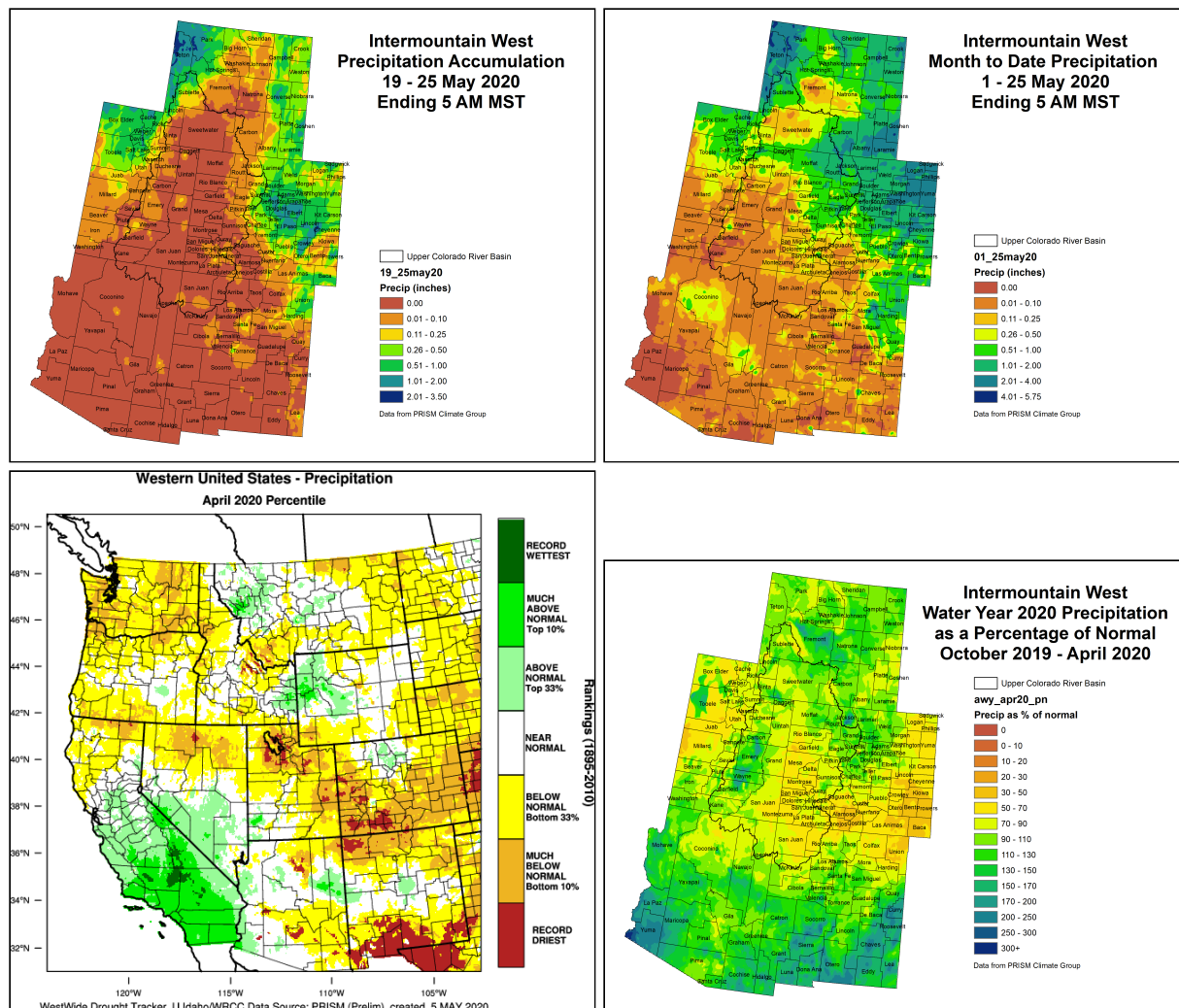


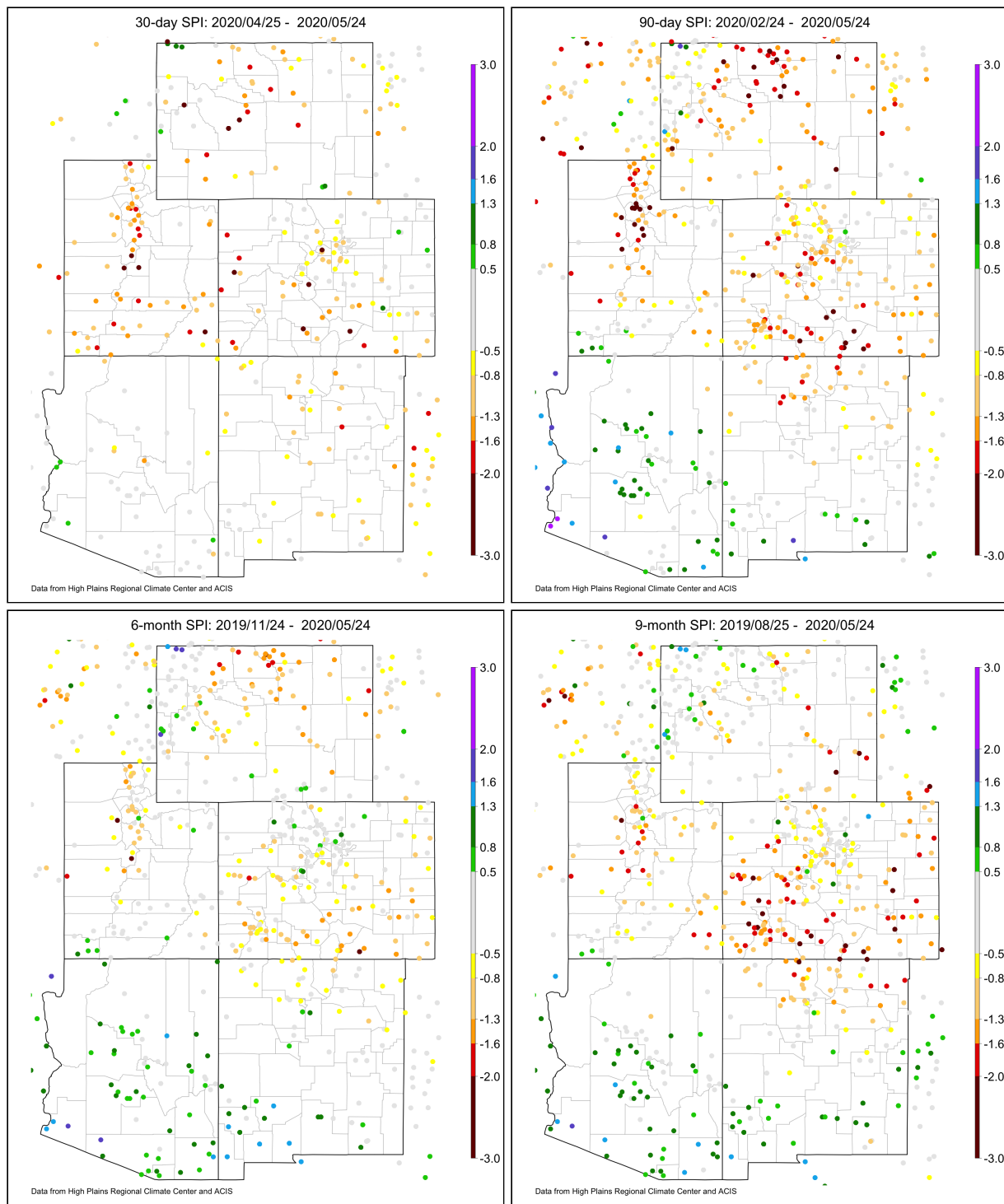
NIDIS Intermountain West Drought Early Warning System May 26, 2020

Precipitation



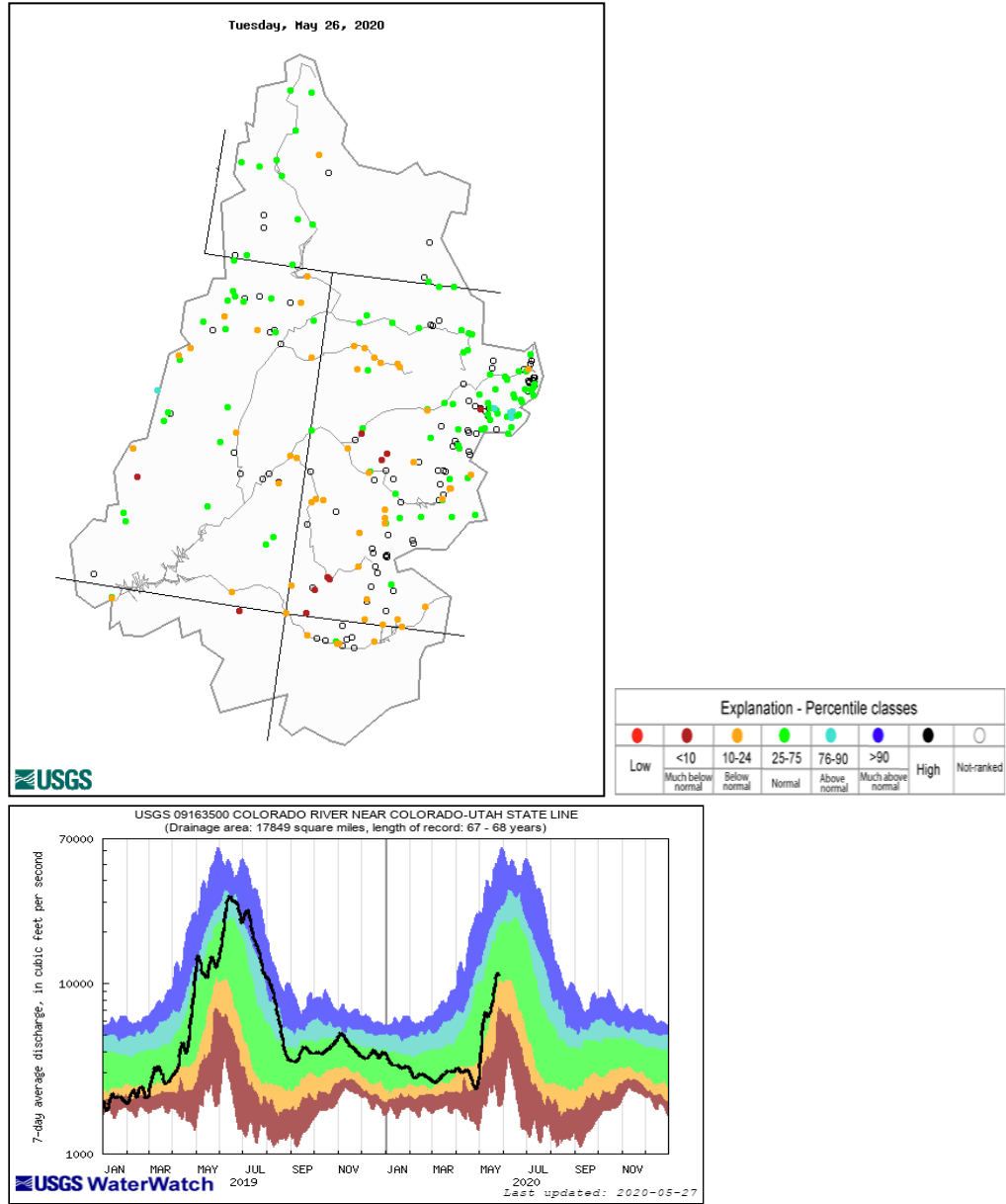
The images above use daily precipitation statistics from NWS COOP, CoCoRaHS, and CoAgMet stations. From top to bottom, and left to right: most recent 7-days of accumulated precipitation in inches; current month-to-date accumulated precipitation in inches; last month's precipitation as a percent of average;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

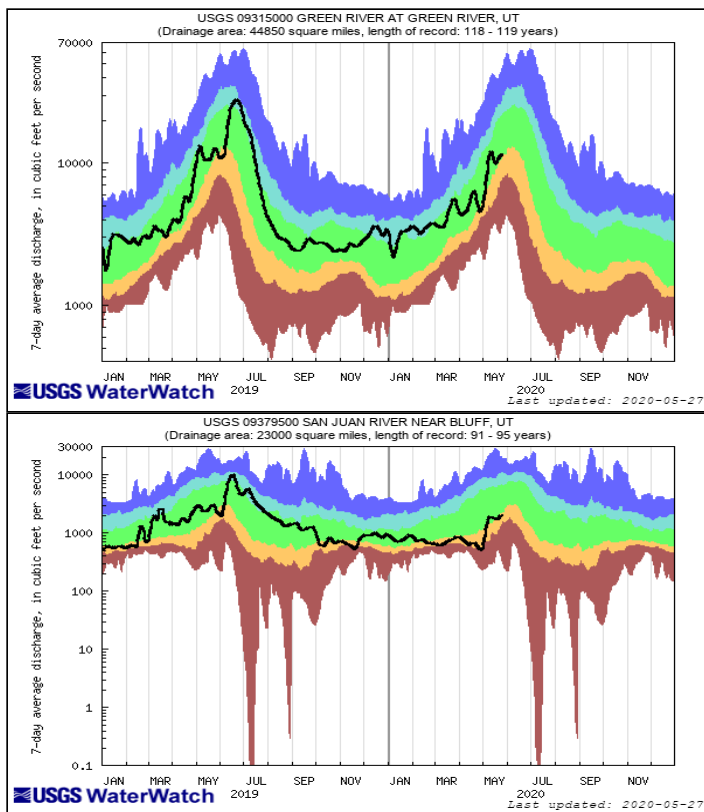
Standardized Precipitation Index



Standardized Precipitation Index standardizes precipitation accumulations for a specified time period into percentile rankings. Colors match the different drought categories with the U.S. Drought Monitor. 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.

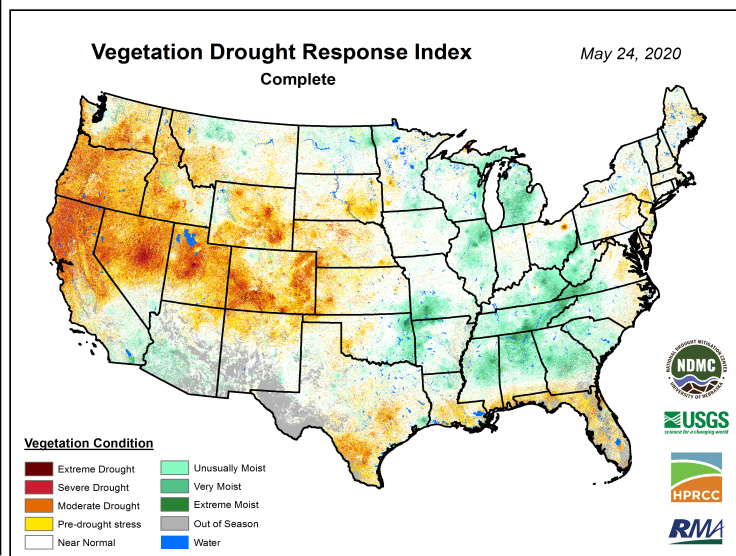
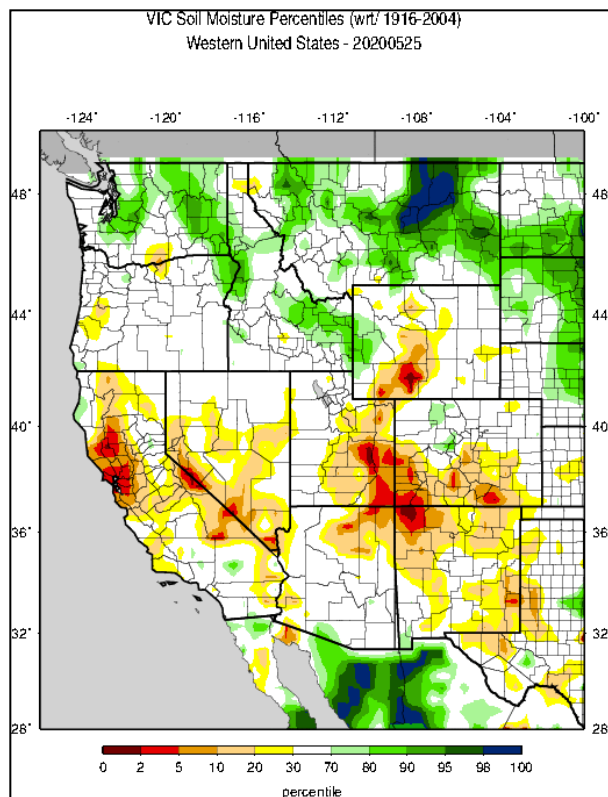
Streamflow





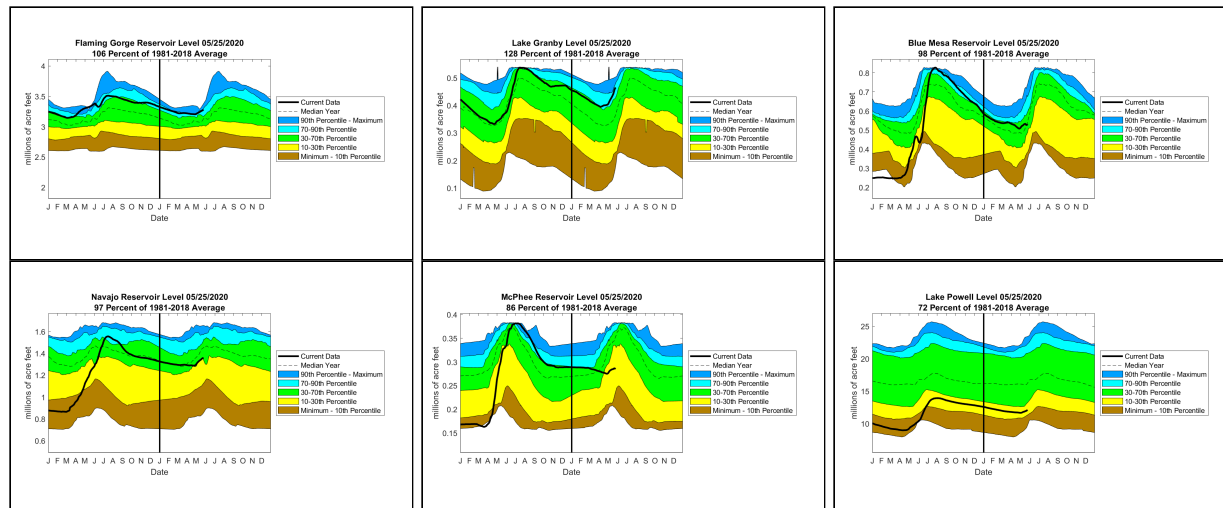
The top left image shows 7-day averaged streamflows as a percentile ranking across the UCRB. The top right image shows 7-day averaged discharge over time at three key sites around the UCRB: The Colorado River at the CO-UT state line; the Green River at Green River, UT; and the San Juan River near Bluff,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

Surface Water

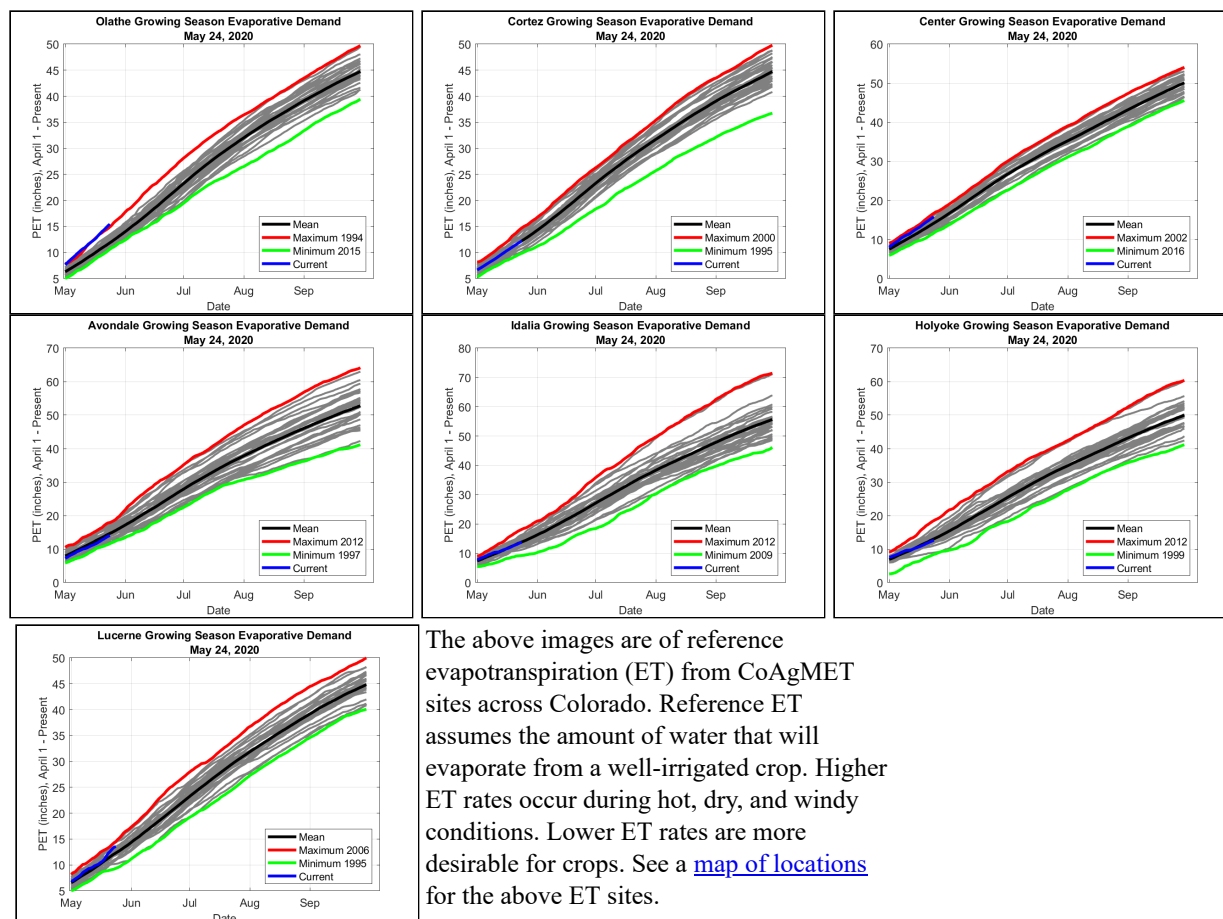


The top left image shows VIC modeled soil moisture as a percentile ranking. The top right image shows satellite-derived vegetation from the VegDRI product (which updates on Mondays).

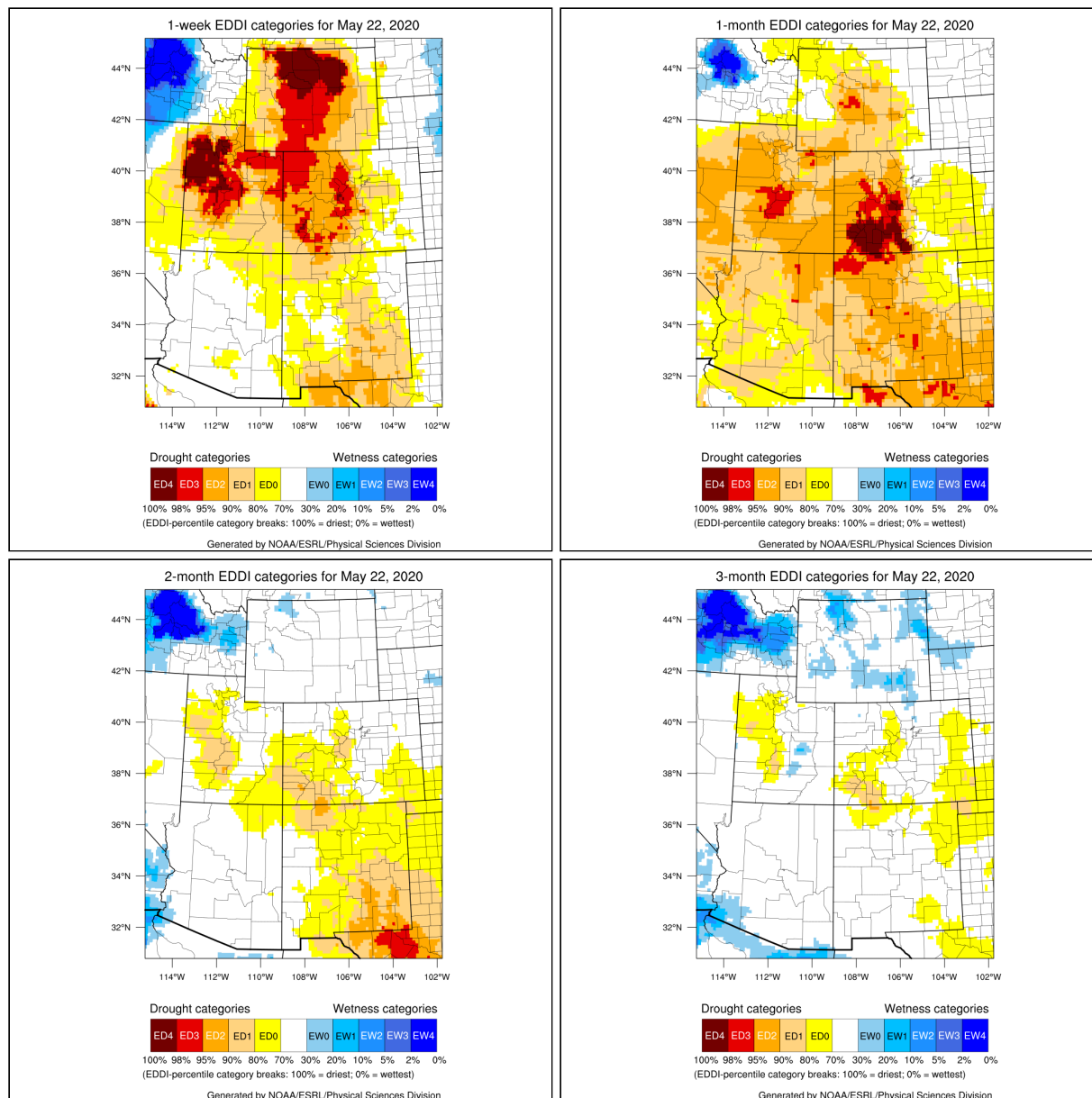
The graphs shown below are plots of reservoir volumes over the past full year and current year to date (black). The dashed line at the top of each graphic indicates the reservoir's capacity, and the background color-coded shading provides context for the range of reservoir levels observed over the past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

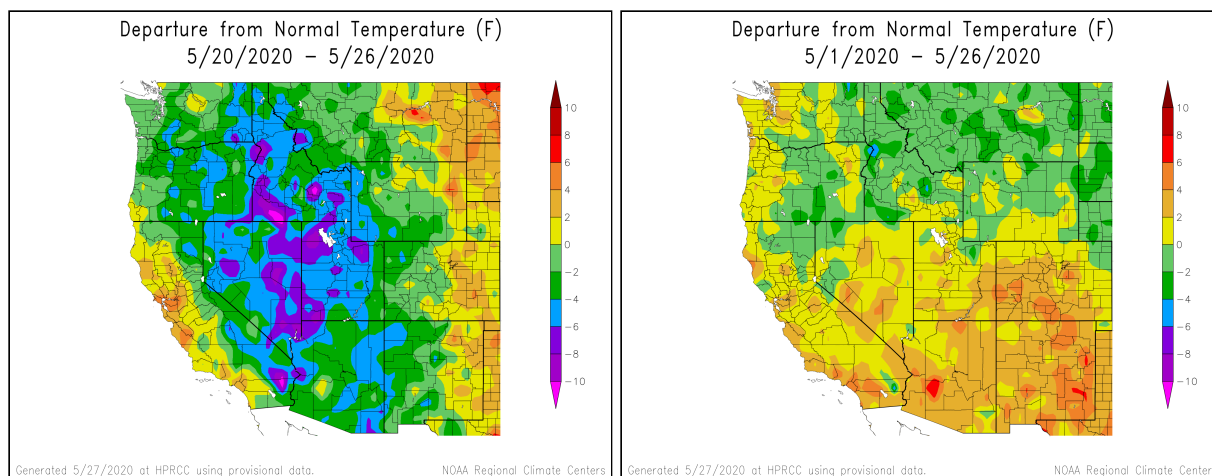


The above images are of reference evapotranspiration (ET) from CoAgMET sites across Colorado. Reference ET assumes the amount of water that will evaporate from a well-irrigated crop. Higher ET rates occur during hot, dry, and windy conditions. Lower ET rates are more desirable for crops. See a [map of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

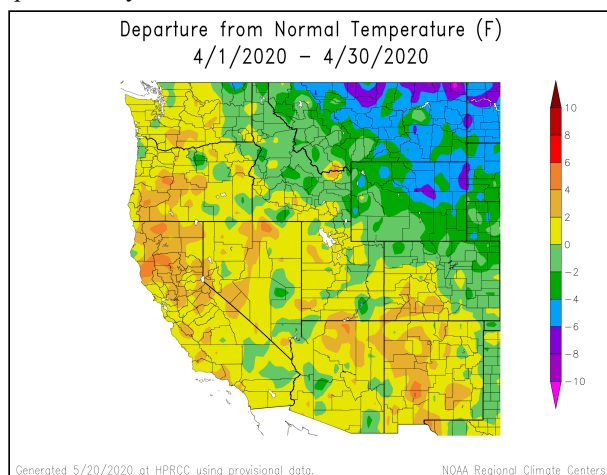


The above images are available courtesy of NOAA's Evaporative Demand Drought Index (EDDI). Drought classification listed is a function of the depth of reference evapotranspiration accumulated over a given period of record with respect to a climatology of 1981-2010. The drought categories displayed are 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.

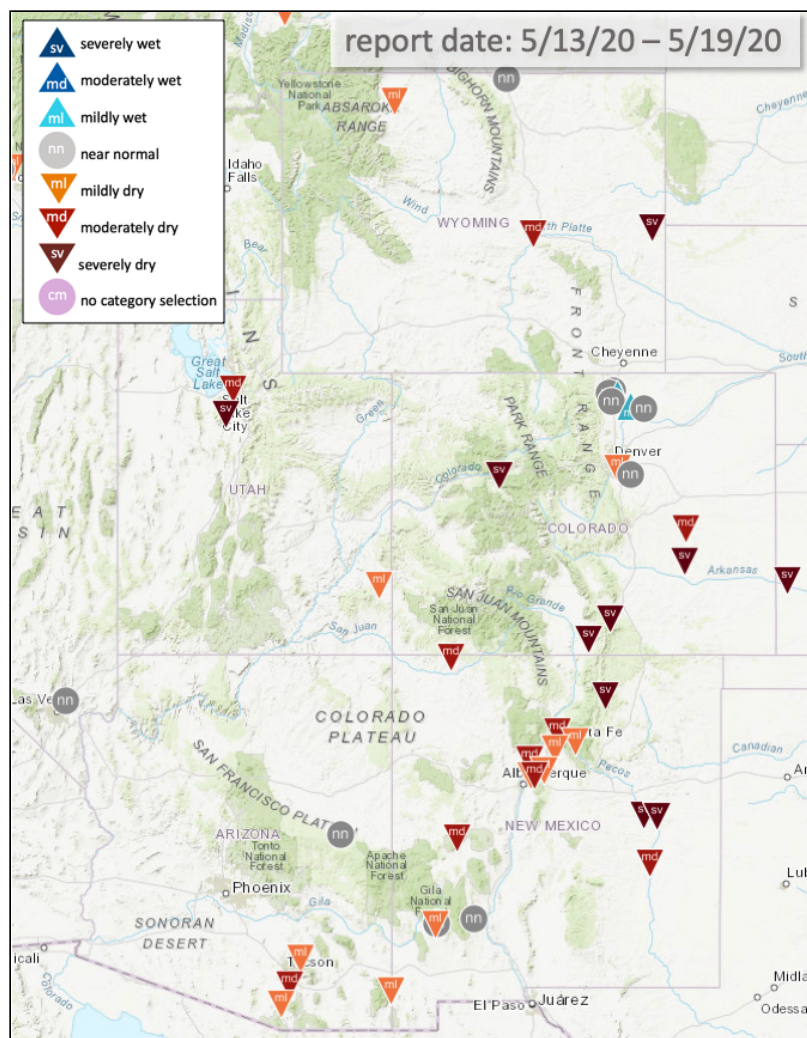
Temperature



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.

Walsenburg, CO

very little precipitation this past week and grass is not growing.

Otero County, CO

Very spotty precipitation. While lots fell in certain spots and was welcome, not enough. Need much more widespread moisture.

Kiowa County, CO

A lot of wind lately. Expecting a lot of acres of prevent plant because there isn't enough moisture to drill for corn and sorghum planting.

Lincoln County, CO

The wind has been really bad this year.

Baca County, CO

With the minimal showers they do get, the wind immediately picks up, blows it away, and there's no evidence of any moisture shortly after. 11,000 acre fire about 50% contained reported in eastern Las Animas County. Looks like the middle of winter.

Cortez, CO

Pretty similar situation to the eastern side of the state, although the wind does seem to be calming down right now.

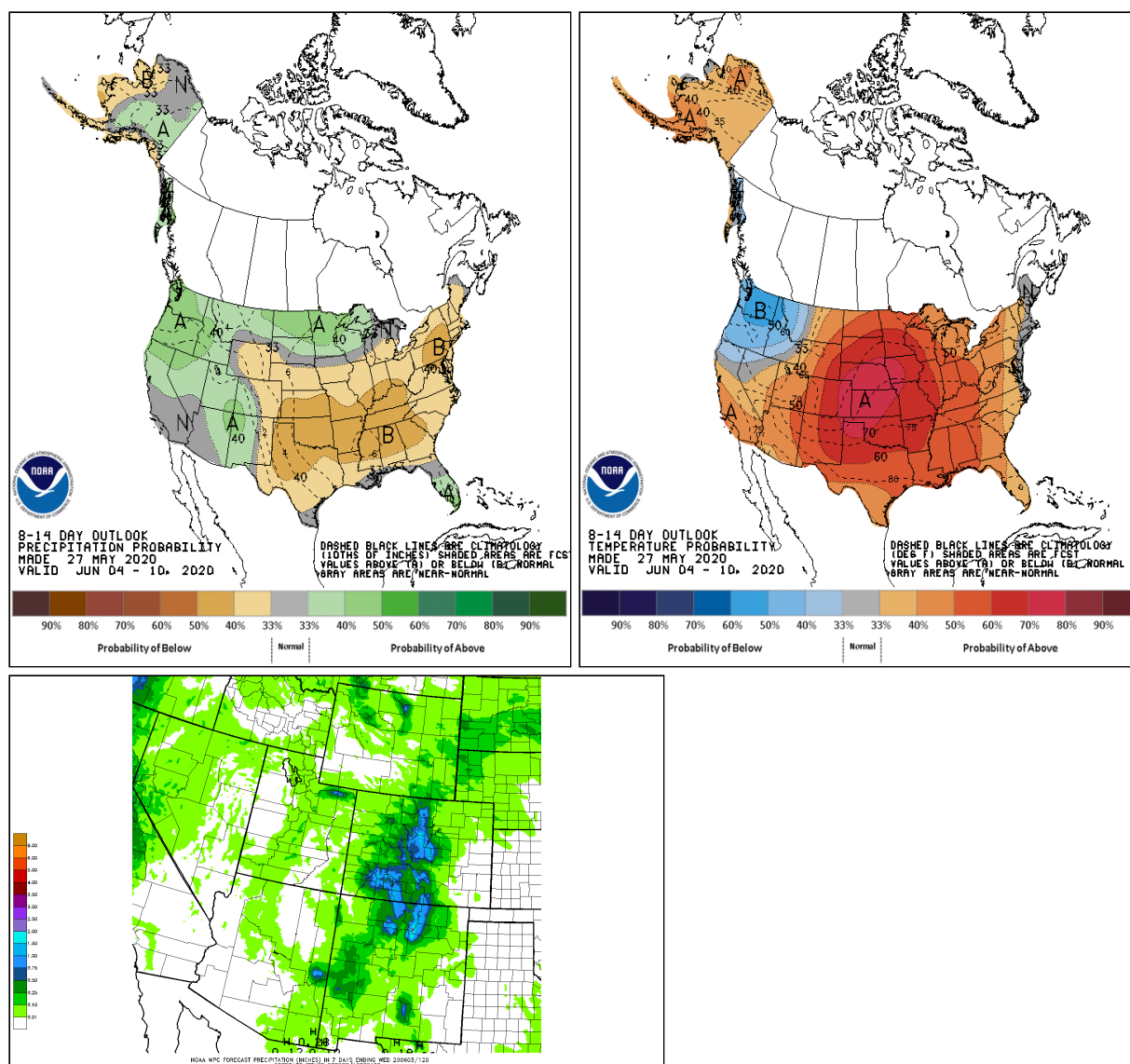
Southwest UT

reservoirs are full, but the runoff from this year is now gone. Starting to dry out very quickly and quite a few fires recently.

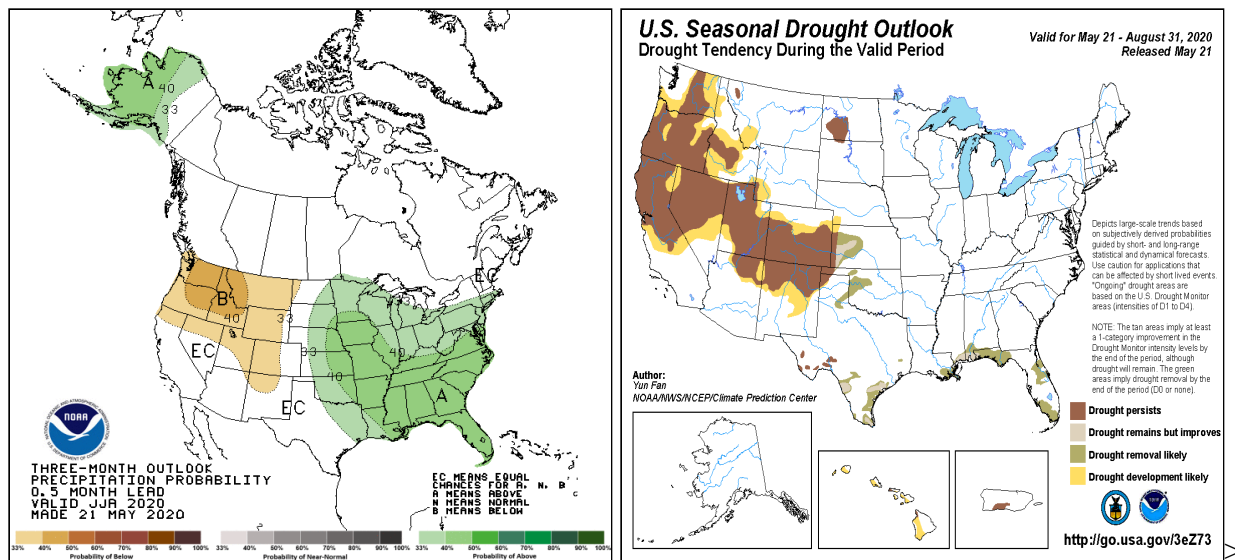
Central UT

Hauling water and grass. Producers that are on the range are having to come off the range because of lack of forage. Eastern side of the state has still been hauling water, but running out of forage and may have to come off the range soon too. Irrigators relying on snowmelt and rangelands are experiencing much more rough conditions.

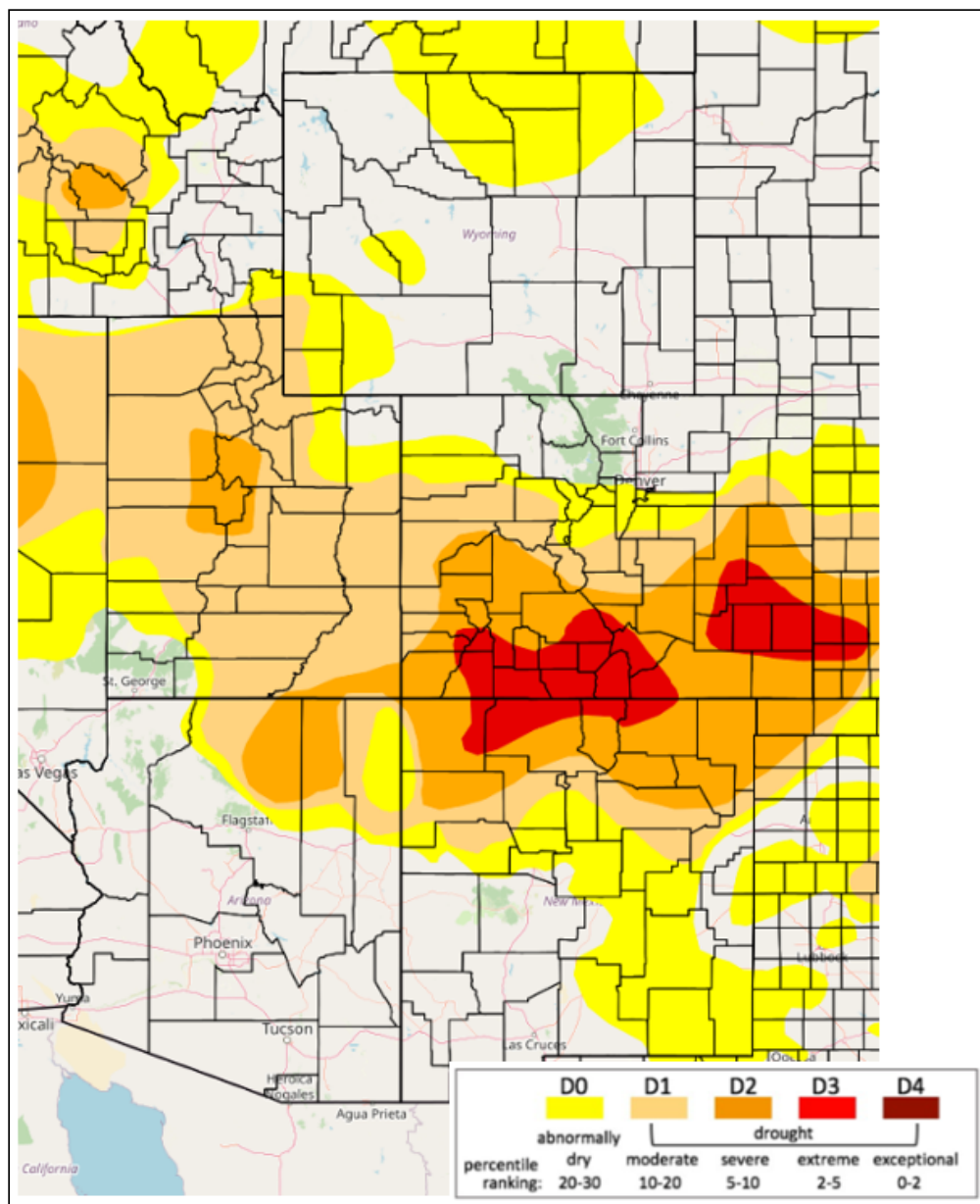
Outlook



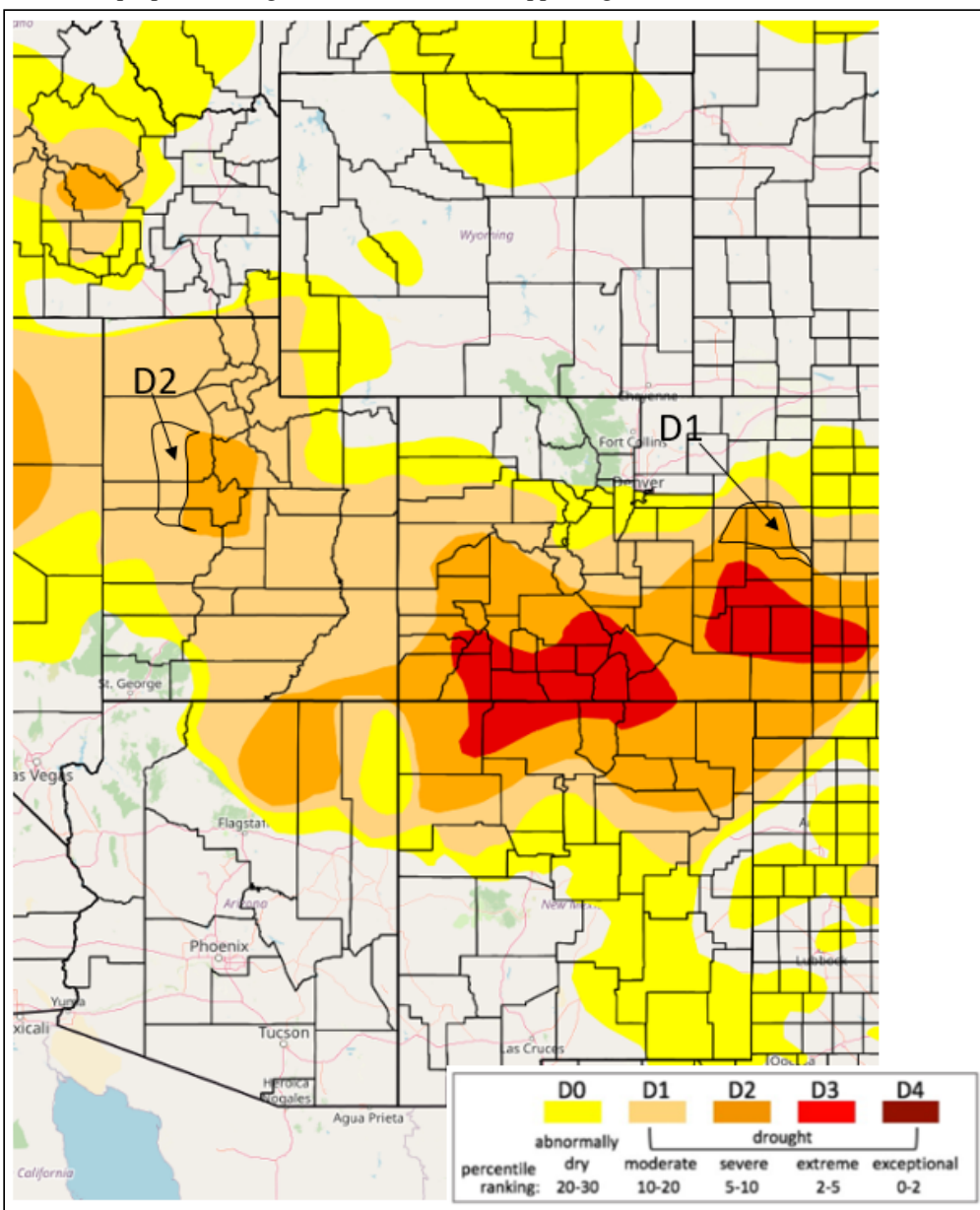
The top two images show Climate Prediction Center's Precipitation and Temperature outlooks for 8 - 14 days. The middle image shows the Weather Prediction Center's Quantitative Precipitation Forecast accumulation for seven days. The bottom left image shows the 3-month precipitation outlook from Climate 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: May 26, 2020

The previous week's weather was true to early summer form over the Intermountain West. The Colorado River watershed stayed dry save for the far northern reaches of the Upper Green Basin. Areas east of the Continental Divide received several rounds of showers, amounting to 0.50-1.00" of moisture. Isolated severe storms struck southeast Colorado last Tuesday and Thursday, the 19th and 21st. More widespread moisture hit eastern Colorado on Sunday the 24th. Temperatures stayed cooler than normal for the Upper Colorado River Basin, but it was a warm week for the Eastern Plains, with temperatures anywhere from 2-8 degrees above normal.

While the Arapahoe Basin Ski Resort is reopening, this move is not reflective of the broader snowpack scenario. Northern basins, such as the South Platte and Yampa/White watersheds, are holding onto normal snowpack for this time of year. Over 90% of the season's peak snowpack has already melted from SNOTEL measurement sites in the San Juan and Rio Grande Basins. As we reach peak streamflow season, we are seeing a mix of above and below normal

flows. Streamflows are below normal on the San Juan and Gunnison River Channels. This is troubling, since these areas have nearly no snowpack remaining at SNOTEL sites. Reservoir storage is falling into the below normal range in southwest Colorado as well.

While recent moisture in eastern Colorado is helpful, long-term drought indicators, and vegetative health indices are still painting a grim picture over much of the region. The Vegetative Drought Response Index is showing moderate-to-severe drought conditions across all of southern and eastern Colorado, all of northern and central Utah, and now, much of Wyoming as well. Field condition reports are also discouraging, particularly in areas where severe drought already exists. Impacts include dry soils, lack of green vegetation, inability to drill and plant crops, and cattle being taken to auction early.

The seven-day precipitation outlook shows some shots for moisture mainly over the high terrain. This moisture will come in the form of thunderstorms. Temperatures are forecasted to be well above normal as high pressure air builds over the region. Both medium and long-range outlooks suggest increased chances for above normal temperatures across the region with less certainty with regards to precipitation.

Recommendations:

Colorado: It is recommended that D2 be removed in northeast Lincoln County, western Kit Carson County, and northeast Cheyenne County. NE CO has experienced 2.00-4.00" of rainfall for the month of May to date. May is one of the wettest months on average in NE CO, so near-to-above normal precipitation improves the situation. Long-term SPIs are still dry. Rains in southeastern Colorado helped stave off further deterioration, but did not lead to widespread or long-lasting vegetation recovery.

Utah: The Utah drought group met last week, and is in favor of extending D2 westward in Jaub, Tooele, and Millard Counties. These recommendations are well supported by precipitation indicators. 90-day SPIs here range from D2-D4; 12-month SPIs range from D0-D2.

Wyoming: We are not making any official recommendations here, but have noticed some discouraging rangeland reports in eastern Wyoming. The notion that some forage production losses are already "baked in" due to recent dry conditions appears to be supported by Grasscast.