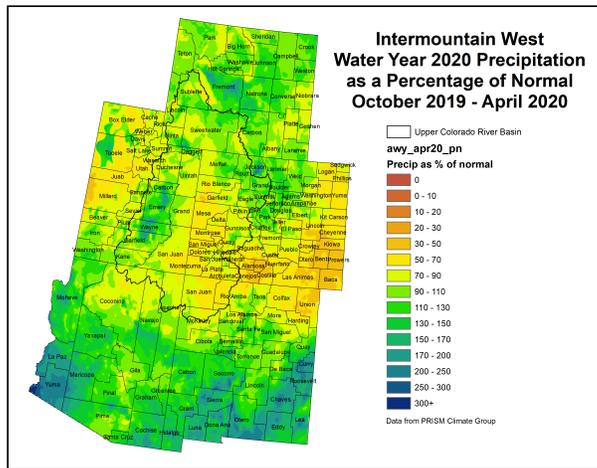
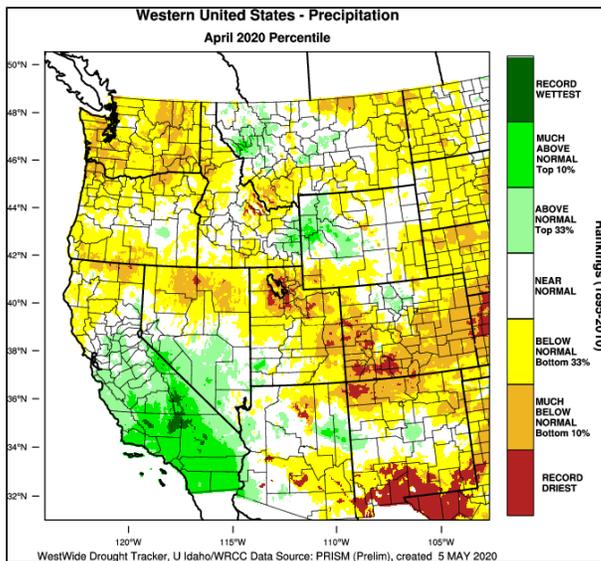
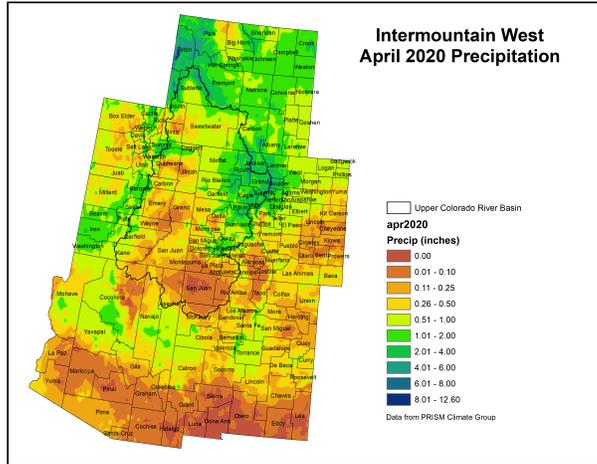
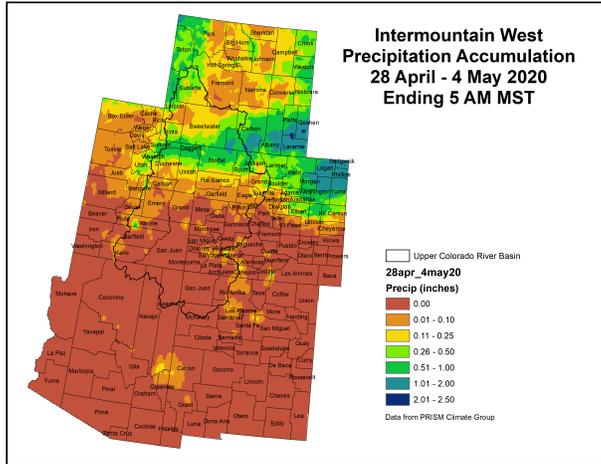


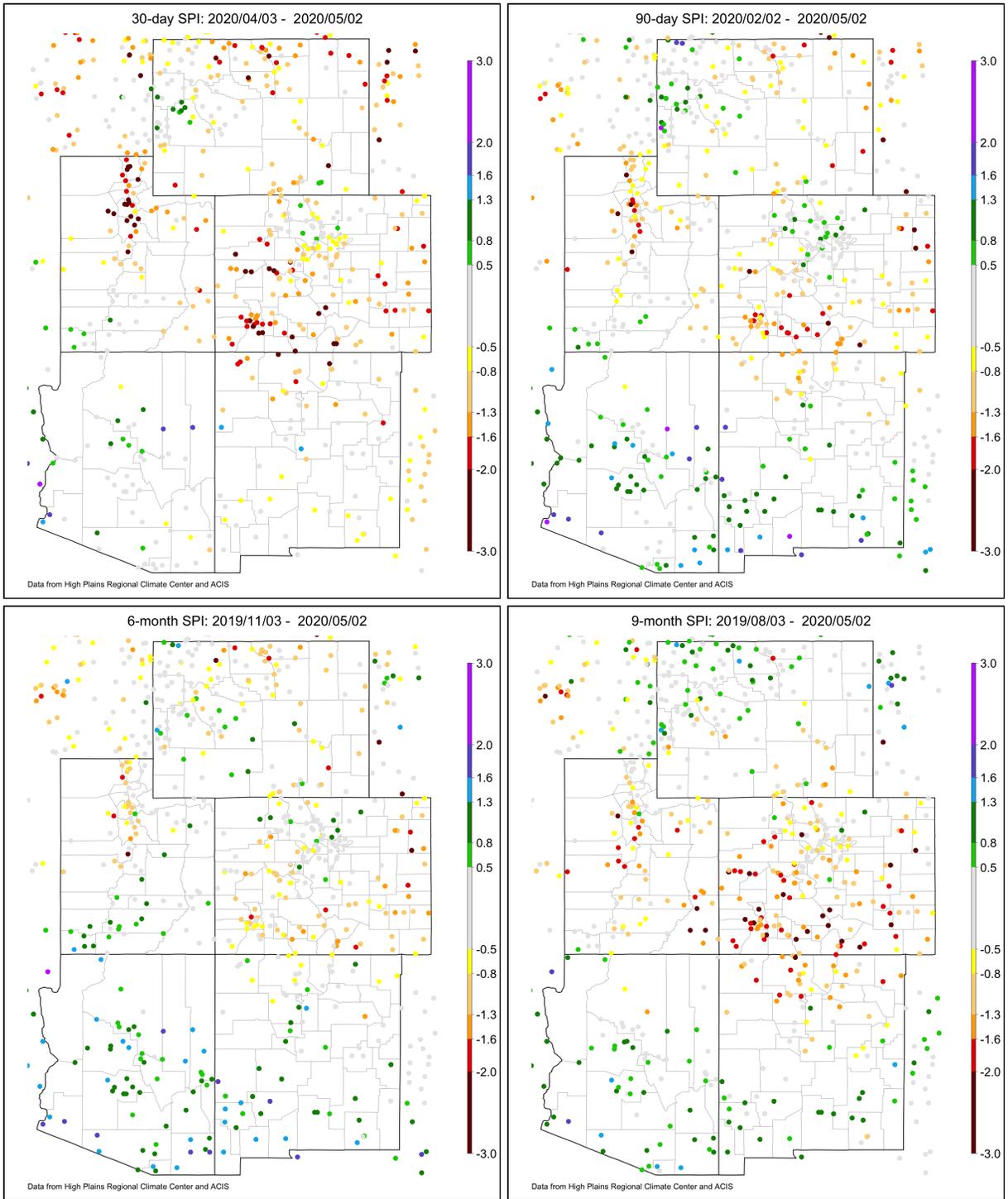
NIDIS Intermountain West Drought Early Warning System May 5, 2020

Precipitation



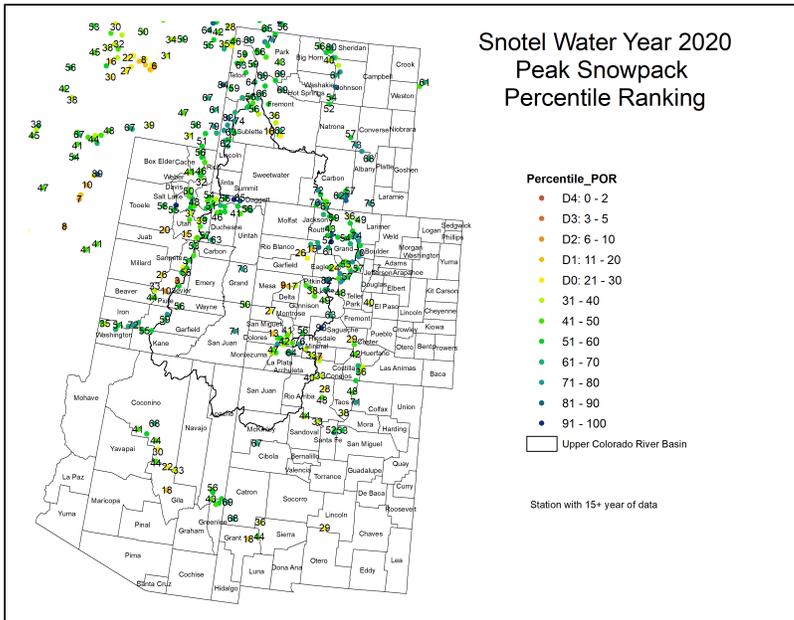
The images above use daily precipitation statistics from NWS COOP, CoCoRaHS, and CoAgMet stations. From top to bottom, and left to right: most recent 7-days of accumulated precipitation in inches; current month-to-date accumulated precipitation in inches; last month's precipitation as a percent of average;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

Standardized Precipitation Index

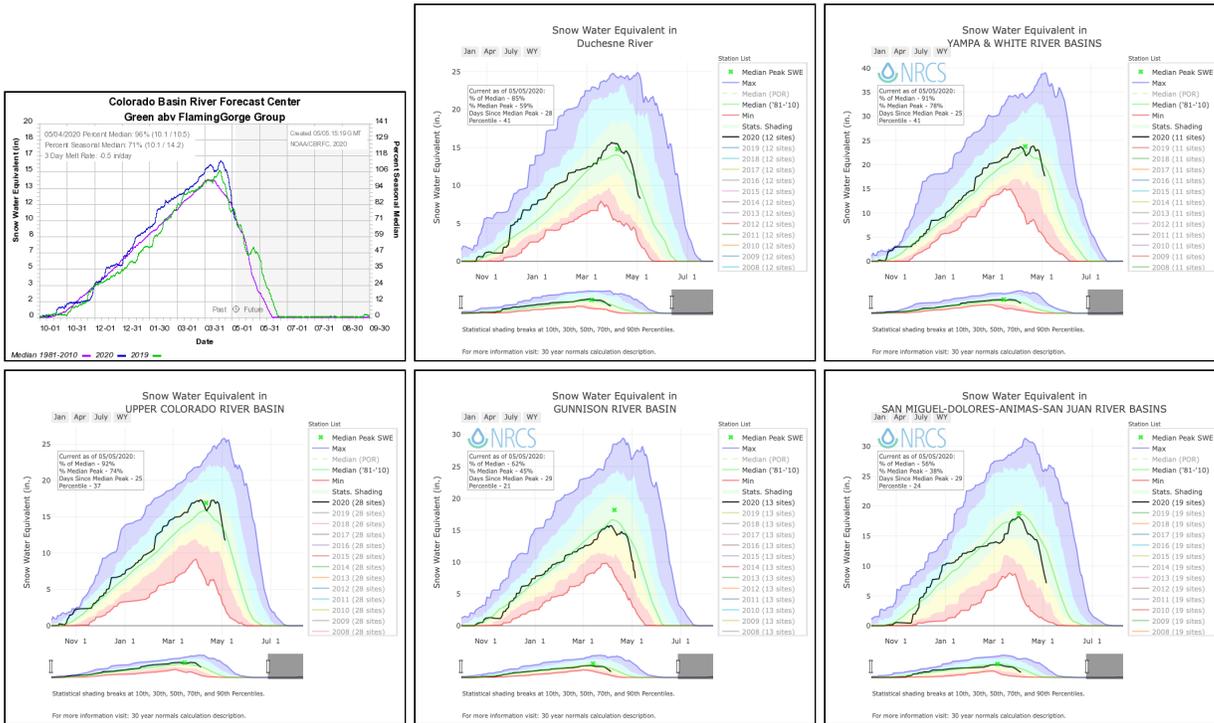


Standardized Precipitation Index standardizes precipitation accumulations for a specified time period into percentile rankings. Colors match the different drought categories with the U.S. Drought Monitor. 30- and 60-day SPIs focus on short-term conditions while 6- and 9-month SPIs focus on long-term conditions. SPI data provided by High Plains Regional Climate Center.

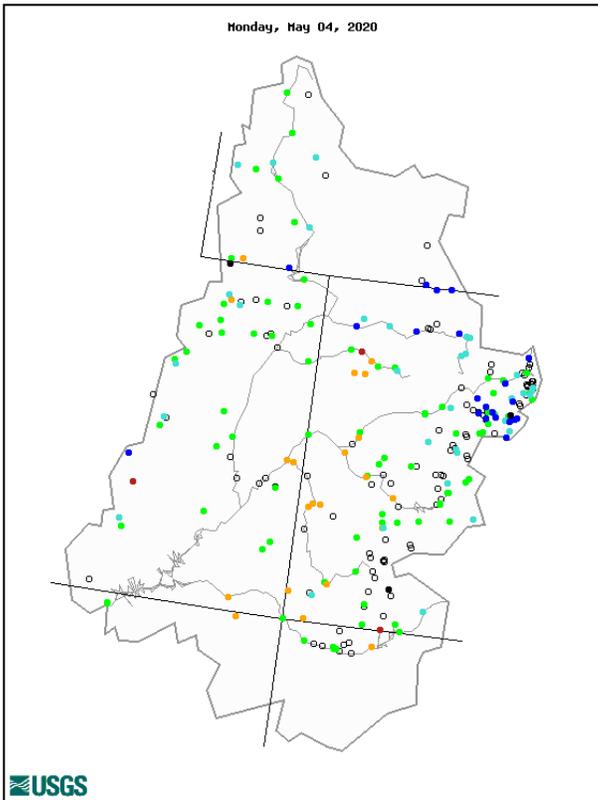
Snotel and Snowpack



The above image shows SNOTEL snowpack percentiles for each SNOTEL site in the Intermountain West. 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).

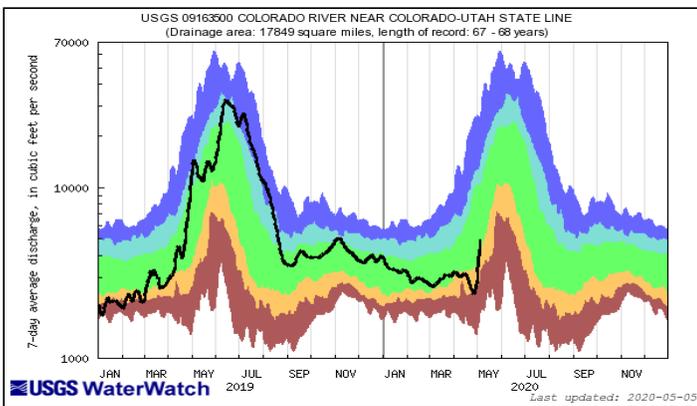


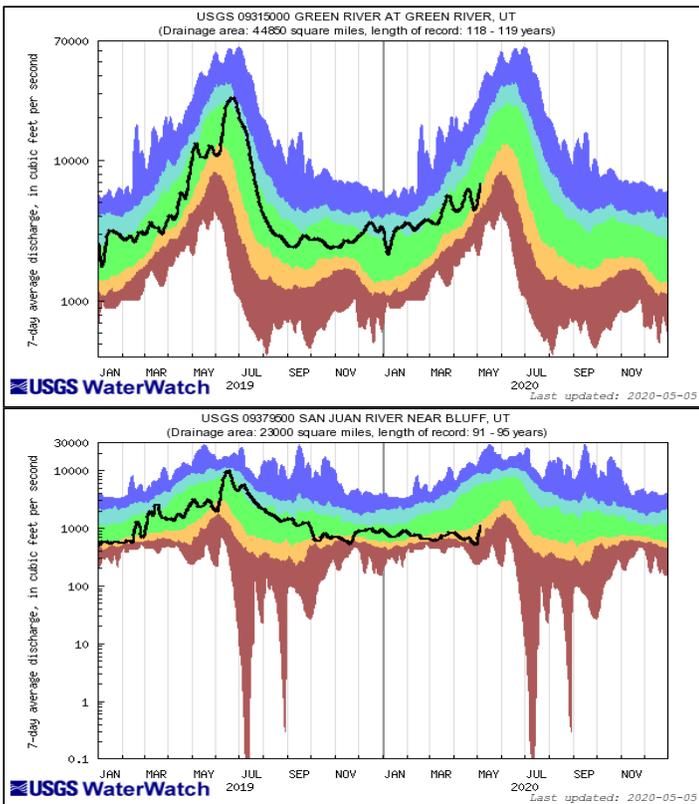
Streamflow



Explanation - Percentile classes

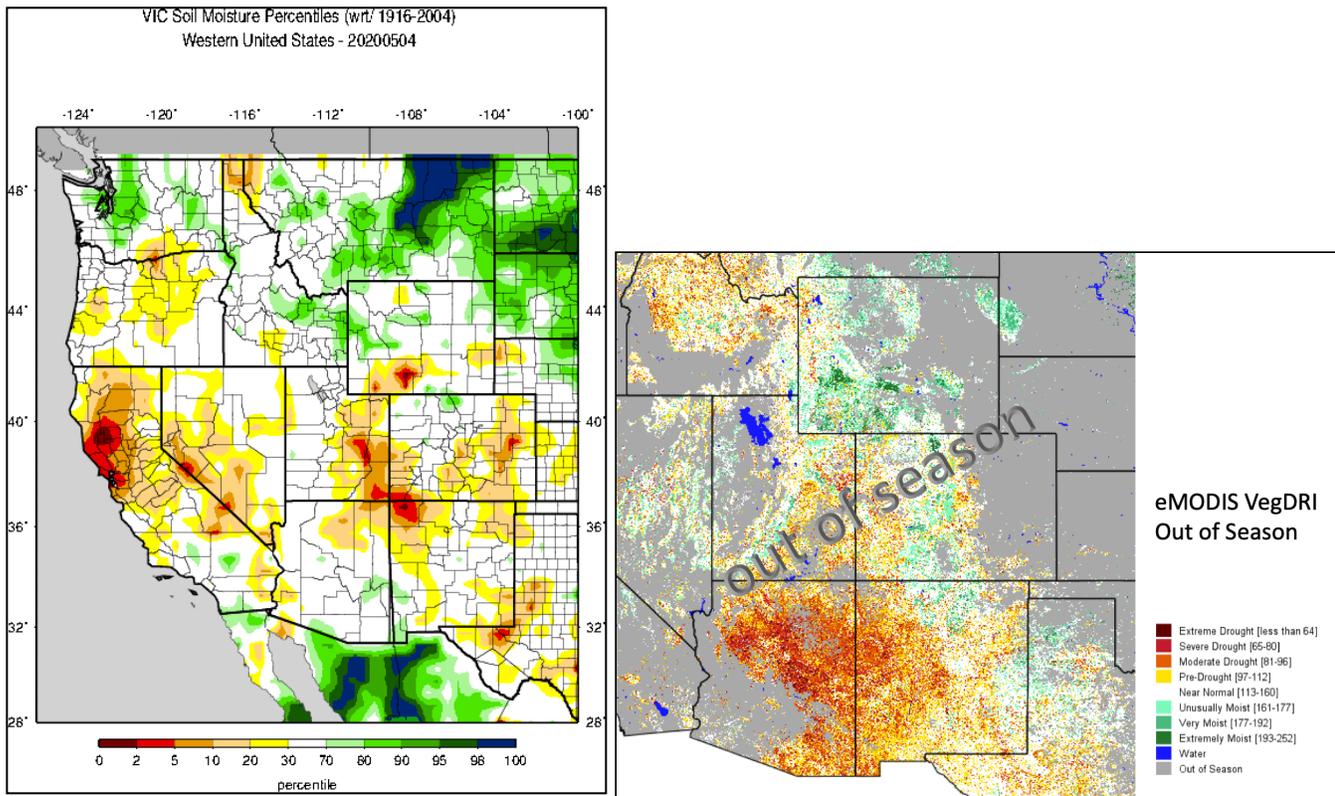
●	●	●	●	●	●	○
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	Not-ranked





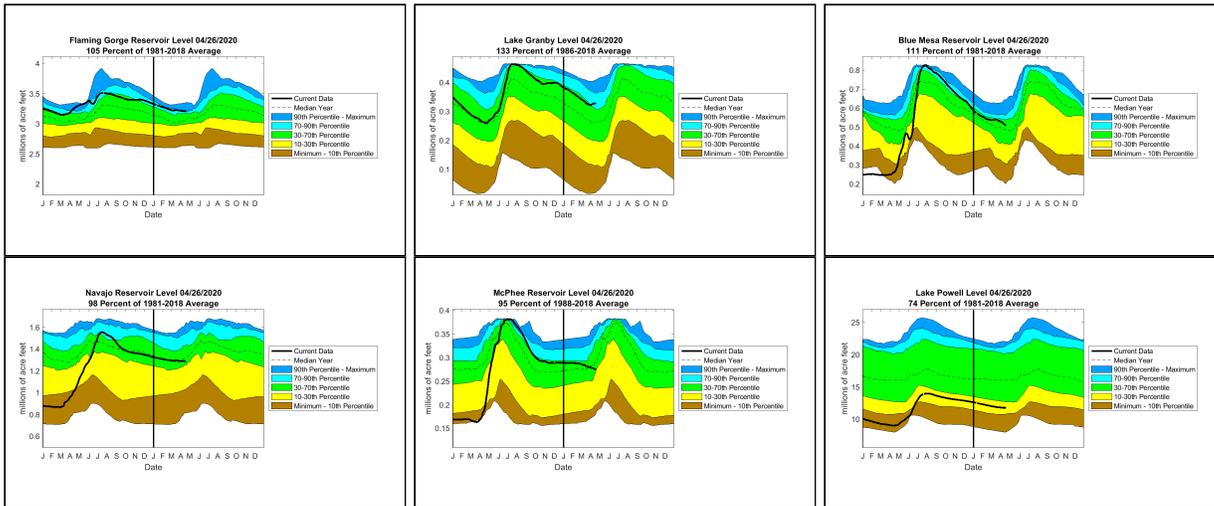
The top left image shows 7-day averaged streamflows as a percentile ranking across the UCRB. The top right image shows 7-day averaged discharge over time at three key sites around the UCRB: The Colorado River at the CO-UT state line; the Green River at Green River, UT; and the San Juan River near Bluff,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

Surface Water

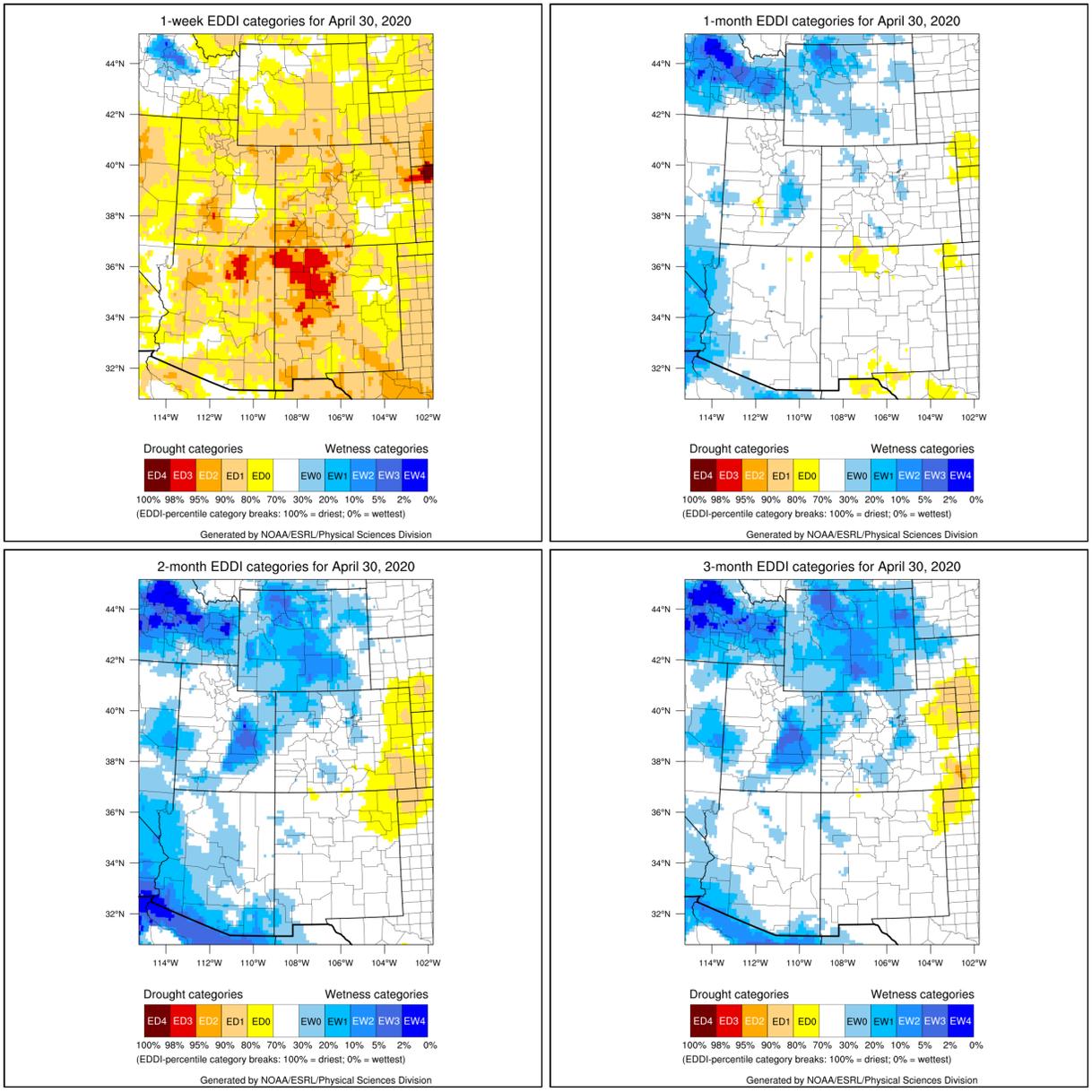


The top left image shows VIC modeled soil moisture as a percentile ranking. The top right image shows satellite-derived vegetation from the VegDRI product (which updates on Mondays).

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.

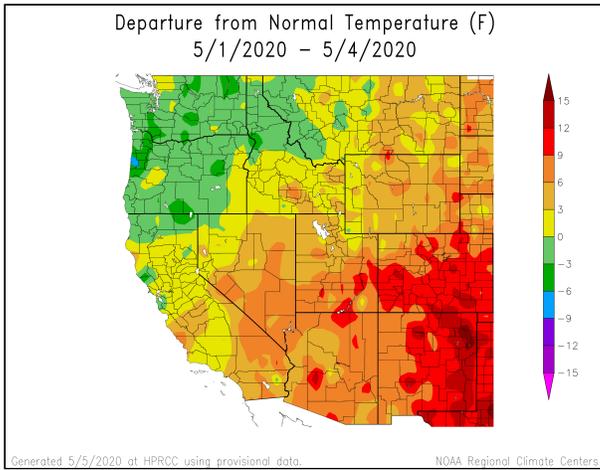
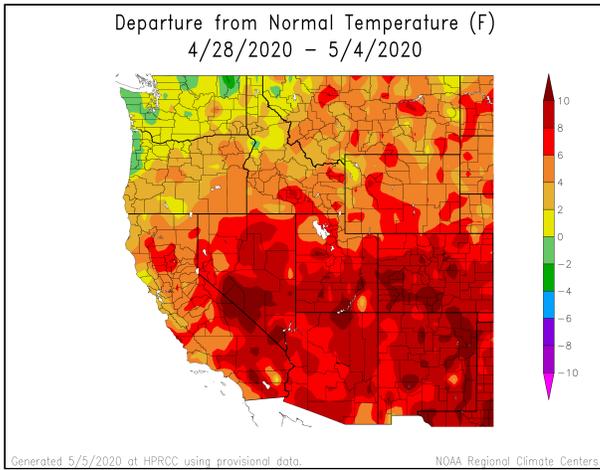


Evaporative Demand

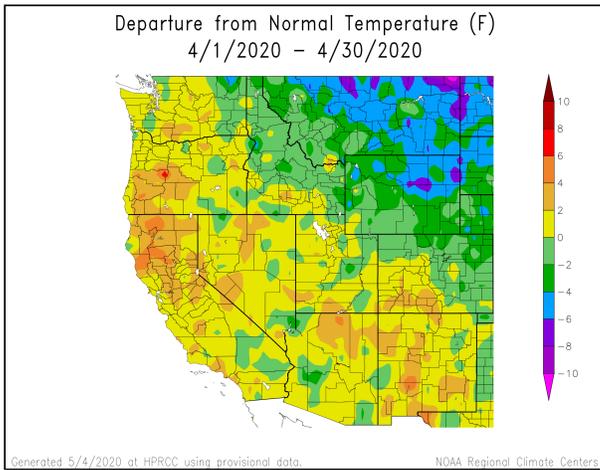


The above images are available courtesy of NOAA’s Evaporative Demand Drought Index (EDDI). Drought classification listed is a function of the depth of reference evapotranspiration accumulated over a given period of record with respect to a climatology of 1981-2010. The drought categories displayed are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

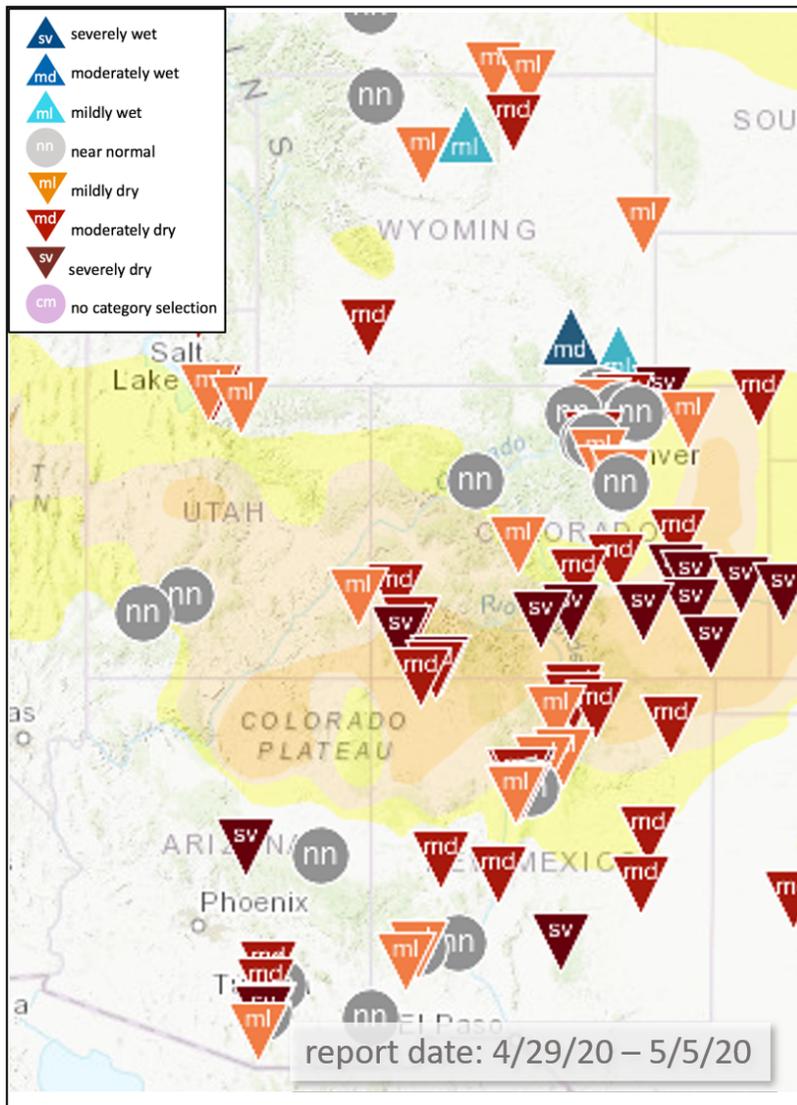
Temperature



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.

Rocky Ford: waiting for rain. Everything is going backwards. Grass. Producers are looking at no grass so far. 70k acre grazing allotment that has decided not to turn cattle in.

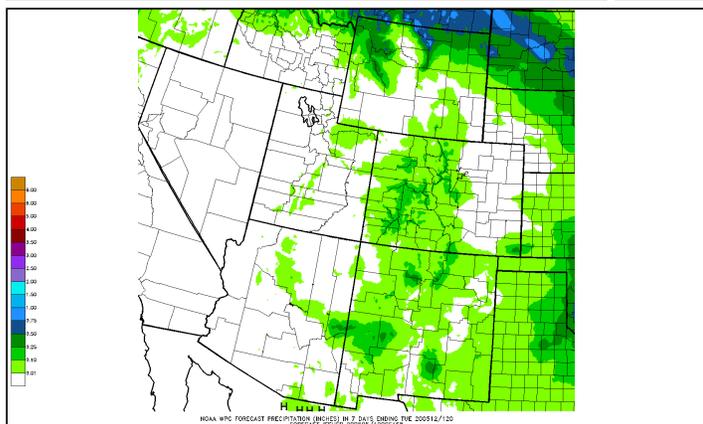
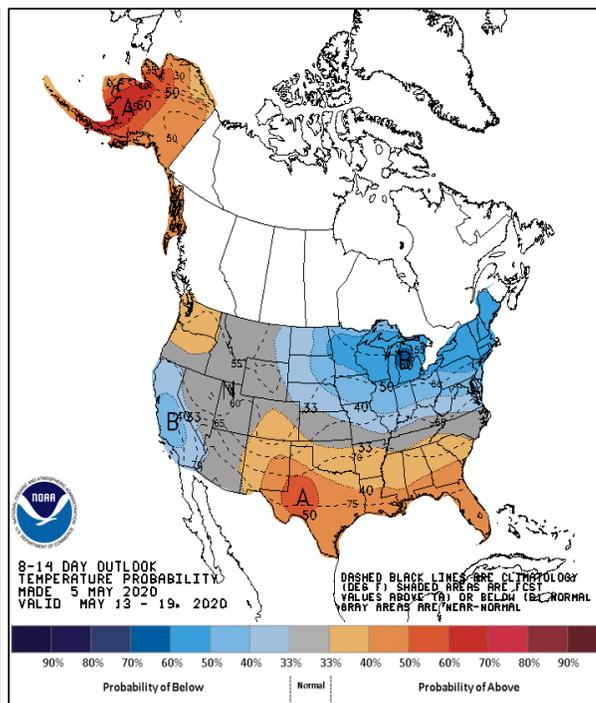
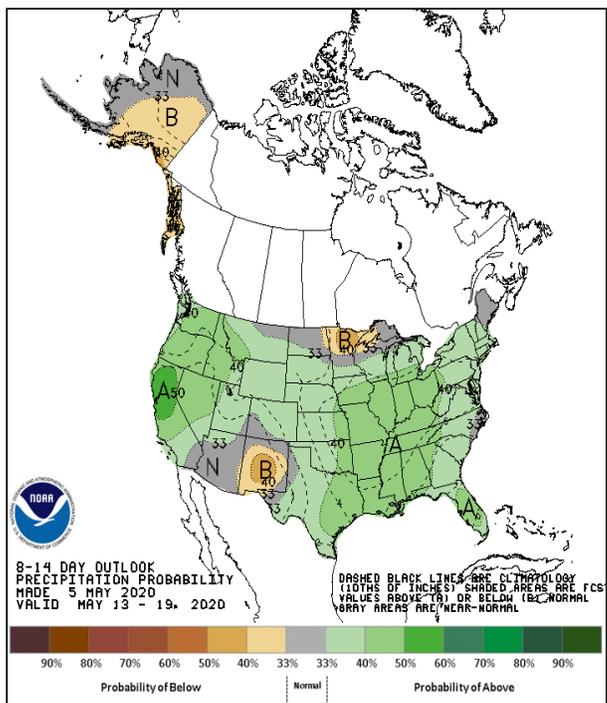
Lamar: no greening of grass. Weeds are struggling to grow. Wheat looks horrible. Lots of dust storms.

Bent County: numerous fires, struggle to get them put out.

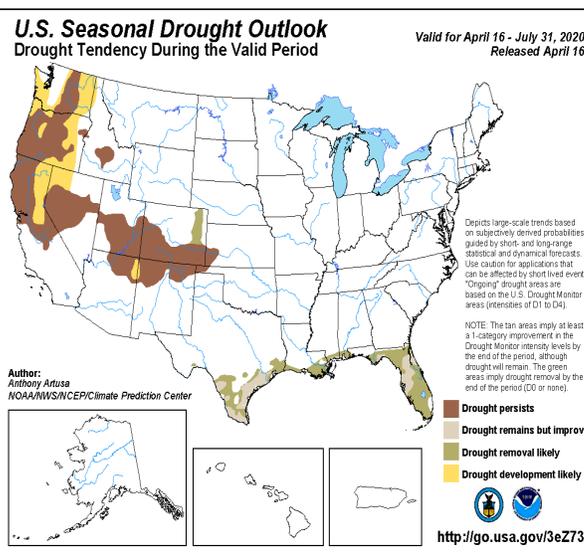
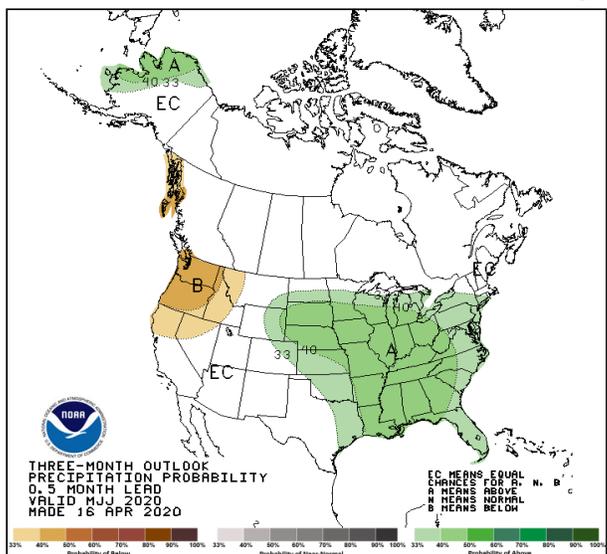
Durango: nothing has changed. Things aren't greening up. Everything south is bone dry. North lower elevations (below 9000 ft) is dry. Concerning. Peak runoff coming soon. The Animas was at 500 cfs 2 weeks ago, half of median, and in one week it jumped to 1200, now it's at 2300 every day. Maybe 3 or 4 weeks of good flows and then it will be done.

Utah: Millard/Tooele and it is really dry. Unless you were in high elevations, the grass didn't green up. Cows hadn't turned out all spring because it didn't green up. April scared us. Very dry. Farmers digging 3 feet down in fields before hitting moisture.

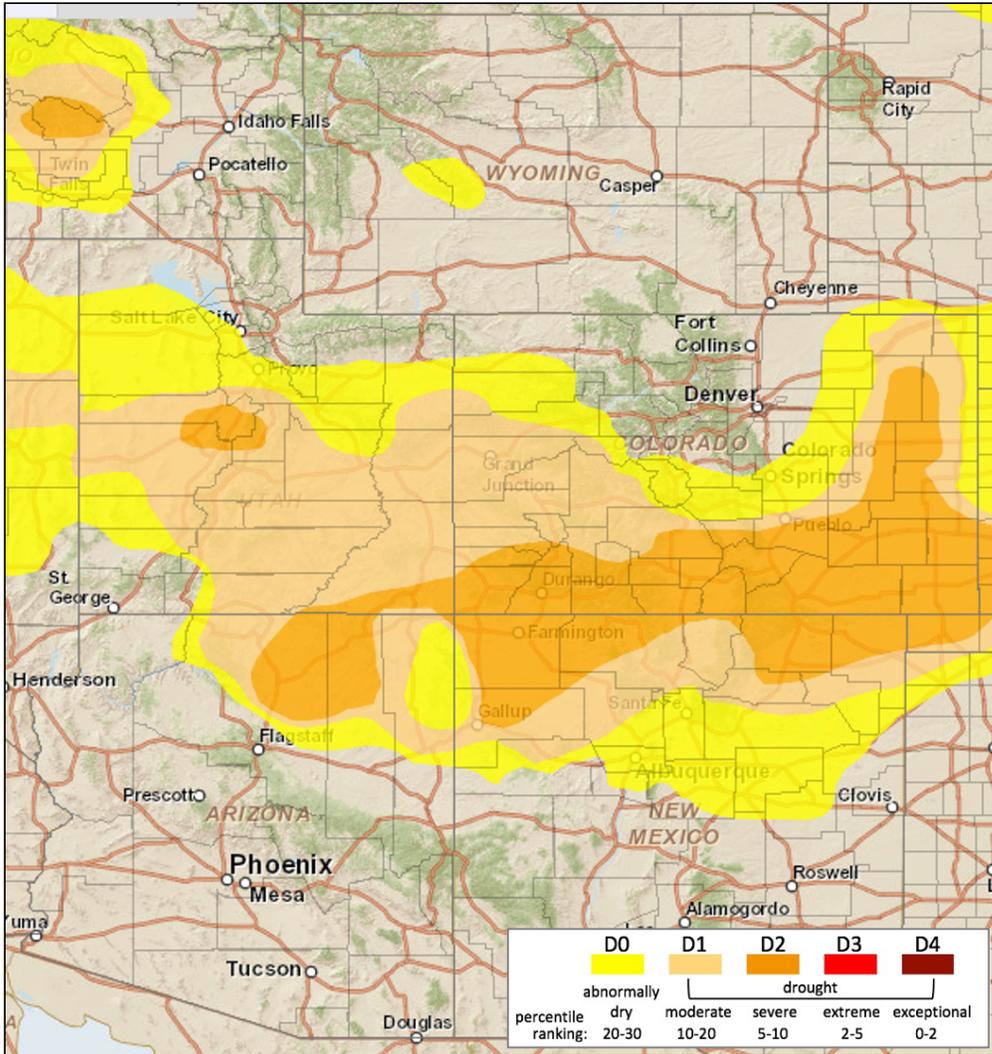
Outlook



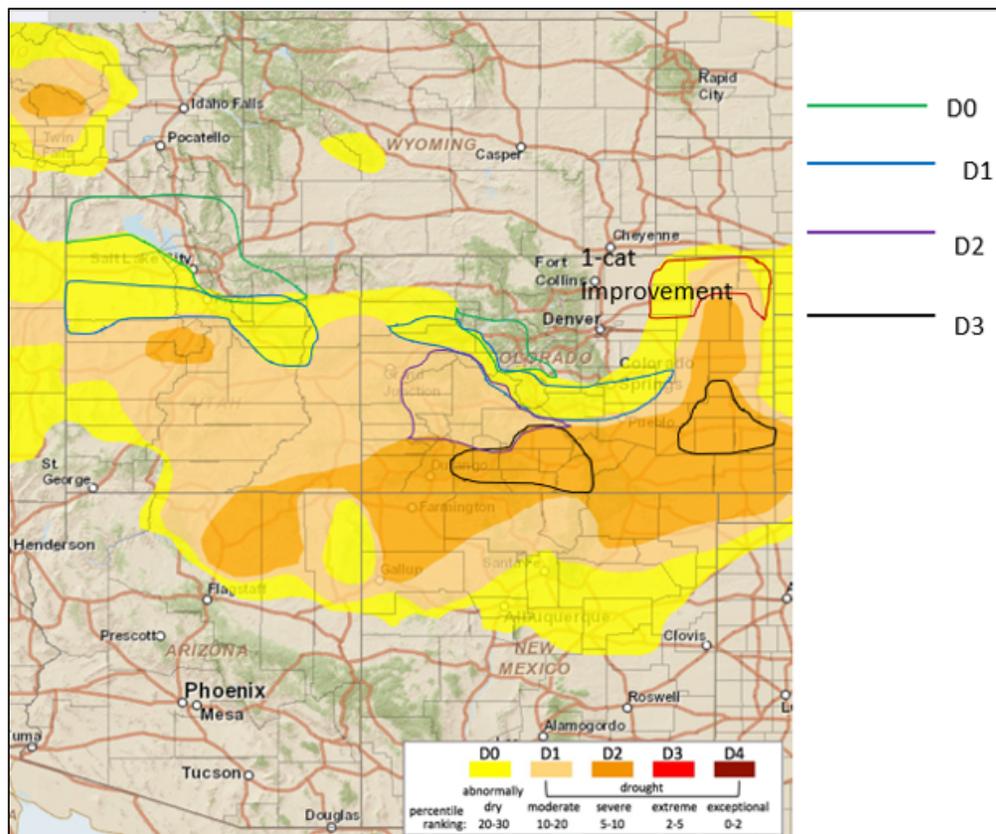
The top two images show Climate Prediction Center's Precipitation and Temperature outlooks for 8 - 14 days. The middle image shows the Weather Prediction Center's Quantitative Precipitation Forecast accumulation for seven days. The bottom left image shows the 3-month precipitation outlook from Climate 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 5, 2020

Dryness prevailed through most of the Intermountain West Region in April. Most of western and southern Colorado saw the driest or one of the driest Aprils on record. Northern Utah also got in on the extreme dryness that was April 2020 with the Salt Lake area seeing some of their lowest April precipitation amounts on record. For both Utah and Colorado, this was an inopportune time to see this much dryness since April is still a wetter month of the year. Continuing with the dry theme of the week, eastern Colorado started off the growing season with much below normal precipitation. Some wetter spots in the IMW region included north-central Colorado, northwestern Wyoming, and parts of Arizona and New Mexico, see normal or above-normal precipitation.

The first week of May has seen the dry pattern continue except for northern Colorado and southeastern Wyoming where thunderstorm season has started up. Precipitation amounts ranging from 1.00 to over 2.00 inches has fallen over northeast Colorado and southeast Wyoming. The rest of the IMW saw little to no precipitation.

Typically by this time of year the snowpack season is in full snowmelt form with the occasional May storm that brings a pause to melt and a small increase in the snowpack. This means we have passed the peak snowpack of the year. Most of the IMW saw near normal peaks, with many on the lower end of normal. With little snow in April and a quick warmup, the snowpack is melting quickly.

The quick snowmelt means streamflows are starting to come up. Most of the streams with above normal flows means the snow is melting quicker and earlier than normal. We are seeing above normal flows in the headwaters of the Colorado River and the Yampa River. However, we are also seeing below

normal flows on the White, Colorado, Gunnison, San Miguel, and San Juan Rivers. Our three main sites are barely in the normal flow range.

Temperatures for April were not as bad as most years with the dryness we've seen. Most of the northern portion of the IMW region saw below normal temperatures and the southern portion saw near normal temperatures, with some isolated warmer spots. One of the areas much above normal is southwestern Colorado and the Rio Grande River Basin, which did not help the lack of snowfall. More recently, the last week's temperatures across the IMW have been 6+ degrees F above normal.

Little precipitation is forecast to hit our region with small amounts in the higher elevations. The 8-14 day outlook is hinting at chances of above normal precipitation with New Mexico looking dry.

Recommendations:

UCRB: Introduction of D3 is recommended in southern Colorado catching the southern portion of the San Juan Mountain and continuing east into the San Luis Valley. April was very dry, continuing the dryness that has been seen in the San Juan and Rio Grande basins. Warm temperatures have kicked off an early and fast start to the snowmelt season.

Expansion of D2 northward is being recommended. The warm dry weather over the past 30-days is driving this expansion as well. This expansion covers most of Saguache, Mineral, Hinsdale counties, and southern Ouray County. The expansion is recommended to also cover Gunnison, eastern Mesa, Delta, and eastern Montrose counties. Low snowpack, early snowmelt and terrible indicators are driving this expansion.

Expansion of D1 northward is recommended. This expansion is mainly in Rio Blanco, Garfield, Pitkin, Chaffee counties and into eastern Colorado.

Expansion of D0 northward is recommended mainly covering all of Eagle County and some of Lake County.

San Luis Valley: This is included in the D3 introduction. The southern portion of the valley in Colorado has been very dry and very hot. The Alamosa Coop Weather station has set a daily record temperature for 9 days straight bringing abnormally high evaporative demand and the already dry soils.

Eastern Colorado: D3 introduction is being recommended in Otero, Bent, Prowers counties and eastern Kowa and Cheyenne counties. This area has seen very dry conditions lately, with many SPIs showing up on multiple timescales as D3. As the growing season is getting going, a lot of precipitation is needed to help the situation.

Utah: With the drying out of northern Utah D0 expansion northward is being recommended along with an expansion of D1 northward in Tooele, Utah, Duchesne, Uintah, and Carbon counties.