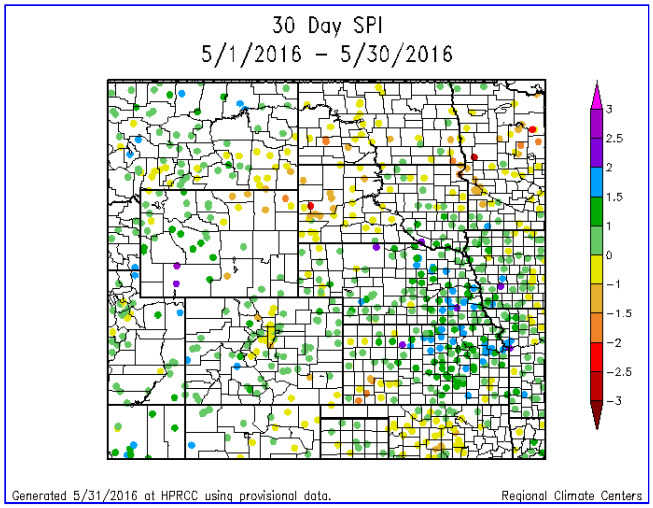


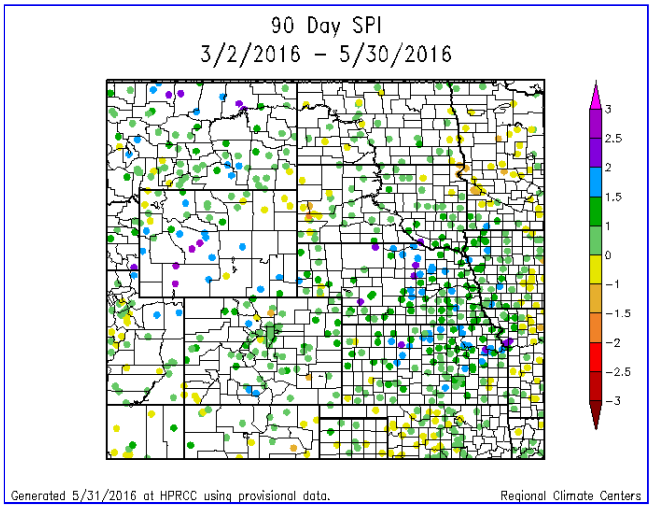


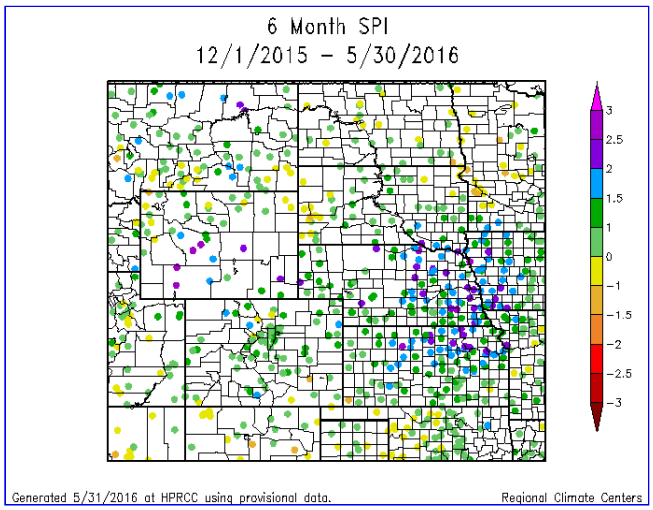


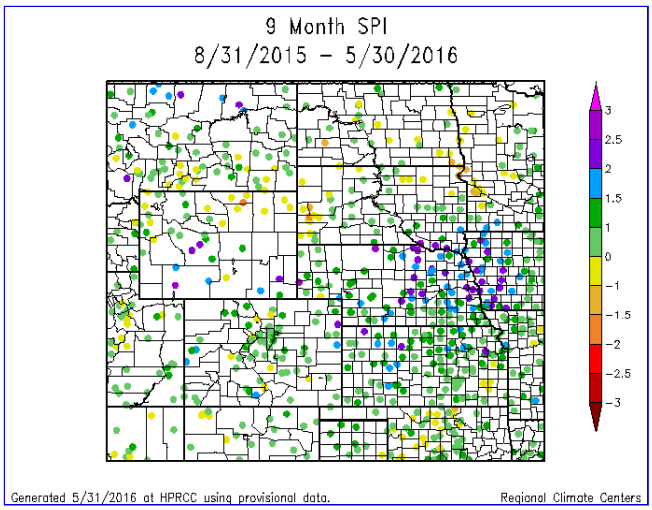


STANDARDIZED PRECIPITATION INDEX



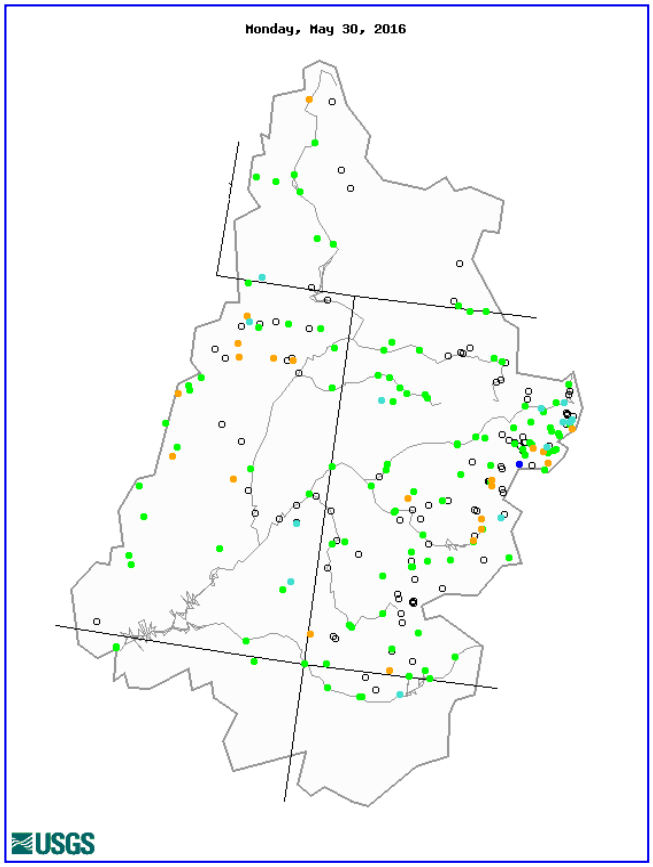


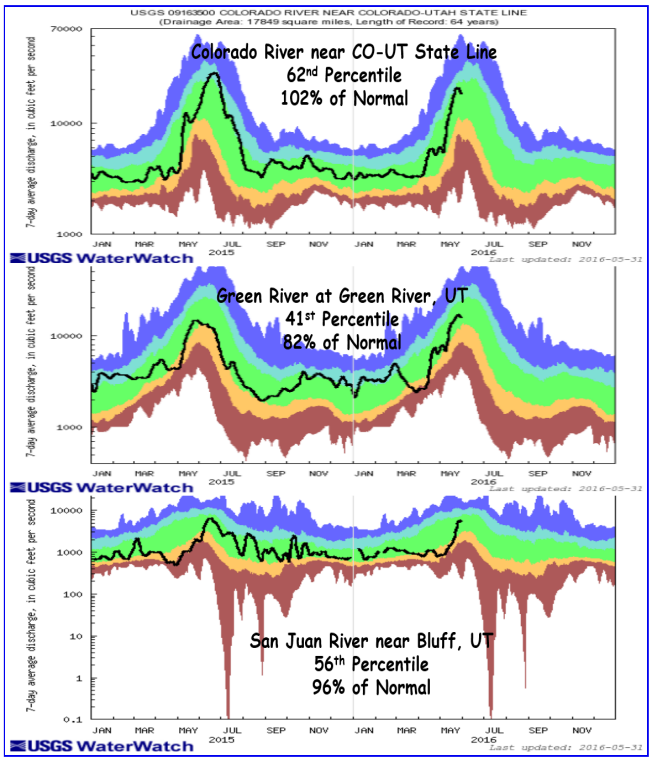




Standardized Precipitation Index standardizes precipitation accumulations for a specified time period into percentile rankings. -1.0 to -1.5 is equivalent to a D1 to D2. -1.5 to -2.0 is equivalent to a D2 to D3. -2.0 and worse is equivalent to a D3 to D4. 30- and 60-day SPIs focus on short-term conditions while 6- and 9-month SPIs focus on long-term conditions. SPI data provided by High Plains Regional Climate Center.

STREAMFLOW

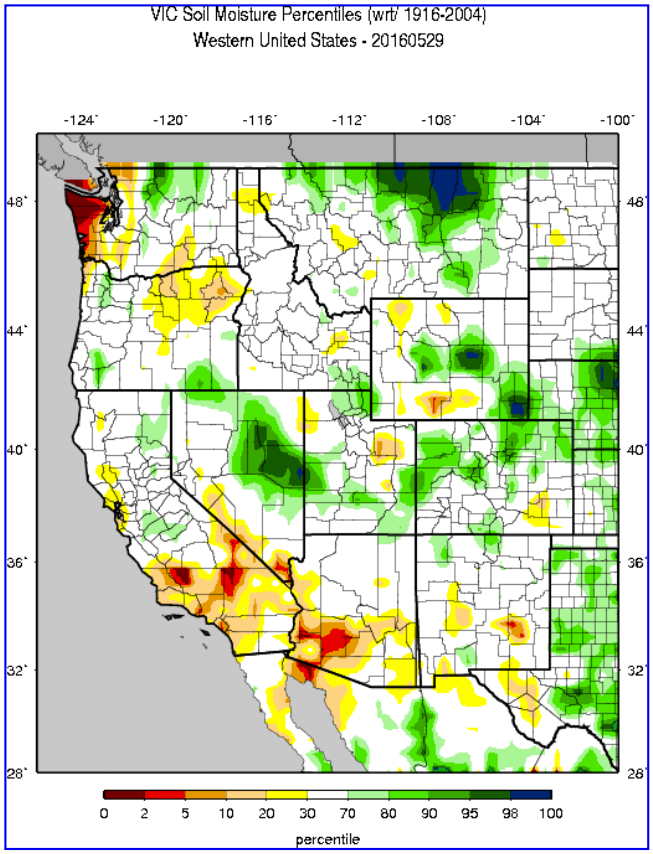


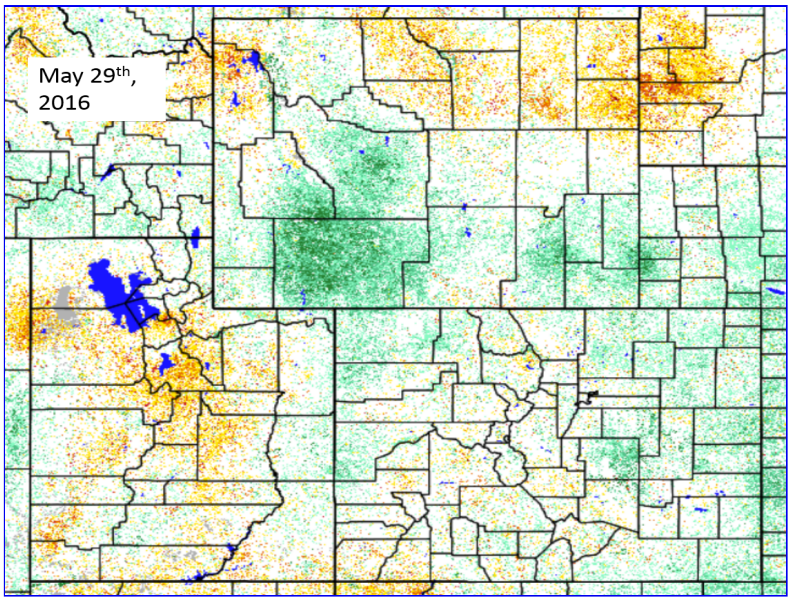


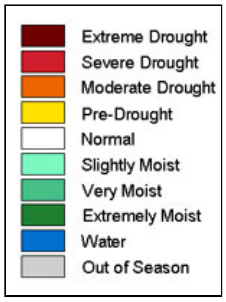
Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

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.

SURFACE WATER

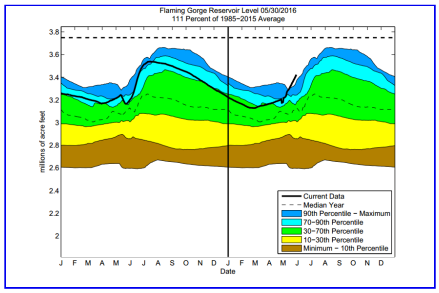


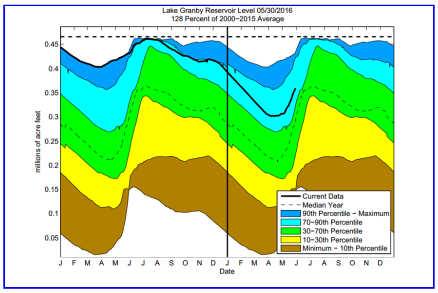


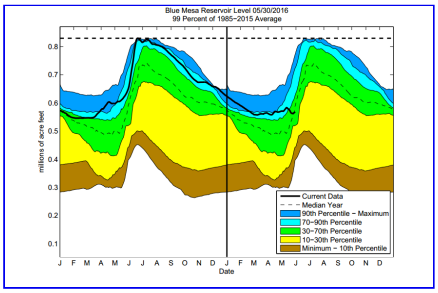


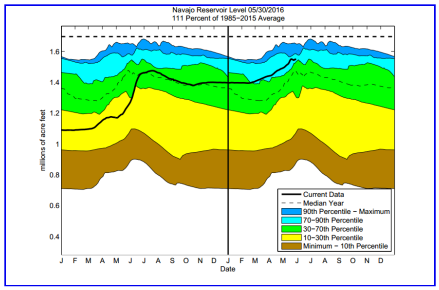
The top left image shows VIC modeled soil moisture as a percentile ranking. The top right image shows satellite-derived vegetation from the VegDRI product (which updates on Mondays).

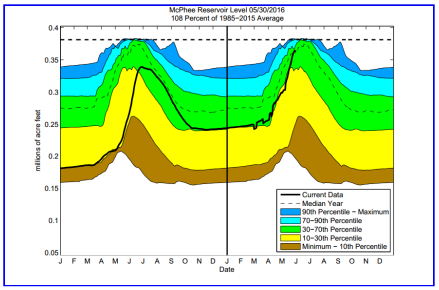
The graphs shown below are plots of reservoir volumes over the past full year and current year to date (black). The dashed line at the top of each graphic indicates the reservoir's capacity, and the background color-coded shading provides context for the range of reservoir levels observed over the past 30 years. The data are obtained from the Bureau of Reclamation. Some of the reservoir percentiles don't line up at the new year due to differences in reservoir levels at the beginning of 1985 and the end of 2014. Dead storage has been subtracted. Note: Lake Granby data are obtained from the Colorado Division of Water Resources, and only goes back to the year 2000.

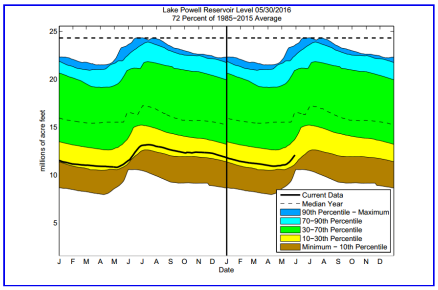




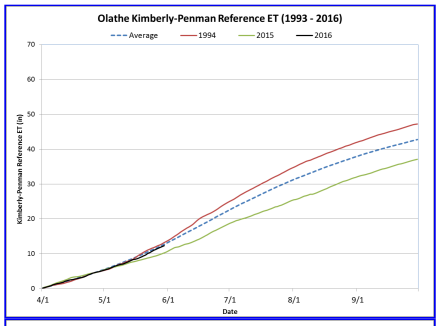


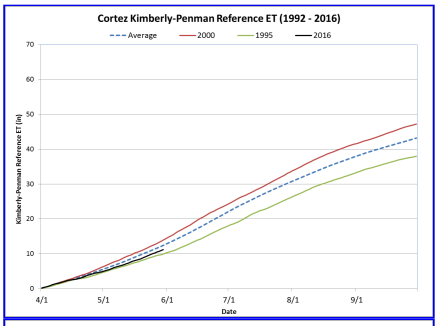


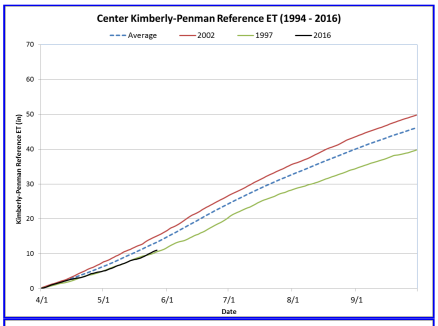


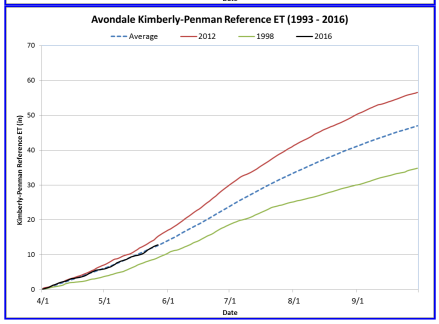


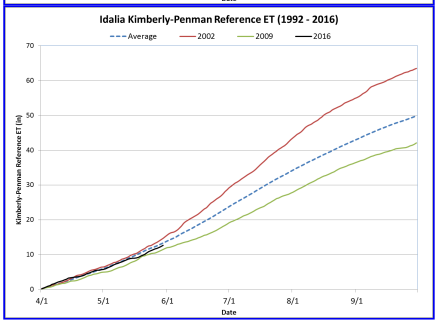
EVAPOTRANSPIRATION

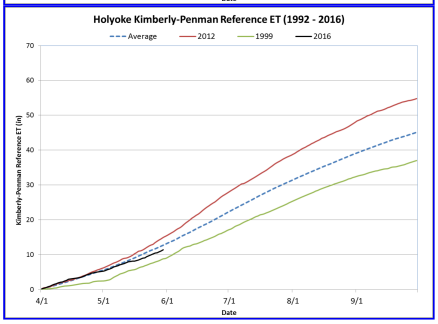


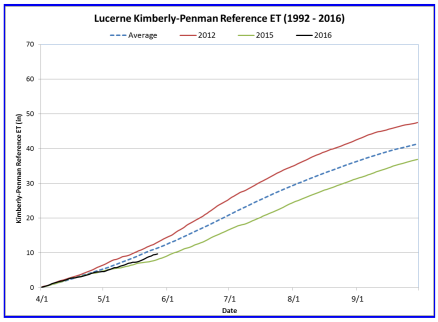




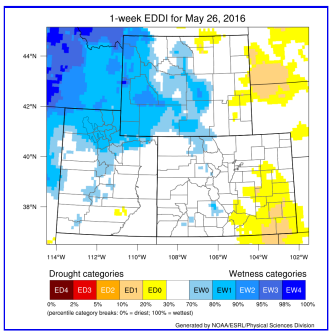


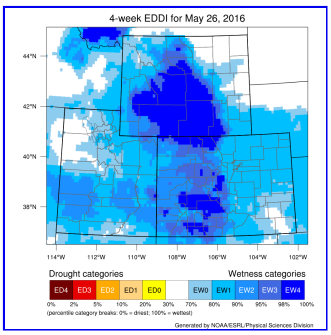


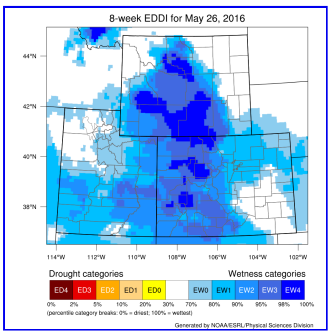


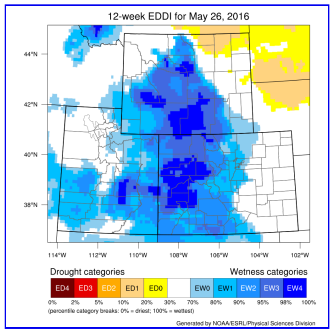


The above images are of reference evapotranspiration (ET) from CoAgMet sites across Colorado. Reference ET assumes the amount of water that will evaporate from a well-irrigated crop. Higher ET rates occur during hot, dry, and windy conditions. Lower ET rates are more desirable for crops. See a map of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



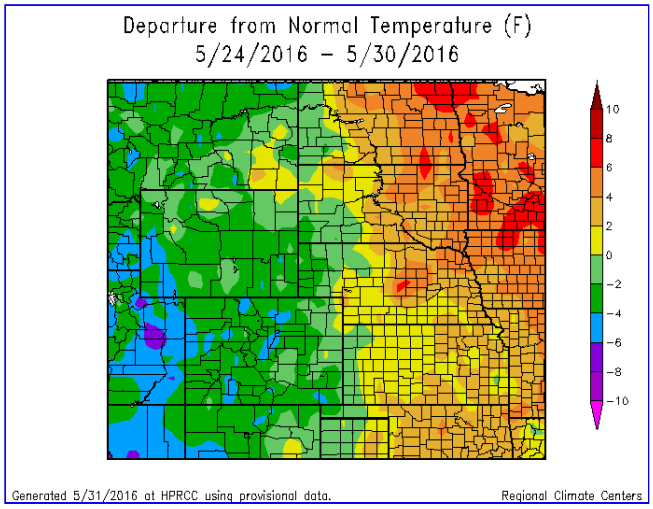


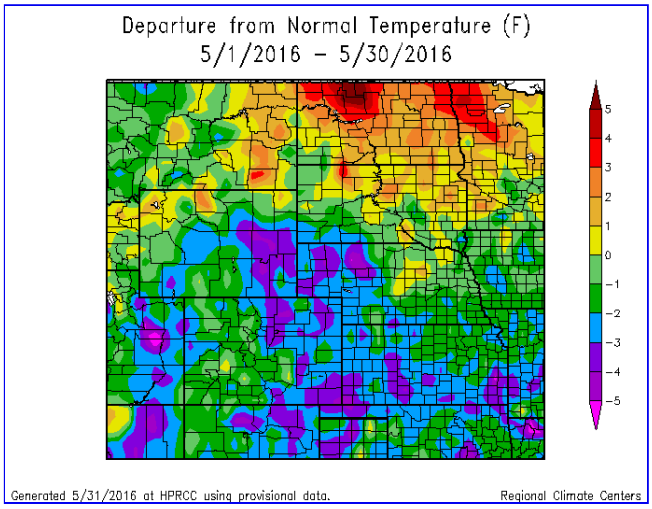




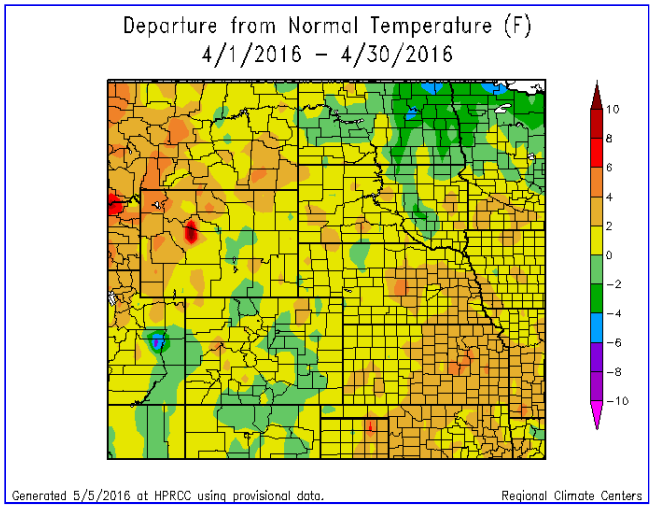
The above images are available courtesy of NOAA's Evaporative Demand Drought Index (EDDI). Drought classification listed is a function of the depth of reference evapotranspiration accumulated over a given period of record with respect to a climatology of 1981-2010. The drought categories displayed are in line with the US Drought Monitor's Percentile Ranking Scheme http://droughtmonitor.unl.edu/AboutUs/ClassificationScheme.aspx. Data used to generate these maps come from the North American Land Data Assimilation System Phase-2 (NLDAS-2) project, which assimilates observations of temperature, wind speed, radiation, and vapor pressure deficit. The date indicates the last day of the period of record, and the week number indicates the window size for the period of record..

TEMPERATURE

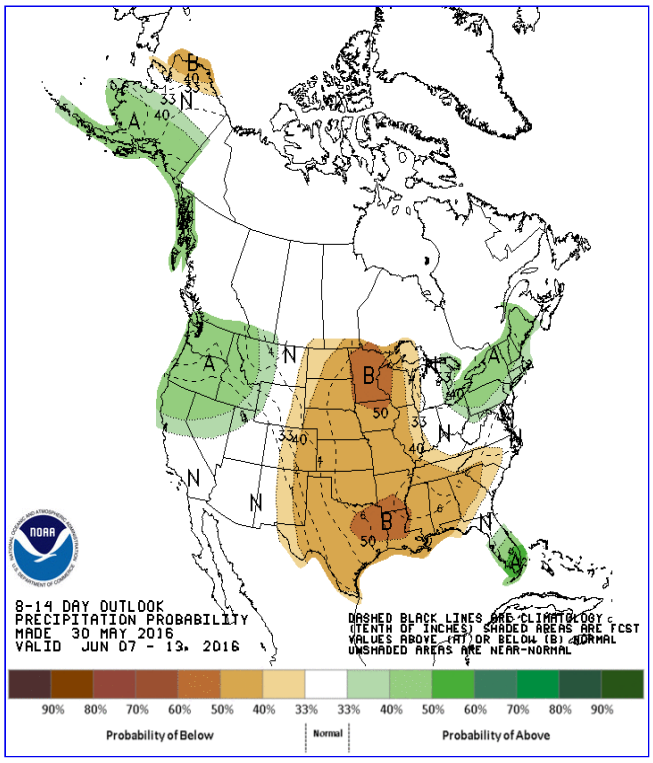


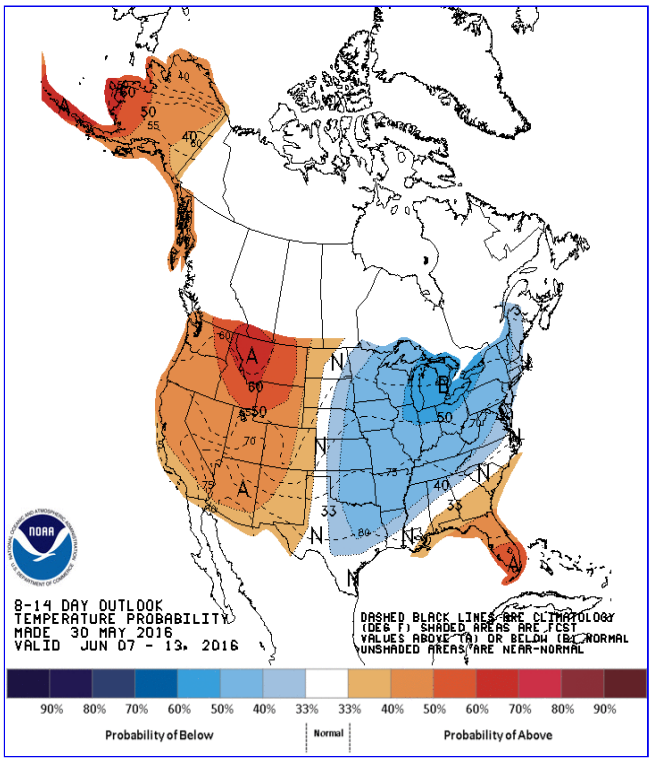


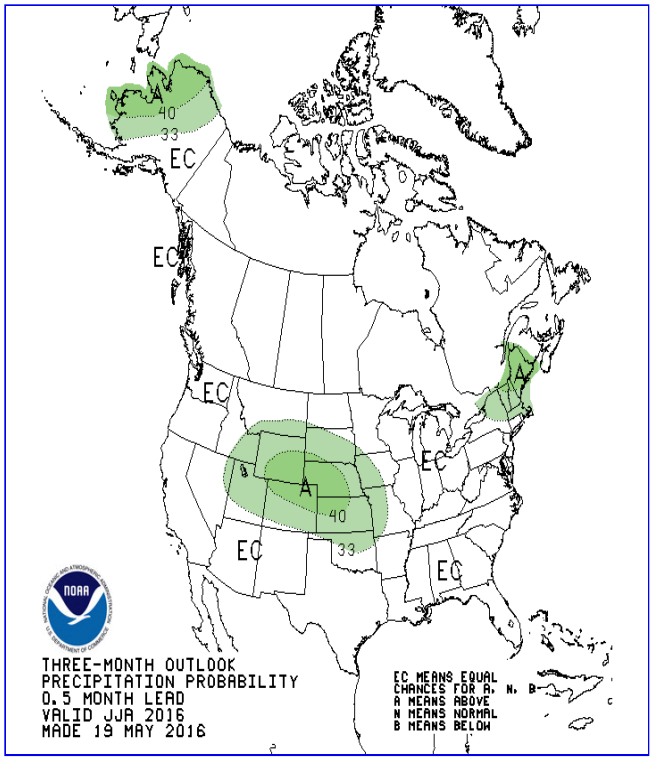
All images show temperature departures from average over different time periods (last 7 days on top left; month-to-date on top right; last full month on bottom). Temperature departure maps provided by HPRCC ACIS.



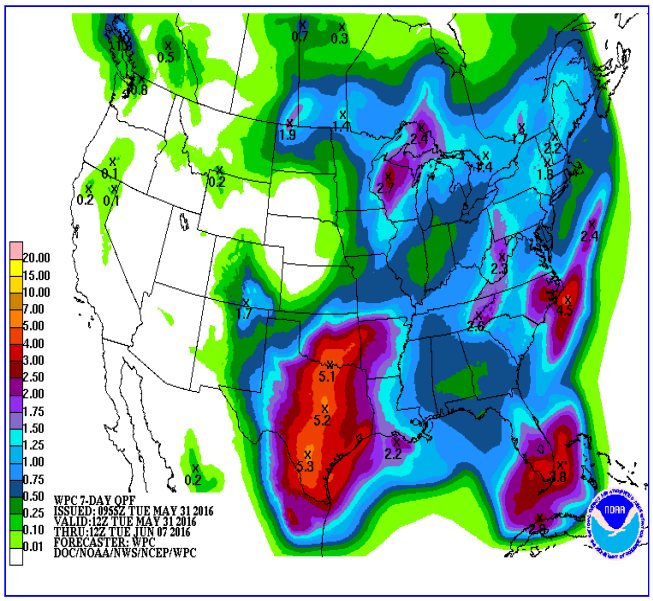
FORECAST AND OUTLOOK

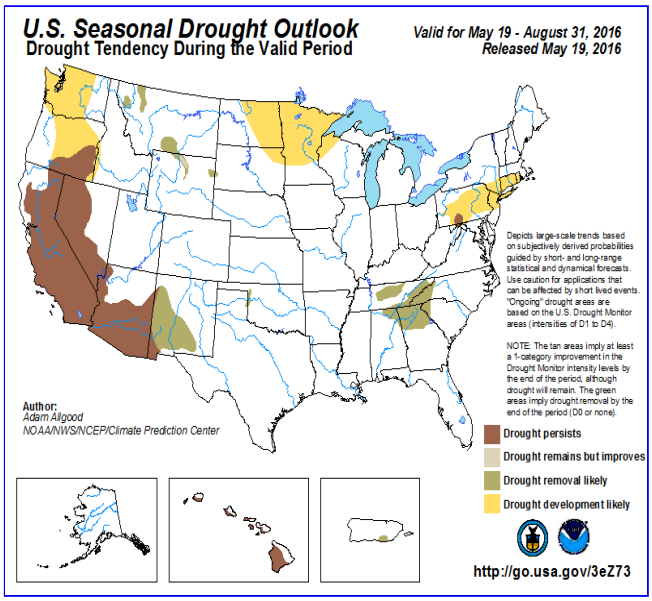






The top two images show Climate Prediction Center's Precipitation and Temperature outlooks for 8 - 14 days. The middle image shows the 3 months Precipitation outlook. The bottom left image shows the Weather Prediction Center's Quantitative Precipitation Forecast accumulation for the seven days between Tuesday 12Z and ending Tuesday 12Z. The bottom right image shows the Climate Prediction Center's most recent release of the U.S. Seasonal Drought Outlook.





Short Term: (5/10)

- Today and tomorrow afternoon showers are possible for southeast Colorado and the urban corridor, but the UCRB should stay mostly dry.
- A drying trend will set in later this week with Thursday through Saturday afternoon looking mostly clear for the basin and eastern

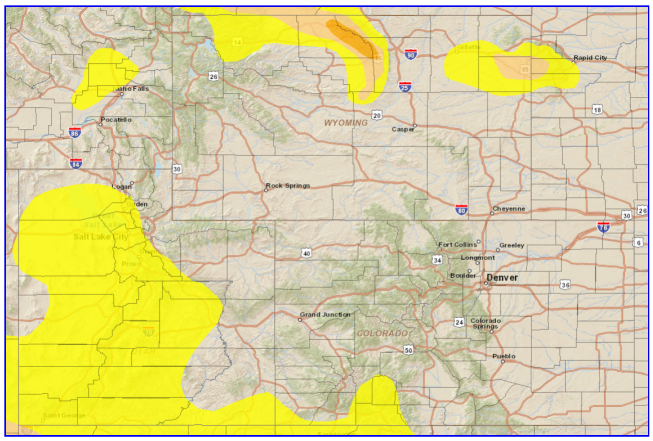
Colorado.

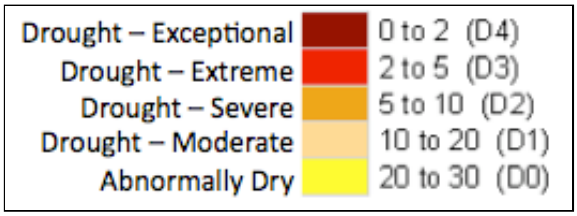
- Saturday into Sunday a change is expected in the weather with an upper level trough moving into the region bringing cooler temperatures and raising the probability of precipitation.
- Precipitation totals for the upcoming week are expected to be highest east of the Continental Divide, and in the Upper Green River Basin with upslope flow developing Sunday into early next week. The southern portion of the UCRB will be mostly dry. Totals in western Colorado are forecast to range from 0.10-0.50" for the week to come, a fairly typical week.

- **Longer Term:**

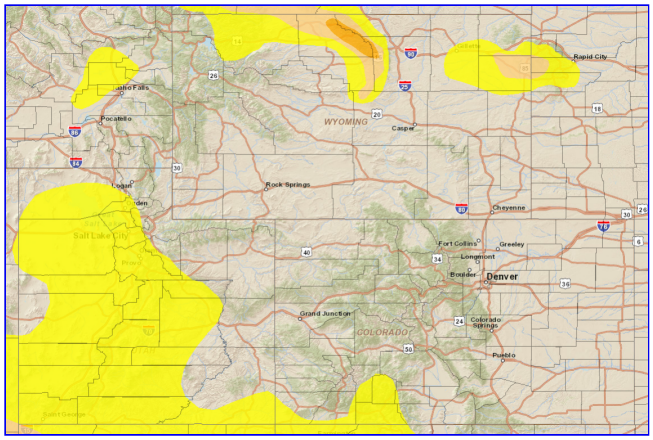
- The 8-14 day precipitation outlook shows increased chances for above average precipitation in the northern half of the Upper Colorado River Basin and northern Colorado. The southern half of the UCRB and southern Colorado will have equal chances of above and below average precipitation.
- The 8-14 day temperature outlook shows increased chances for below average temperatures for the Upper Colorado river Basin. These chances are most strongly enhanced in the western and central portions of the basin. Eastern Colorado has equal chances of above and below average temperatures.
- The Climate Prediction Center May through July outlook shows increased chances of above average precipitation for the entirety of the UCRB and eastern Colorado.
- The seasonal drought outlook for Colorado and the UCRB shows no likely drought development over the next three months, and removal likely in the southeast corner of the state.

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 31, 2016

Last week, the Upper Colorado River Basin received below average precipitation over most of the basin. The western portion of the Upper Green River basin was the only area in the UCRB that saw normal precipitation. The rest of the basin received less than 0.50 inches last week. Even with this dry week, May should end with above normal precipitation in the basin. Even with the wet month, the Four Corners area is still showing dry SPIs in the 0 to -1 range for 90-day time scale justifying the current D0.

The wet month has brought cooler than normal temperatures and lower than average reference evapotranspiration. Soils and vegetation through most of the basin is showing normal to moist conditions with dryness around the Duchesne Basin.

Streamflow through the basin is still mostly in the normal range thanks to the current snowmelt. A few areas showing lower flows show up in the Duchesne basin and the headwaters of the Gunnison basin where snowpack was lower. The three integrator (Colorado River at CO-UT stateline, Green River at Green River, UT, San Juan River at Bluff, UT) sites in the basin are currently in the normal range for the 7-day average streamflow, seeing a small decrease with the dry weather. The Water Year cumulative streamflow for the three sites are seeing near normal accumulations.

Eastern Colorado saw a week of above normal precipitation over much of the area. From Weld County down to Pueblo County and east, precipitation amounts were at least 0.50 inches, with a large area in east-central Colorado seeing up to 4.00 inches. The rest of eastern Colorado saw less than 0.50 inches, with much of southeastern Colorado receiving less than 0.25 inches last week. May precipitation is mostly near normal, with a few drier areas popping up in southeastern Colorado and near the Denver Metro area. 30-day SPIs in these two areas are in the 0 to -1 range, however they bump back up to the 0 to +1 range on the 90-day time.

With the late season snowfall along the east slope, snowpack ended above normal and the current melting of the snowpack is keeping eastern

Colorado streamflows at or above normal.

Over all of eastern Colorado temperatures for the past week and month to date have been below normal, which is keeping reference evapotranspiration at lower than normal levels for the growing season to date. Soils and vegetation are also in the normal range over most of eastern Colorado.

Recommendations:

UCRB: Status quo.

Eastern Colorado: Status quo.