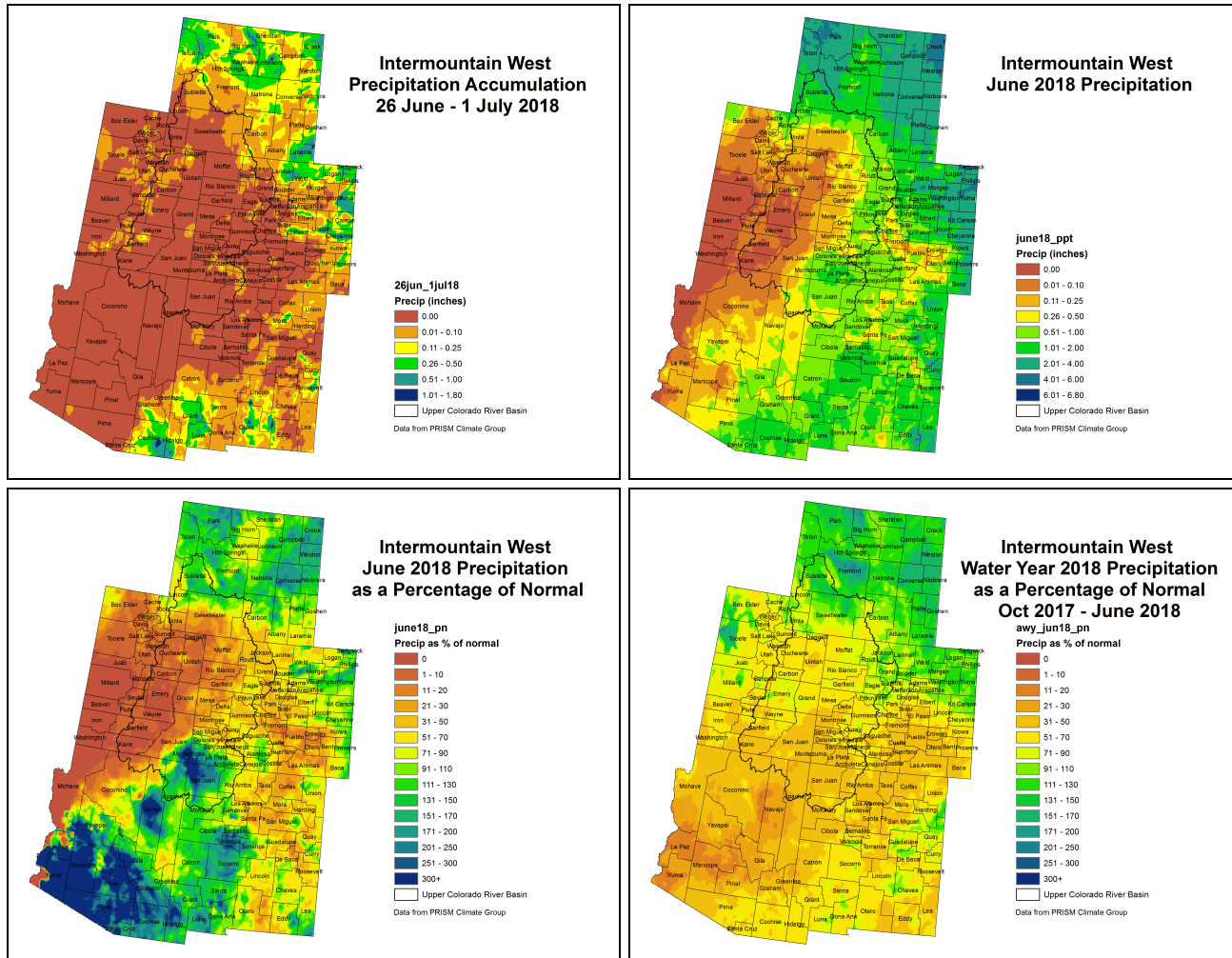


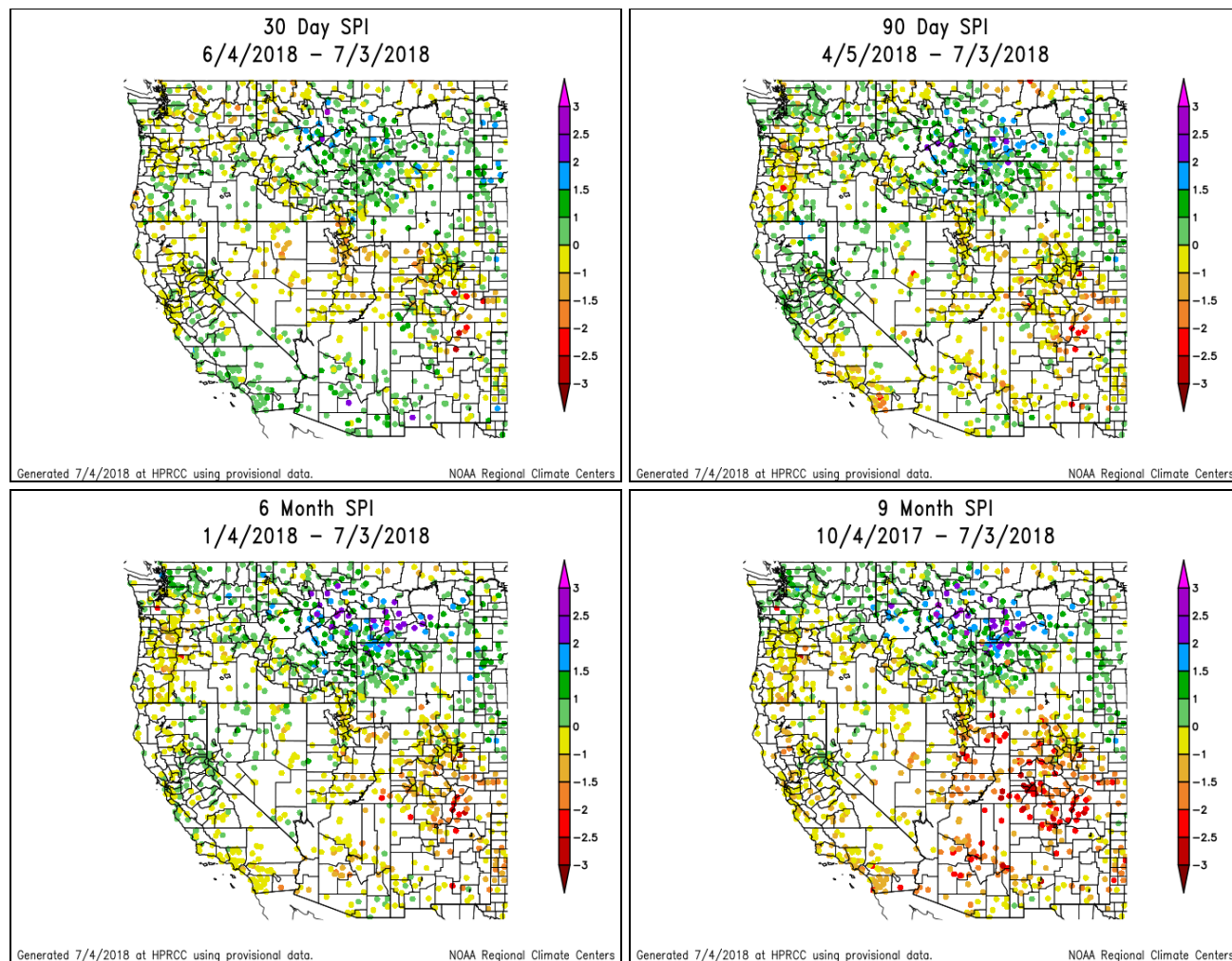
NIDIS Intermountain West Drought Early Warning System June 26, 2018

Precipitation



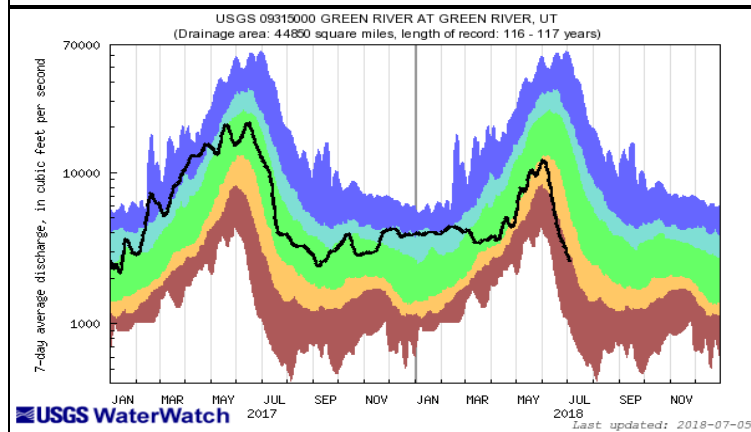
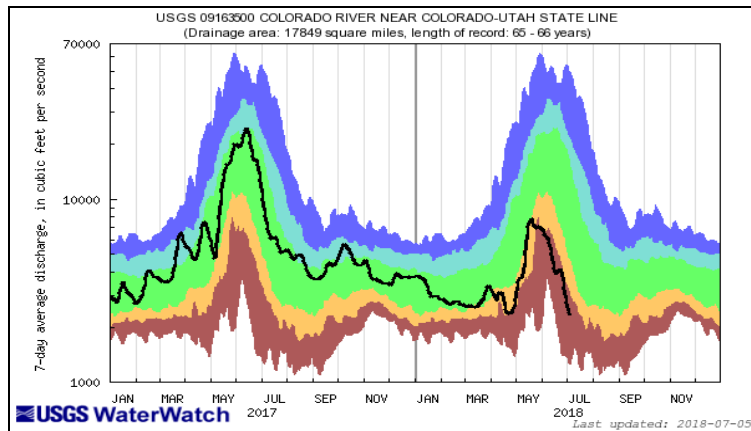
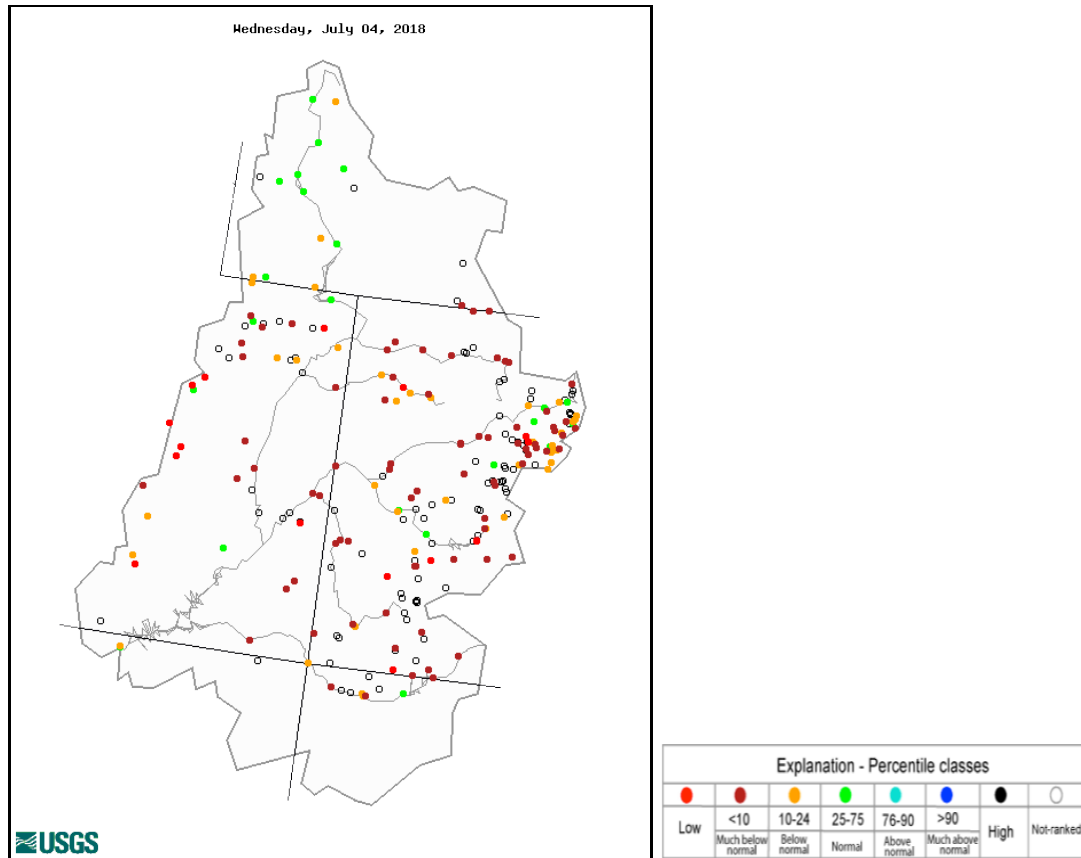
The images above use daily precipitation statistics from NWS COOP, CoCoRaHS, and CoAgMet stations. From top to bottom, and left to right: most recent 7-days of accumulated precipitation in inches; current month-to-date accumulated precipitation in inches; last month's precipitation as a percent of average;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

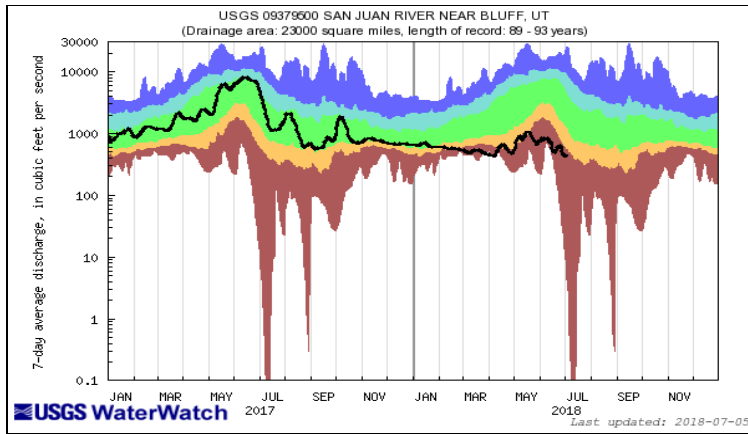
Standardized Precipitation Index



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.

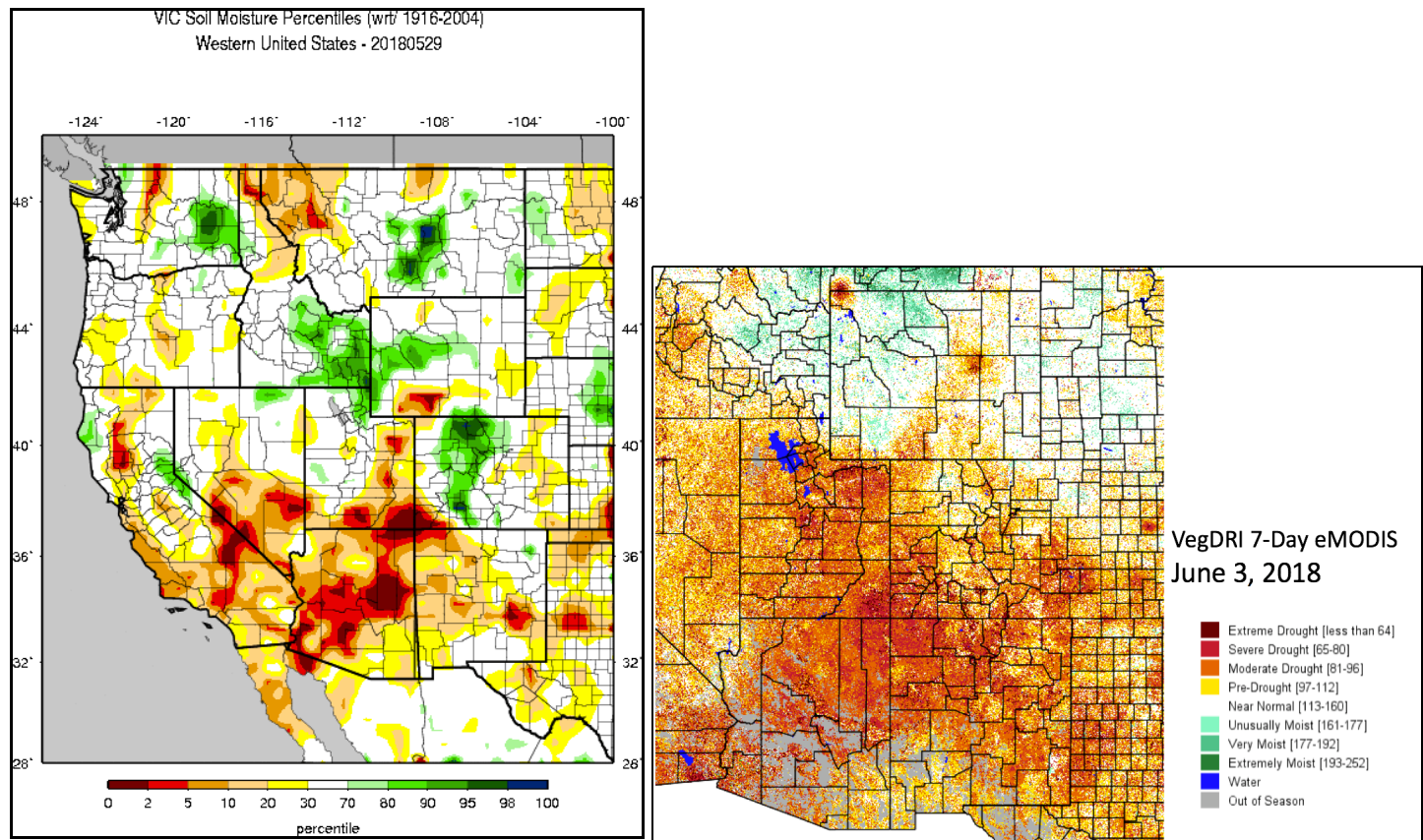
Streamflow





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.

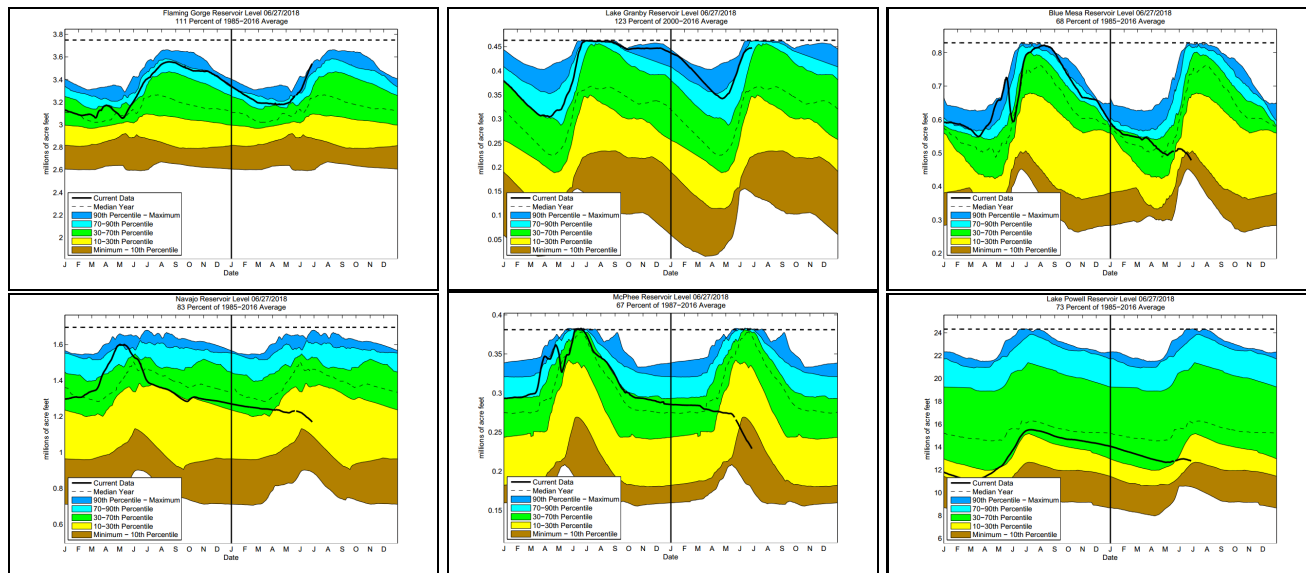
Surface Water



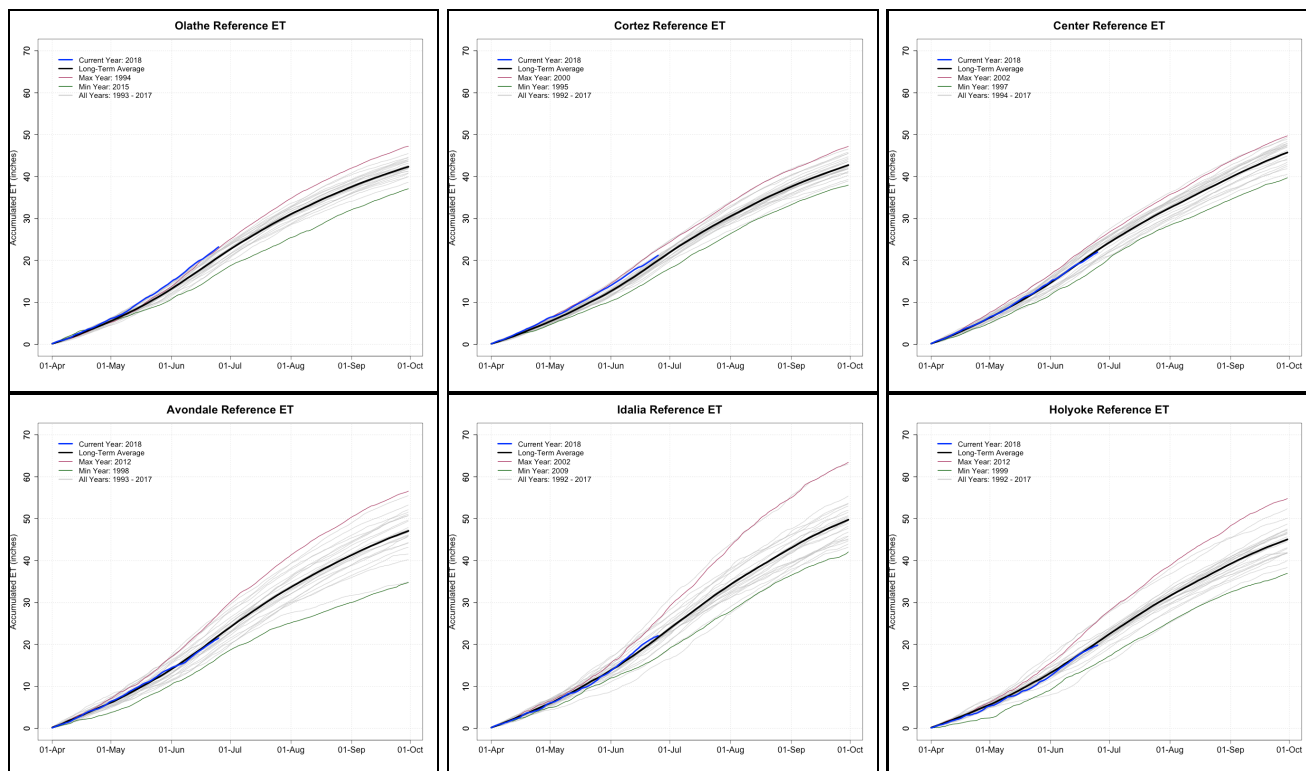
The top left image shows VIC modeled soil moisture as a percentile ranking. The top right image shows satellite-derived vegetation from the VegDRI product (which updates on Mondays).

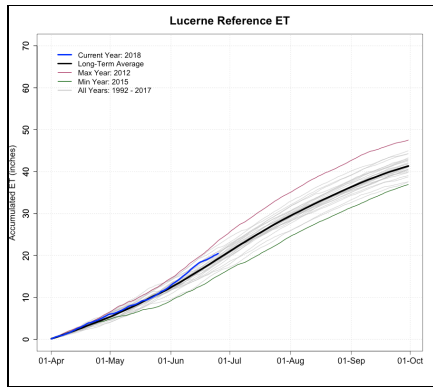
The graphs shown below are plots of reservoir volumes over the past full year and current year to date (black). The dashed line at the top of each graphic indicates the reservoir's capacity, and the background color-coded shading provides context for the range of reservoir

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.

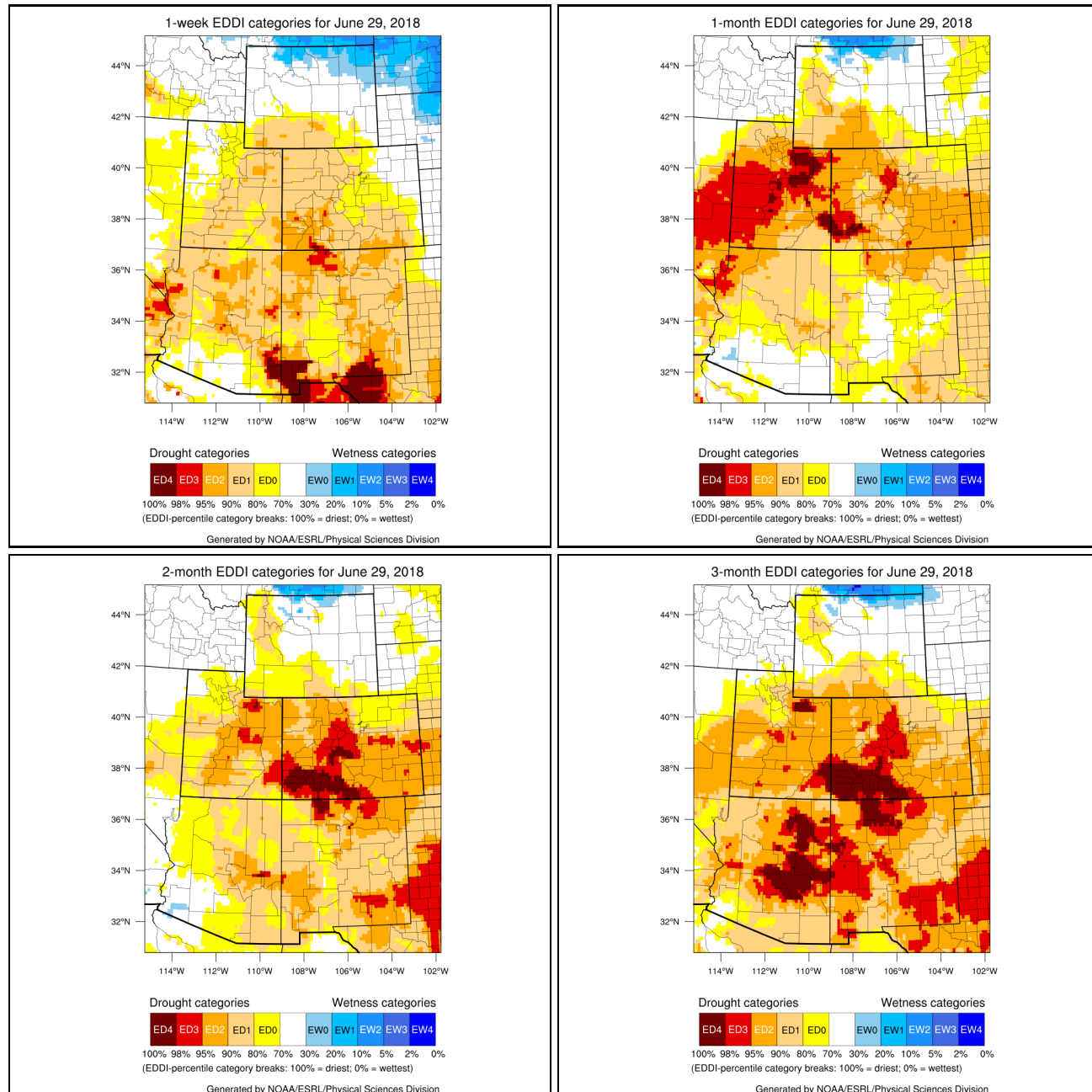


Evaporative Demand





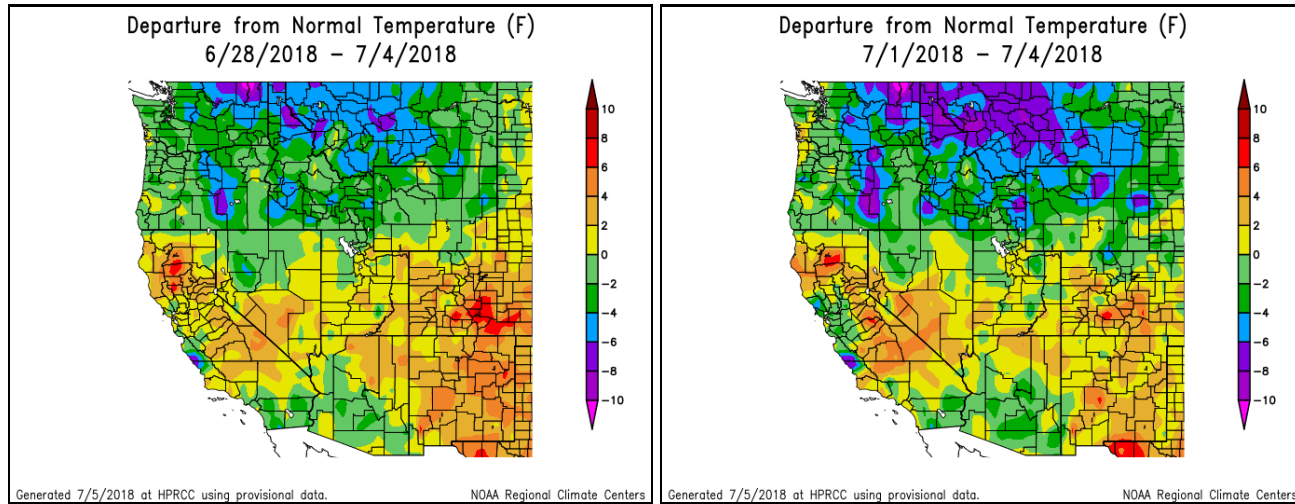
The above images are of reference evapotranspiration (ET) from CoAgMET sites across Colorado. Reference ET assumes the amount of water that will evaporate from a well-irrigated crop. Higher ET rates occur during hot, dry, and windy conditions. Lower ET rates are more desirable for crops. See a [map of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



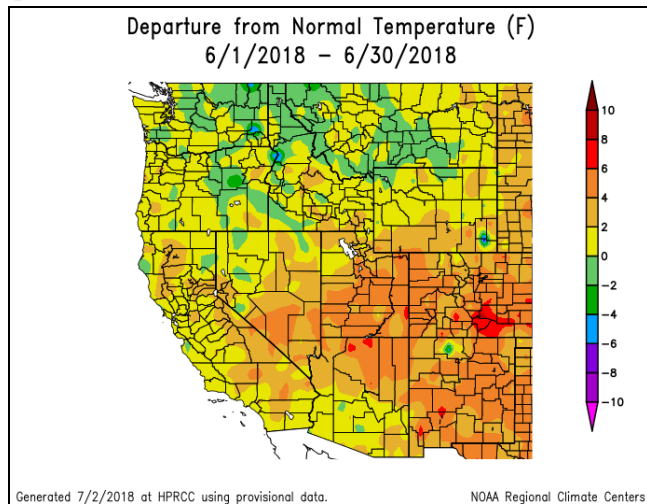
The above images are available courtesy of NOAA's Evaporative Demand Drought Index (EDDI). Drought classification listed is a function of the depth of reference evapotranspiration

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](#). 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.

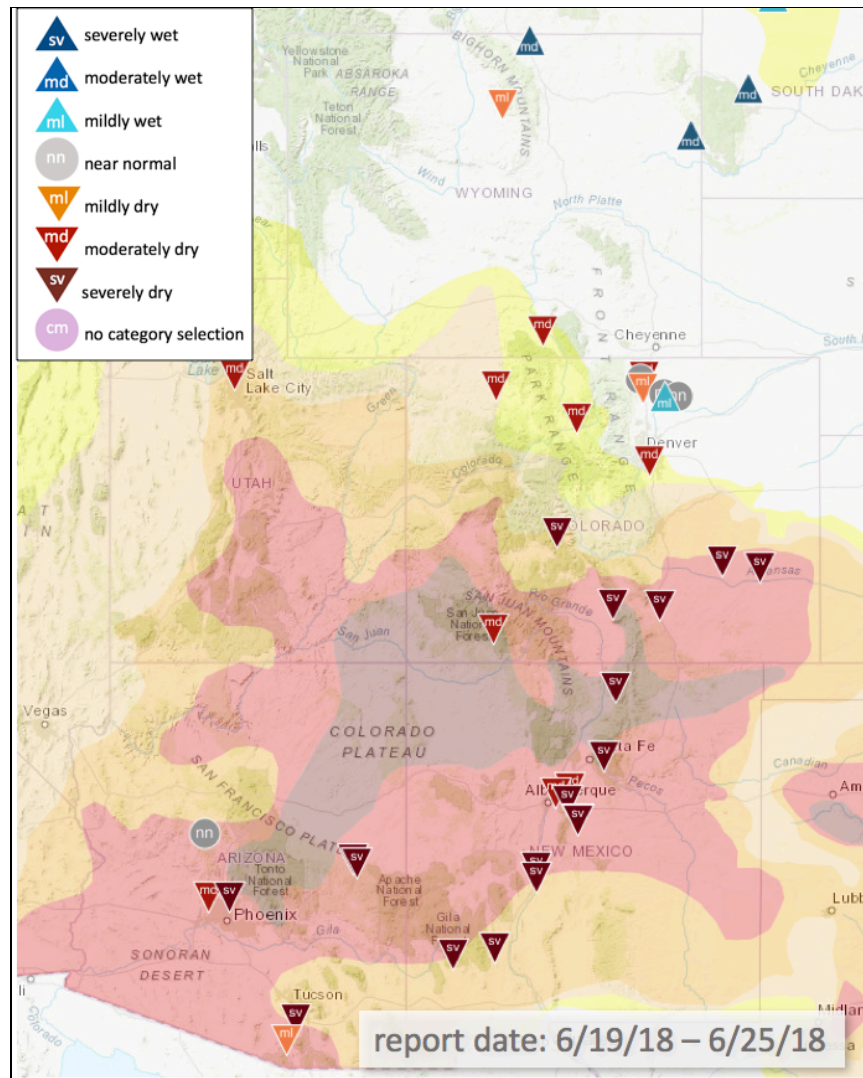
Temperature



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.



Condition Monitoring and Impacts



Map of current condition monitoring reports submitted to CoCoRaHS in the last week overlaid on the current U.S. Drought Monitor depiction. Specific impacts reports from local experts listed below.

Southeast CO

Producer in Agate: 4-5 miles north of Highway 86 looks good. Then there's a wall and it's just bad all the way down to the south.

An organic producer had to apply for a waiver to graze on non-native grasslands because otherwise the cattle have nothing to feed on.

Notice of losses above average, even though it's normally early to get these.

Nothing to harvest or poor harvests expected. Selling of herds. Postponing planting of feed because no moisture to plant. Precipitation that has fallen is spotty and variable. When it does rain, hail has been an issue. Farmers showing signs of depression.

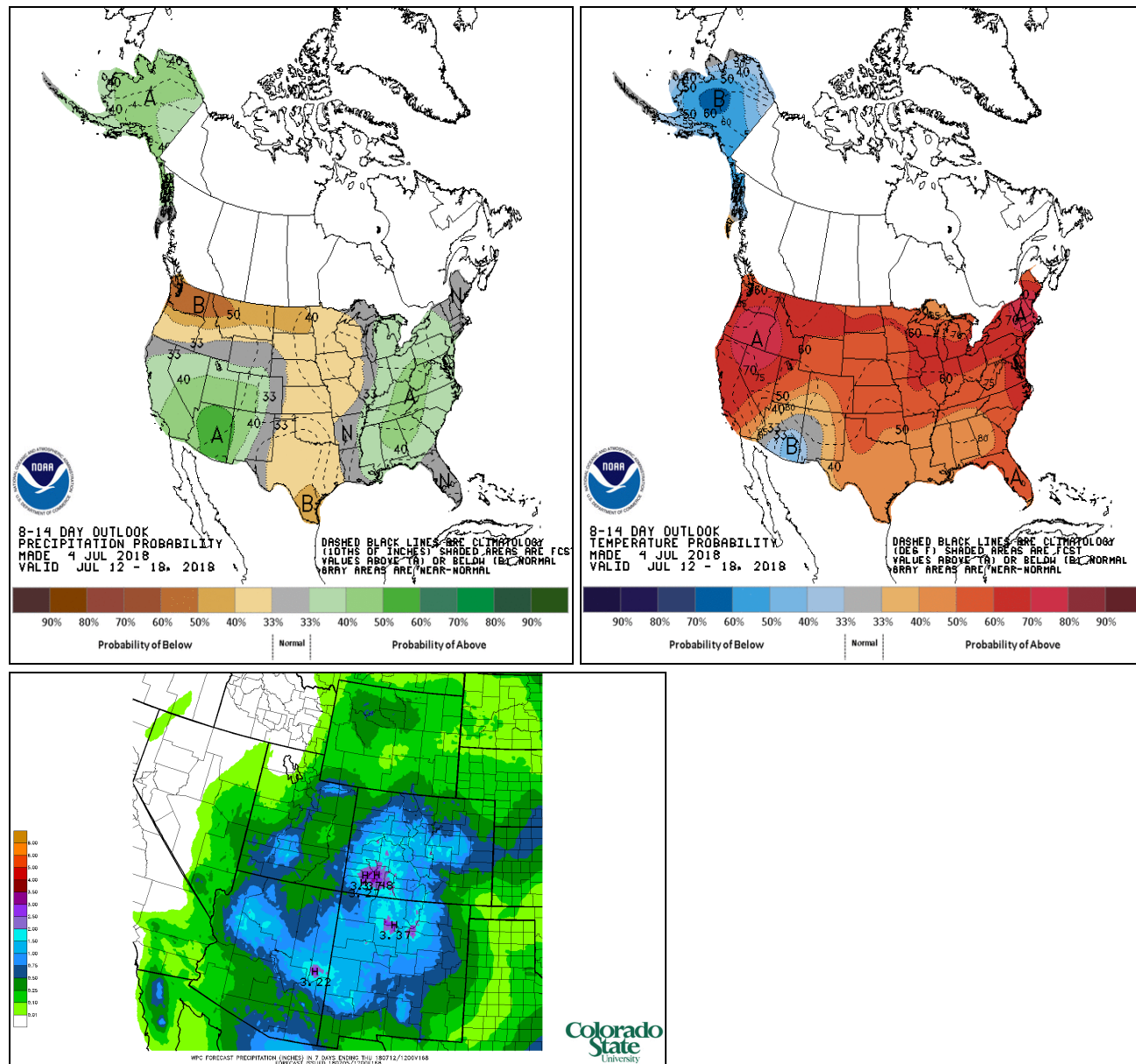
Southern CO

Moisture from Tropical Storm Bud was very spotty. Rangeland conditions are very poor. Accepting LFP applications.

Central UT

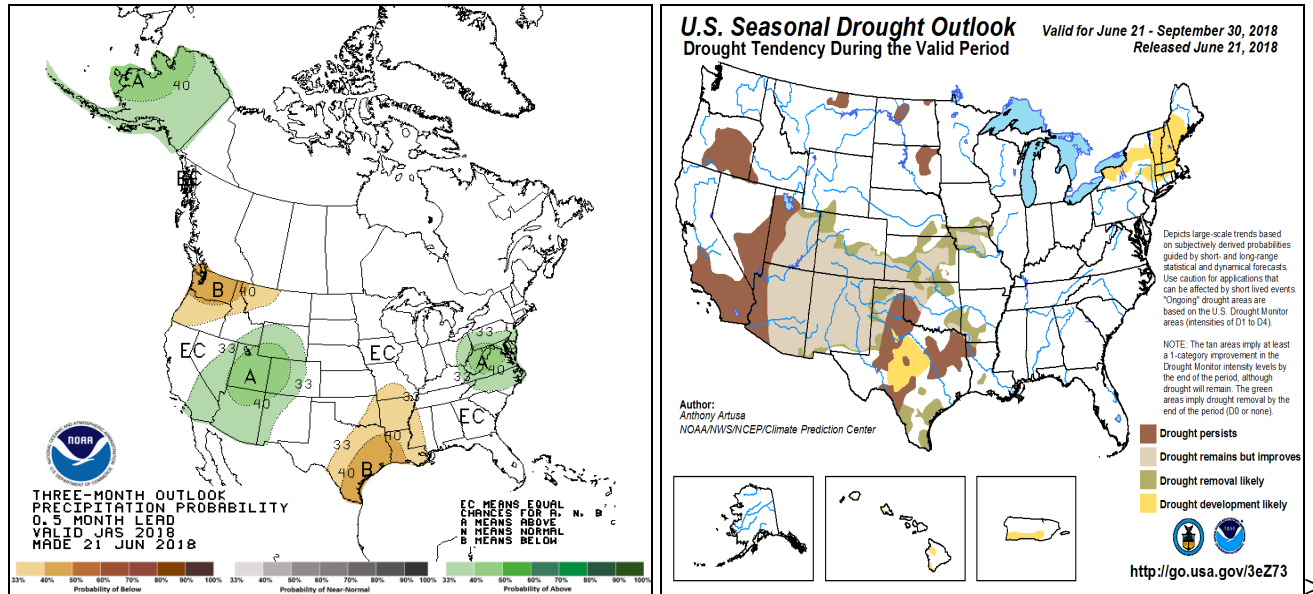
Permittees are allowed to graze on mountains early because there is no feed at lower elevations. Typically don't do this until July. Suffering with hot winds. Producers can't irrigate and there's no runoff. Wells are drying out or can't pump enough water out.

Outlook

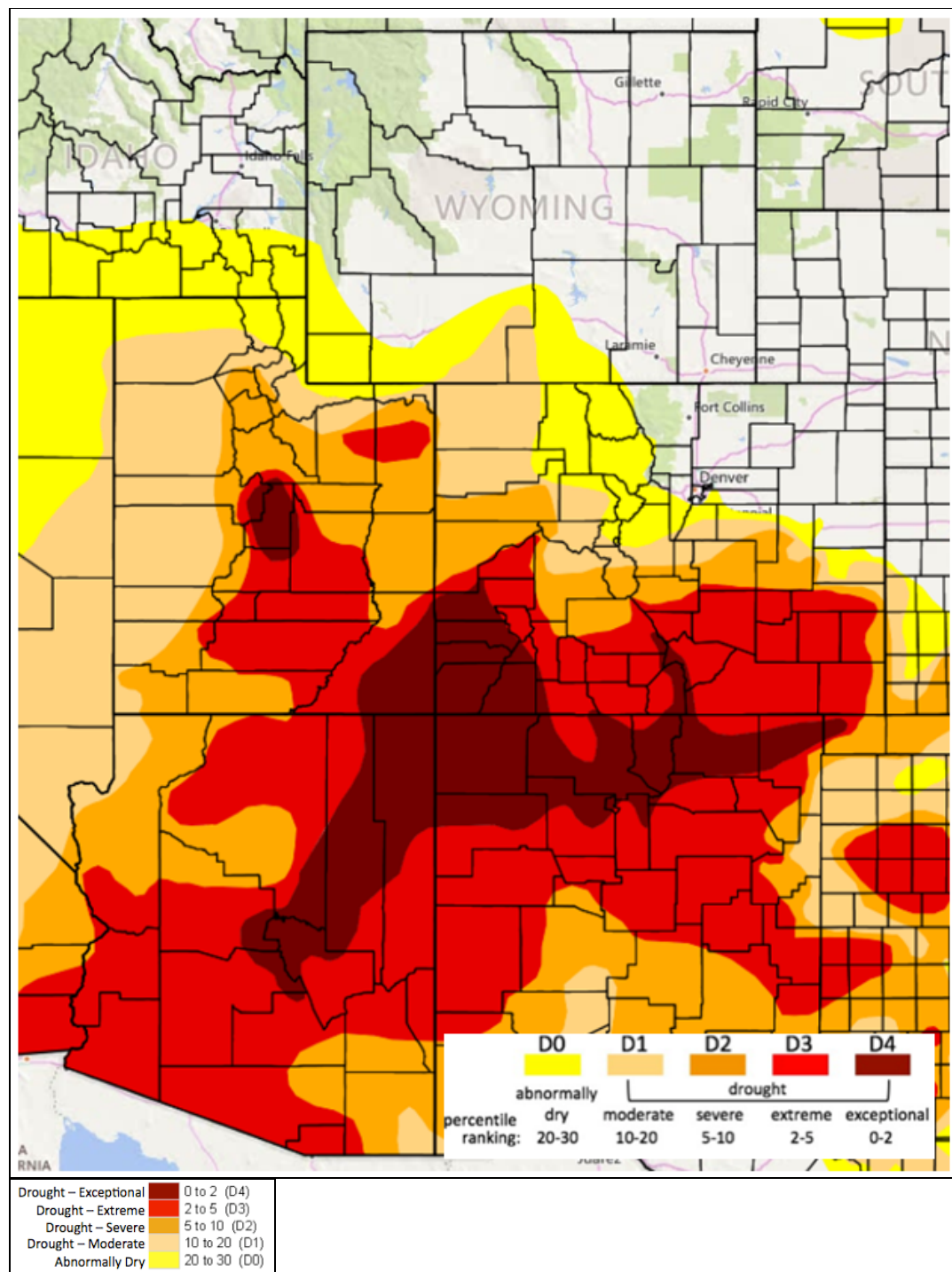


The top two images show Climate Prediction Center's Precipitation and Temperature outlooks for 8 - 14 days. The middle image shows the Weather Prediction Center's Quantitative Precipitation Forecast accumulation for seven days. The bottom left image shows the 3-month

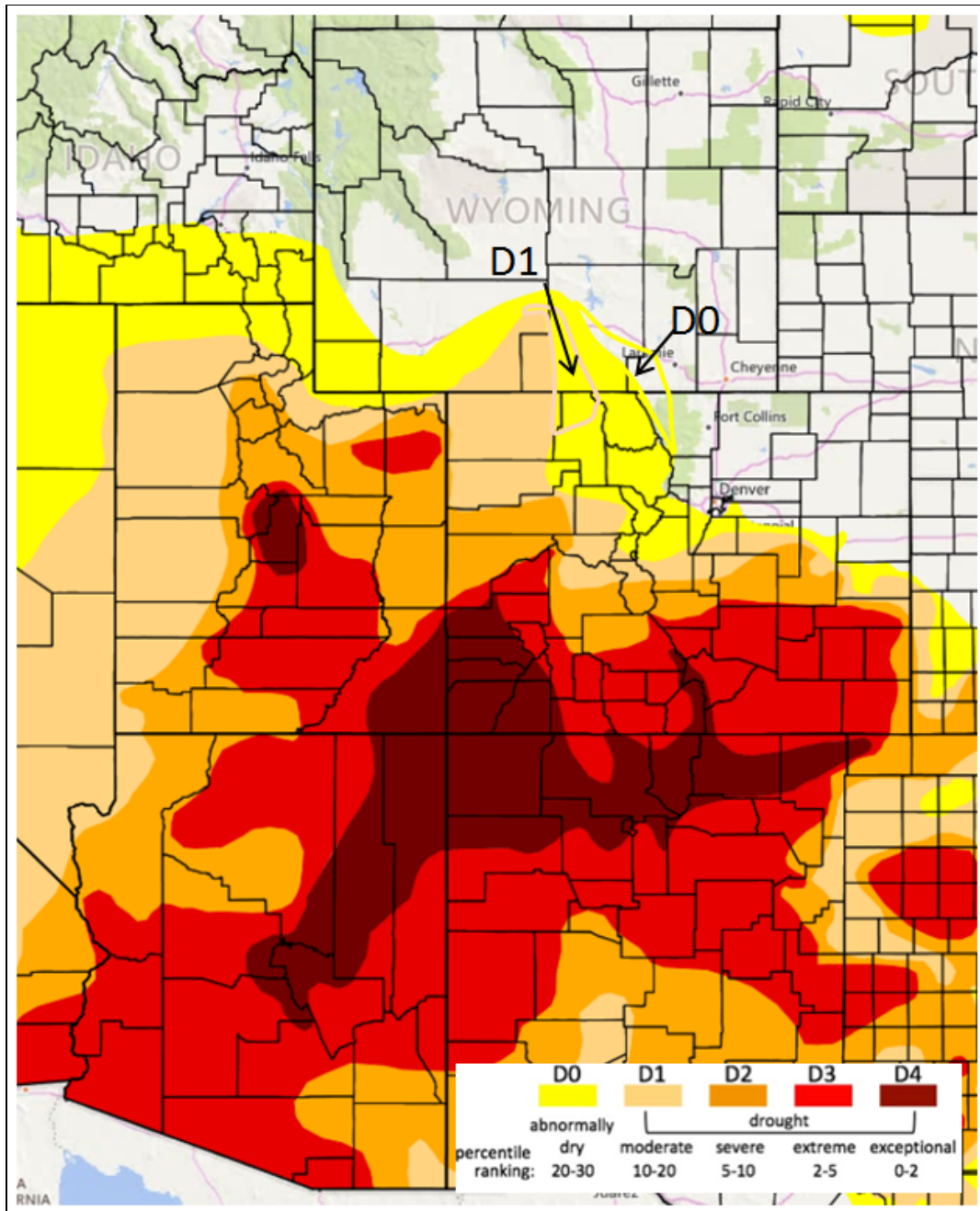
precipitation outlook from Climate Prediction Center, and the bottom right image shows the Climate Prediction Center's most recent release of the U.S. Seasonal Drought Outlook.



Summary and Recommendations



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 2 2018

Colorado is thirsty for a strong monsoon. The Spring Creek and 416 fires in southern Colorado have combined to burn over 100,000 acres of land, and are both top 10-ranking fires in terms of acres burned in the state's history. Denver tied its all time high temperature record last week at 105. There was a cool down over the weekend, but temperatures in the lower elevations are already climbing back into the 90s.

All precipitation accumulations in the Intermountain West over the past week have been east of the Upper Colorado River Basin and from Colorado Springs north into Wyoming. Most accumulation came in the form of concentrated thunderstorms; northeast Wyoming had some widespread rain.

At any rate, the areas of the Upper Colorado River Basin and eastern Colorado that need the moisture most missed out yet again.

62% of 7-day average streamflows in the Upper Colorado River Basin are running at below the 10th percentile. 7% are running at a record low level. Reservoir storage is well below normal for this time of year too. Lake Powell peaked earlier than normal this year at under 13 million acre feet. It's storing 73% of normal water levels for this time of year.

The week ahead brings promise for some orographically-generated thunderstorms, some of which could be strong in the San Juans and Sangre de Cristos. Heavy widespread moisture is unlikely. The 8-14 day outlook shows increased chances for above average moisture in the Four Corners Region, but increased chances of below average moisture on the eastern plains. Hotter than average temperatures are likely to persist.

Recommendations

UCRB: It is recommended that D1 be added to northern Routt County and extreme northwest Jackson County in Colorado, and to south-central and western Carbon County in Wyoming. This area has been hotter and drier than normal since April. The Badger Creek Fire in the area has burned over 20,000 acres.

It is recommended that D0 be extended into the western third of Larimer County in Colorado, and into southwest Albany and southeast Carbon County in Wyoming. 90-day SPIs have fallen mostly into the -0.5 to - 1.5 range in this area. Evaporative Demand has been above the 70th percentile for the last two months.

Eastern CO: Status quo (hot with enough moisture in the NE and hot with no moisture in the SE).