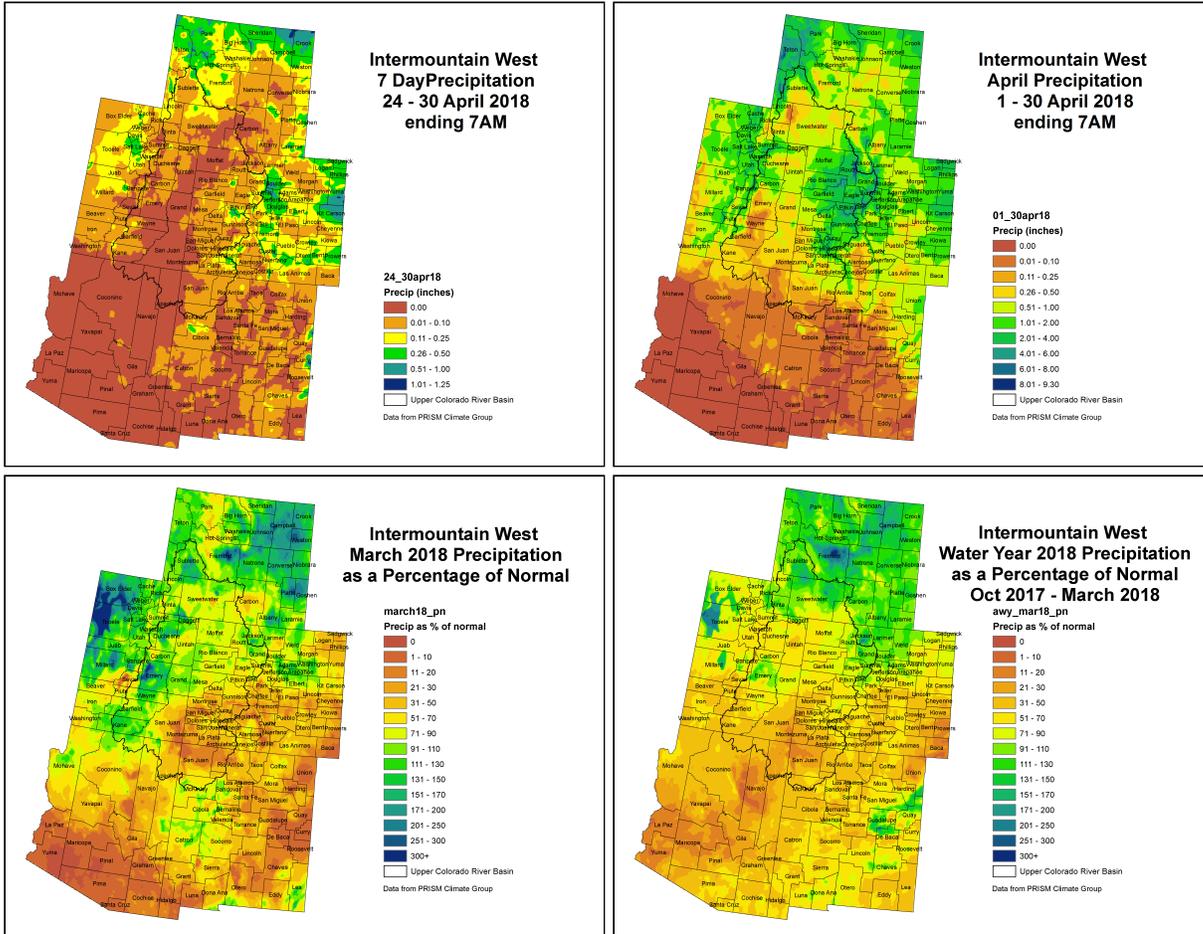


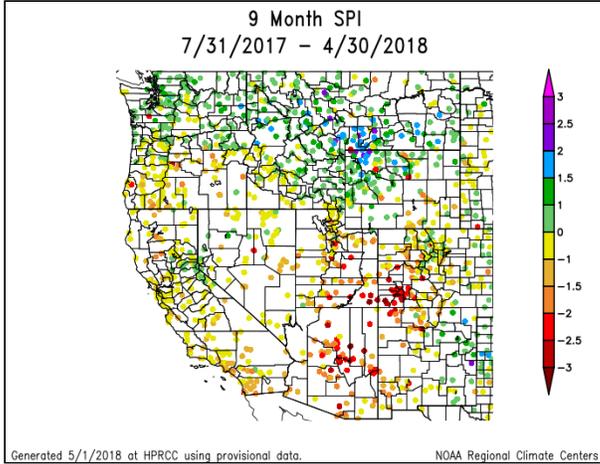
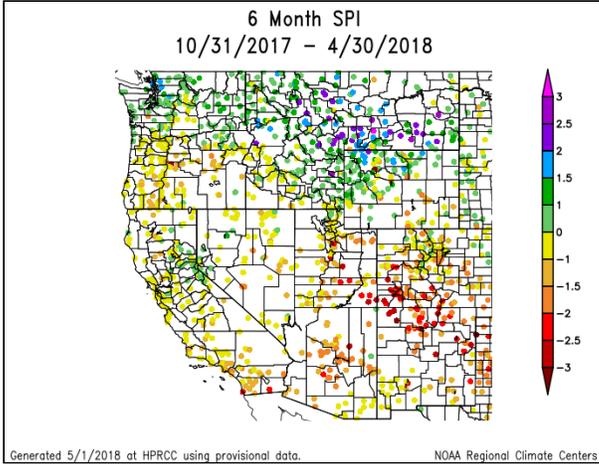
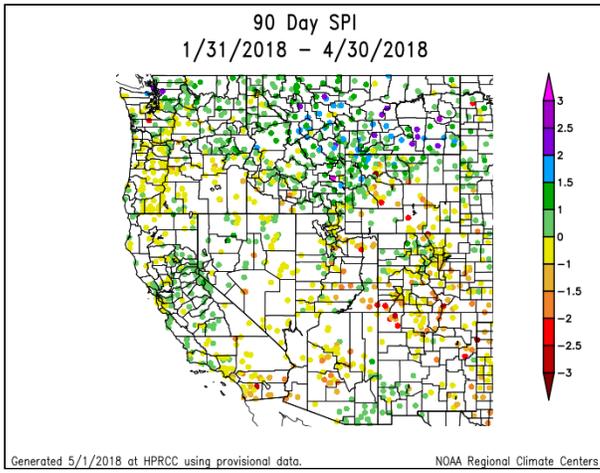
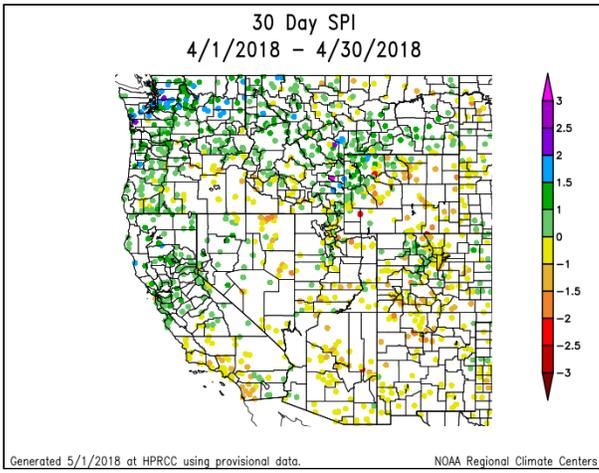
NIDIS Intermountain West Drought Early Warning System May 1, 2018

Precipitation



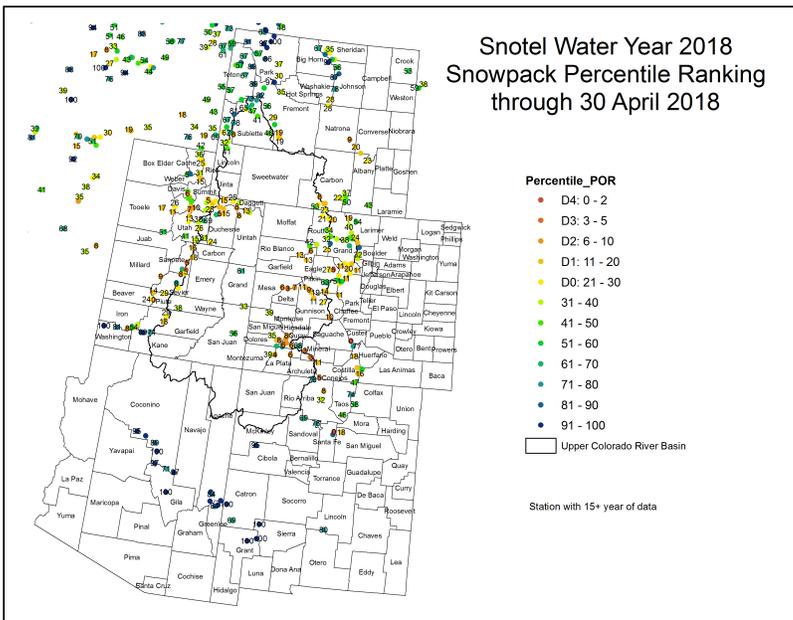
The images above use daily precipitation statistics from NWS COOP, CoCoRaHS, and CoAgMet stations. From top to bottom, and left to right: most recent 7-days of accumulated precipitation in inches; current month-to-date accumulated precipitation in inches; last month's precipitation as a percent of average;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

Standardized Precipitation Index



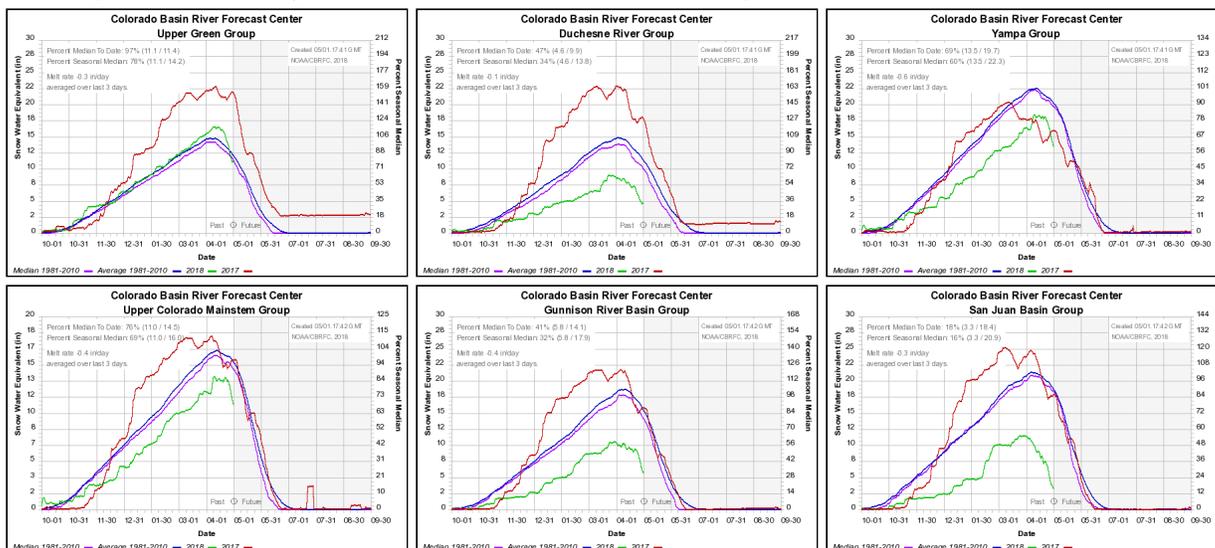
Standardized Precipitation Index standardizes precipitation accumulations for a specified time period into percentile rankings. -1.0 to -1.5 is equivalent to a D1 to D2. -1.5 to -2.0 is equivalent to a D2 to D3. -2.0 and worse is equivalent to a D3 to D4. 30- and 60-day SPIs focus on short-term conditions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

Snotel and Snowpack



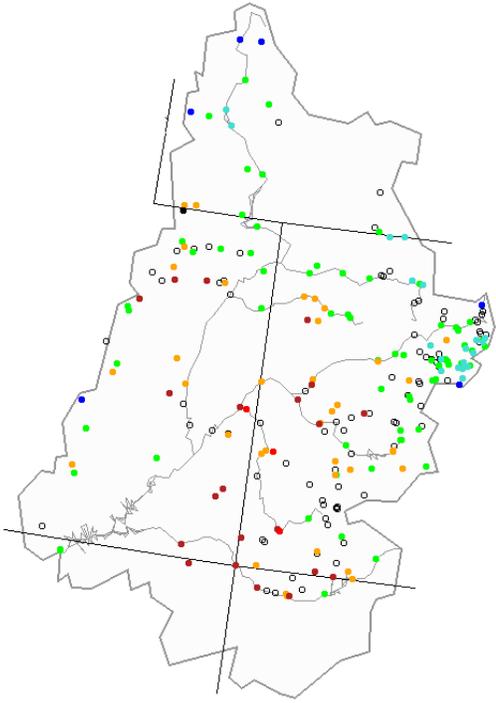
The above image shows SNOTEL snowpack percentiles for each SNOTEL site in the Intermountain West. The images below show accumulated snow water equivalent in inches

(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).



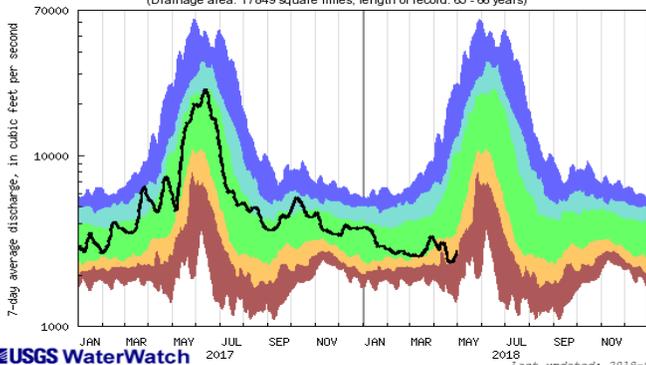
Streamflow

Monday, April 30, 2018

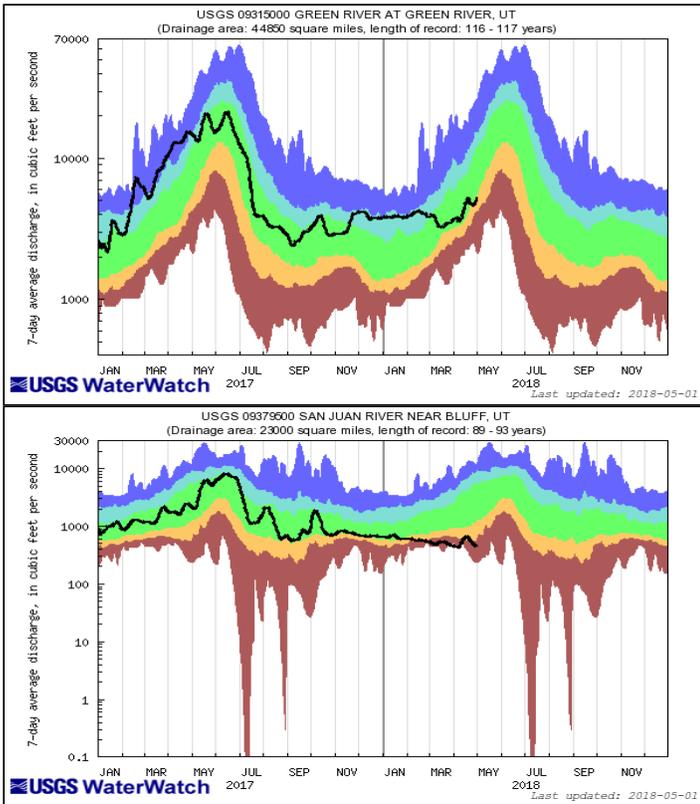


Explanation - Percentile classes							
●	●	●	●	●	●	○	
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

USGS 09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE
(Drainage area: 17849 square miles, length of record: 65 - 66 years)

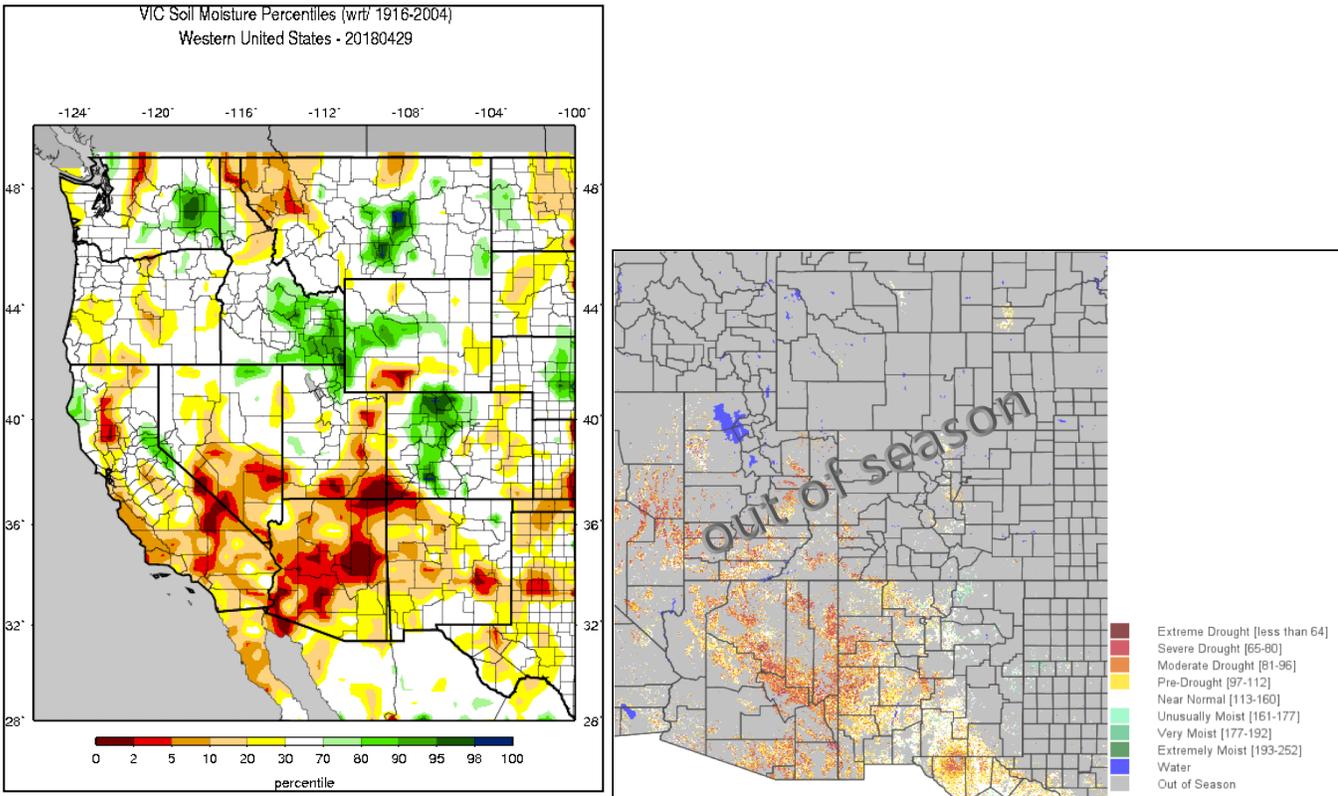


Last updated: 2018-05-01



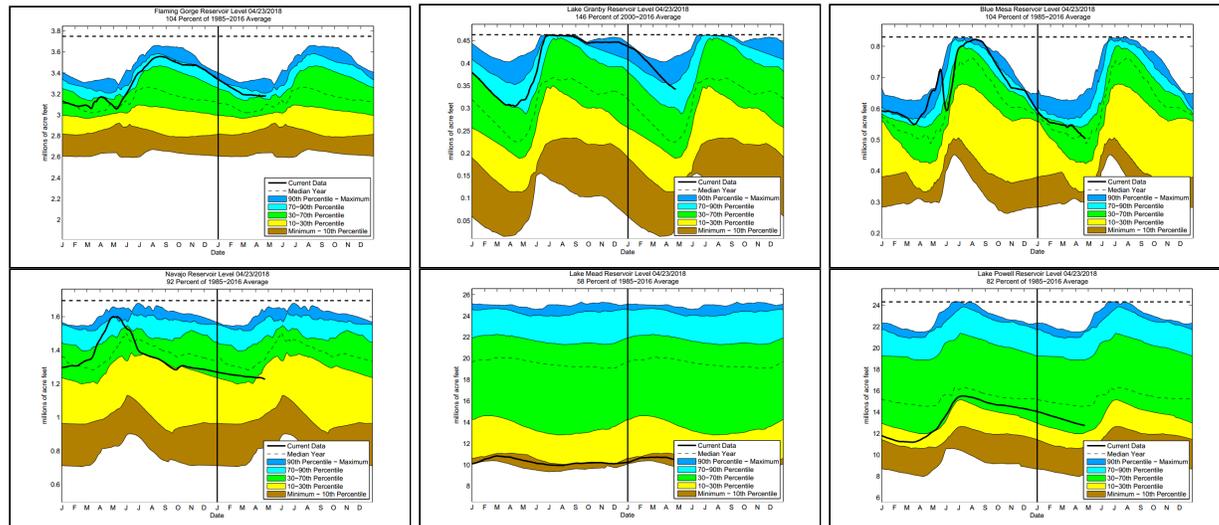
The top left image shows 7-day averaged streamflows as a percentile ranking across the UCRB. The top right image shows 7-day averaged discharge over time at three key sites around the UCRB: The Colorado River at the CO-UT state line; the Green River at Green River, UT; and the San Juan River near Bluff,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

Surface Water

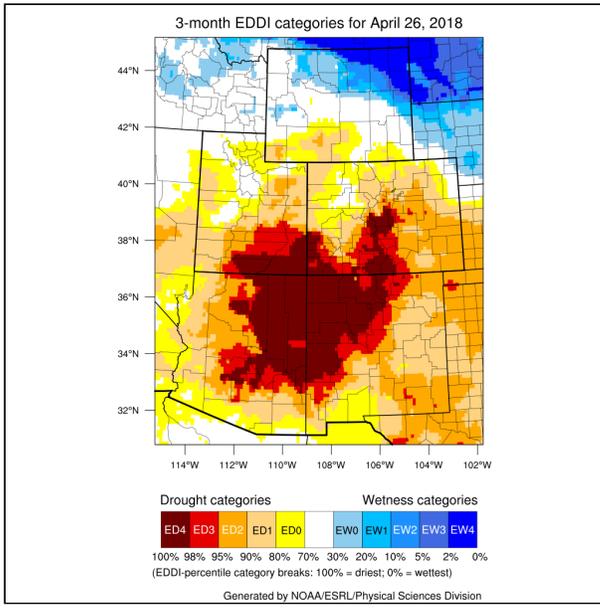
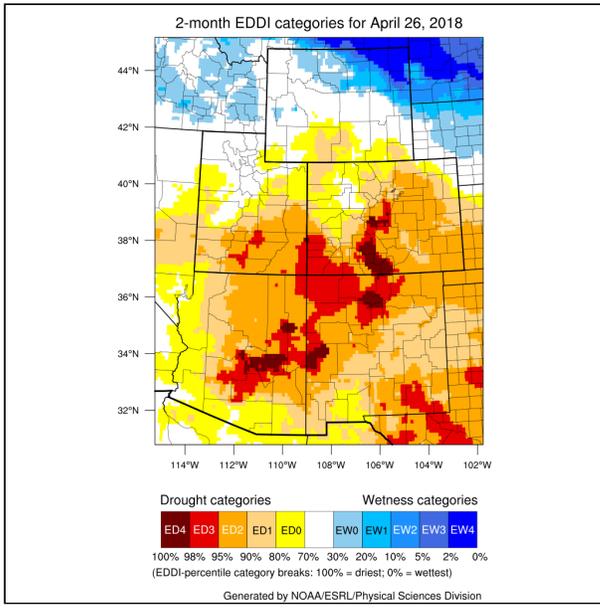
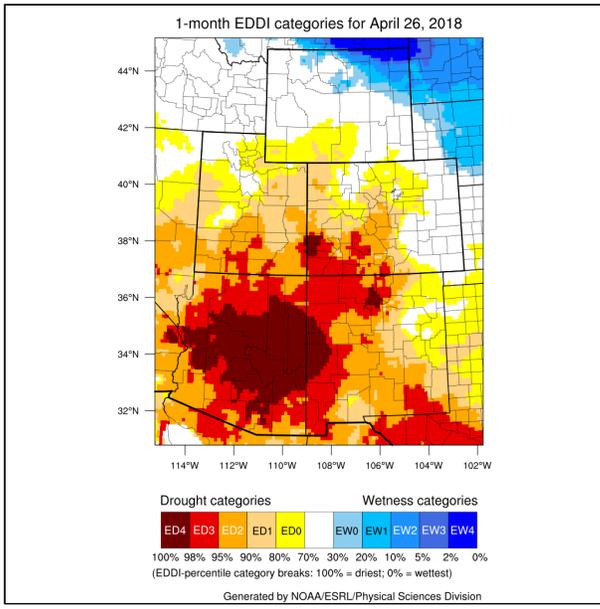
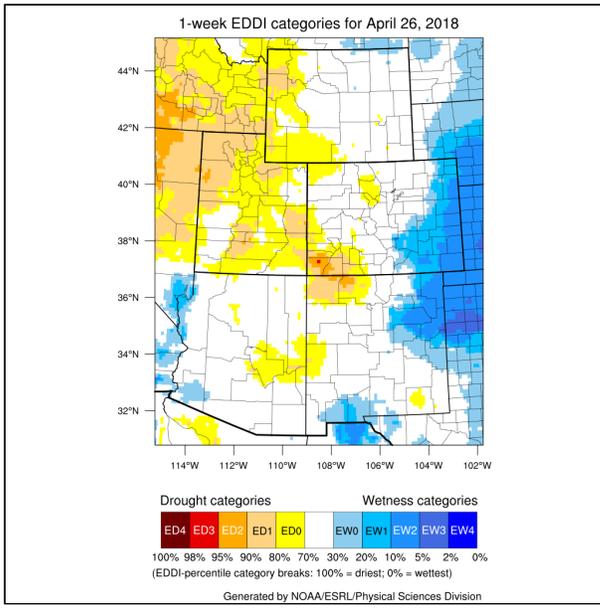


The top left image shows VIC modeled soil moisture as a percentile ranking. The top right image shows satellite-derived vegetation from the VegDRI product (which updates on Mondays).

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.

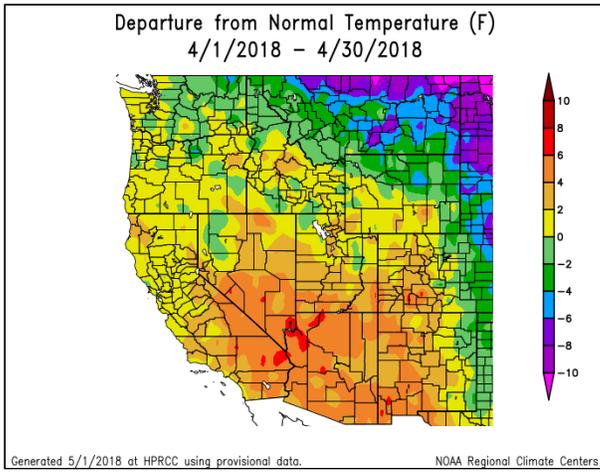
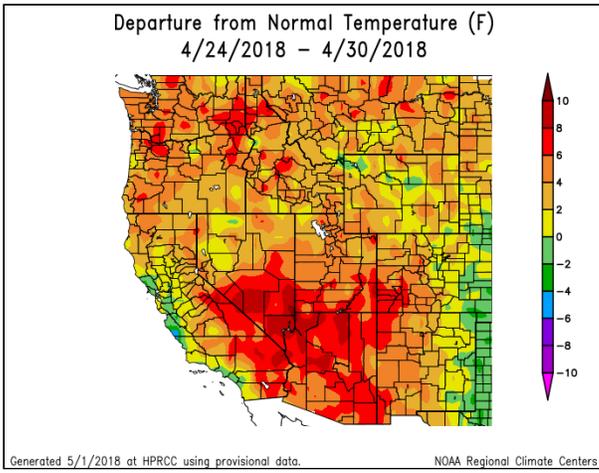


Evaporative Demand

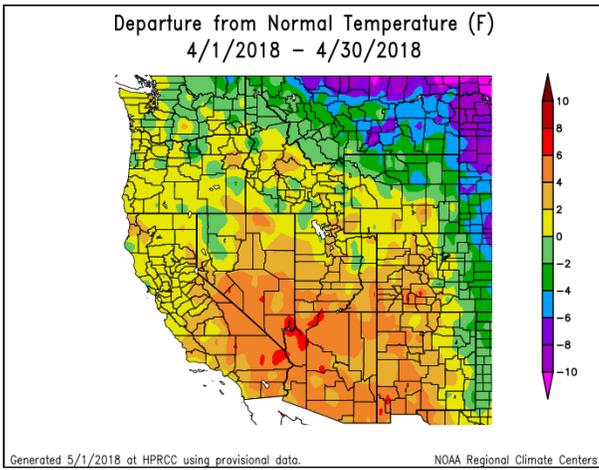


The above images are available courtesy of NOAA's Evaporative Demand Drought Index (EDDI). Drought classification listed is a function of the depth of reference evapotranspiration accumulated over a given period of record with respect to a climatology of 1981-2010. The drought categories displayed are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

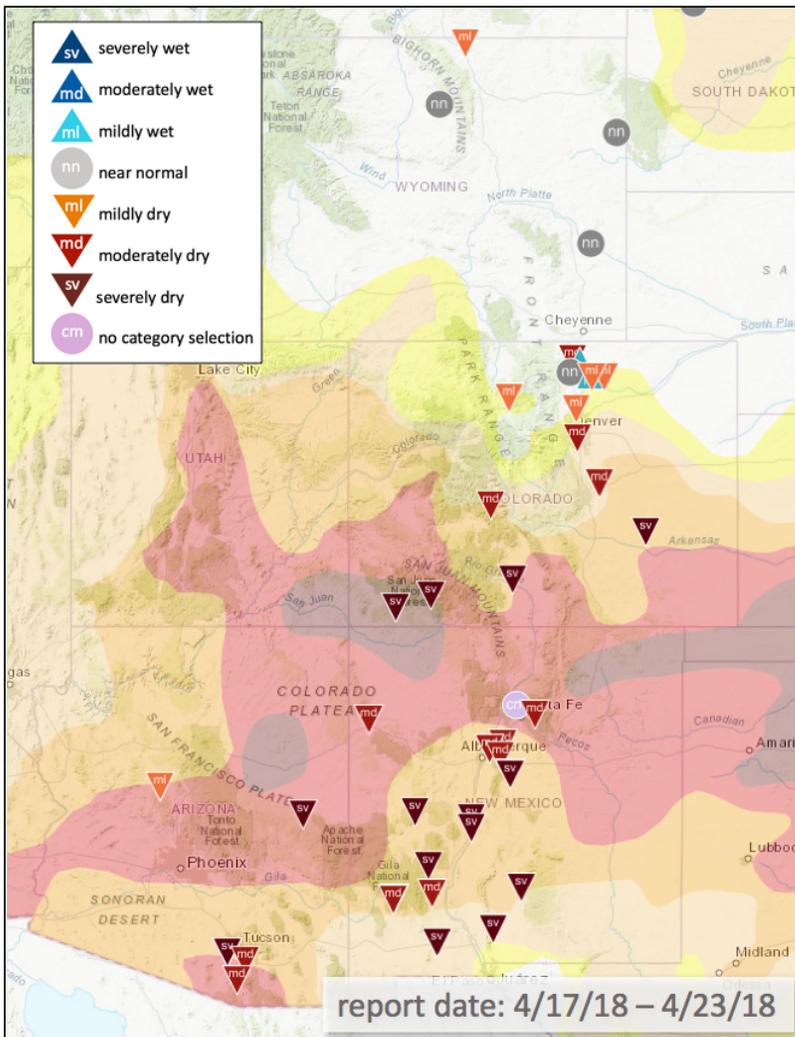
Temperature



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.

Southeast CO

All snow on the lee side of Sangre de Cristos melted out in March. Wind has dried things out faster than normal. Strong winds are blowing dust and preventing precipitation from even hitting the ground. Fires throughout southeast CO have been an issue, with Colorado's 5th largest fire in history occurring in the last couple of weeks in El Paso County and a 7k acre fire reported by Otero FSA. Streams are looking better because of the inability to collect the water. Downstream exchanges are becoming increasingly complicated, so irrigation operations are struggling.

Not as bad around Kiowa County. Clods of dirt are suggesting there is still some subsurface moisture present from last fall. They also received some beneficial moisture that didn't hit areas to the south and west.

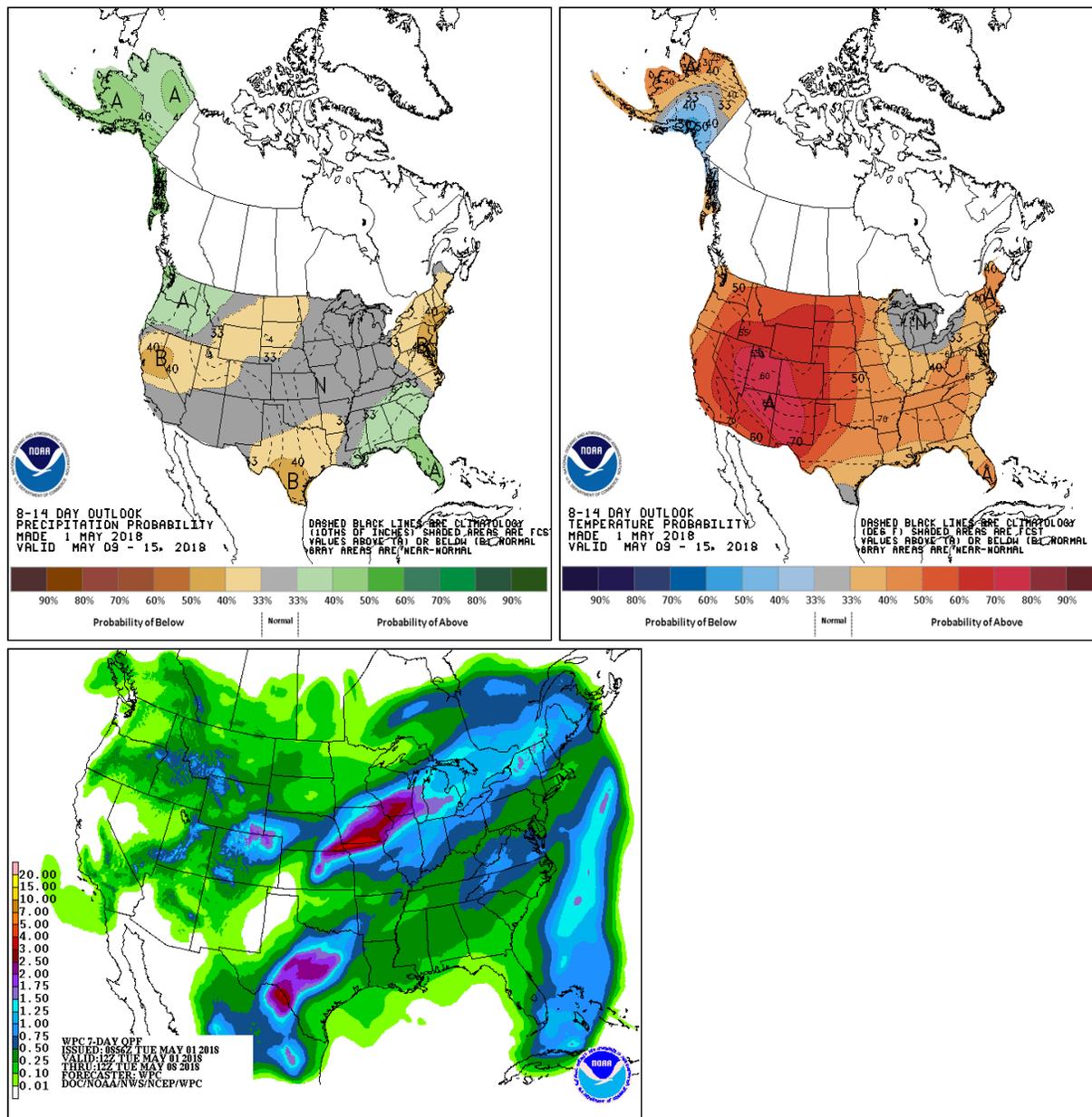
Southwest CO

Low streamflows on the San Miguel and Dolores. Hardly anything trickling down from upstream. Fire near Cortez reported. Winter wheat and grasses are yellowing. If Montrose were to put a call on the river, ag irrigation will be halted. In the higher elevations, there are about 5 dust layers below about 1 to 2 inches of clean snow. That dust will probably come to the surface in the next couple of days, and what's beneath is just muddy slush. With warm temperatures, likely to see a quick melt.

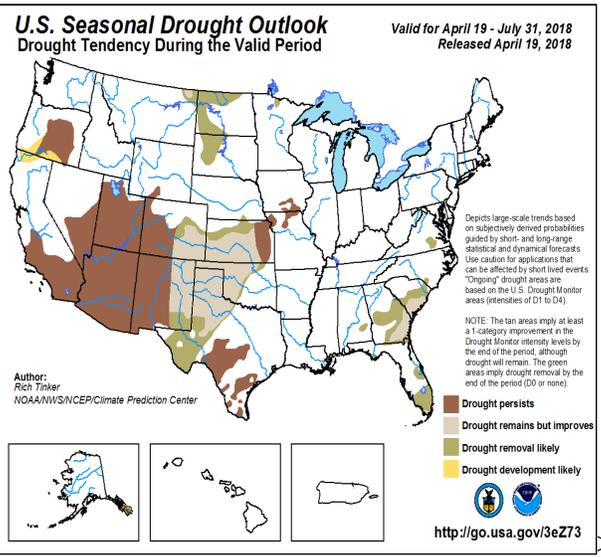
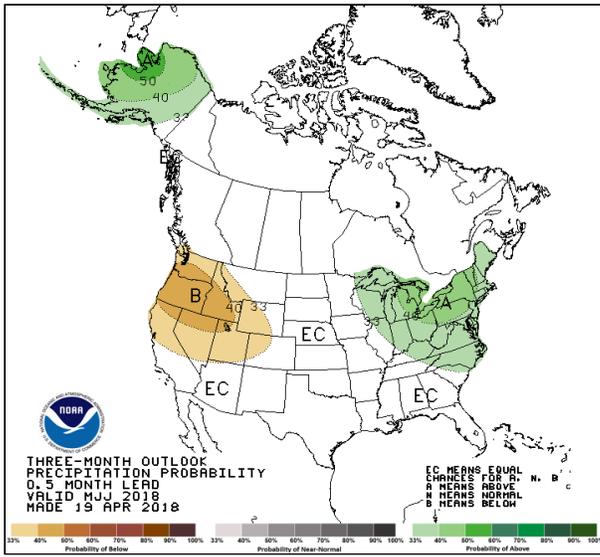
Eastern UT

Winds have been bad throughout Emery and Grand counties, with reports of fires and difficulty containing them. There has not been much precip to report at Green River, UT since the beginning of October and the region is really struggling. Conditions may be a little better in northern UT.

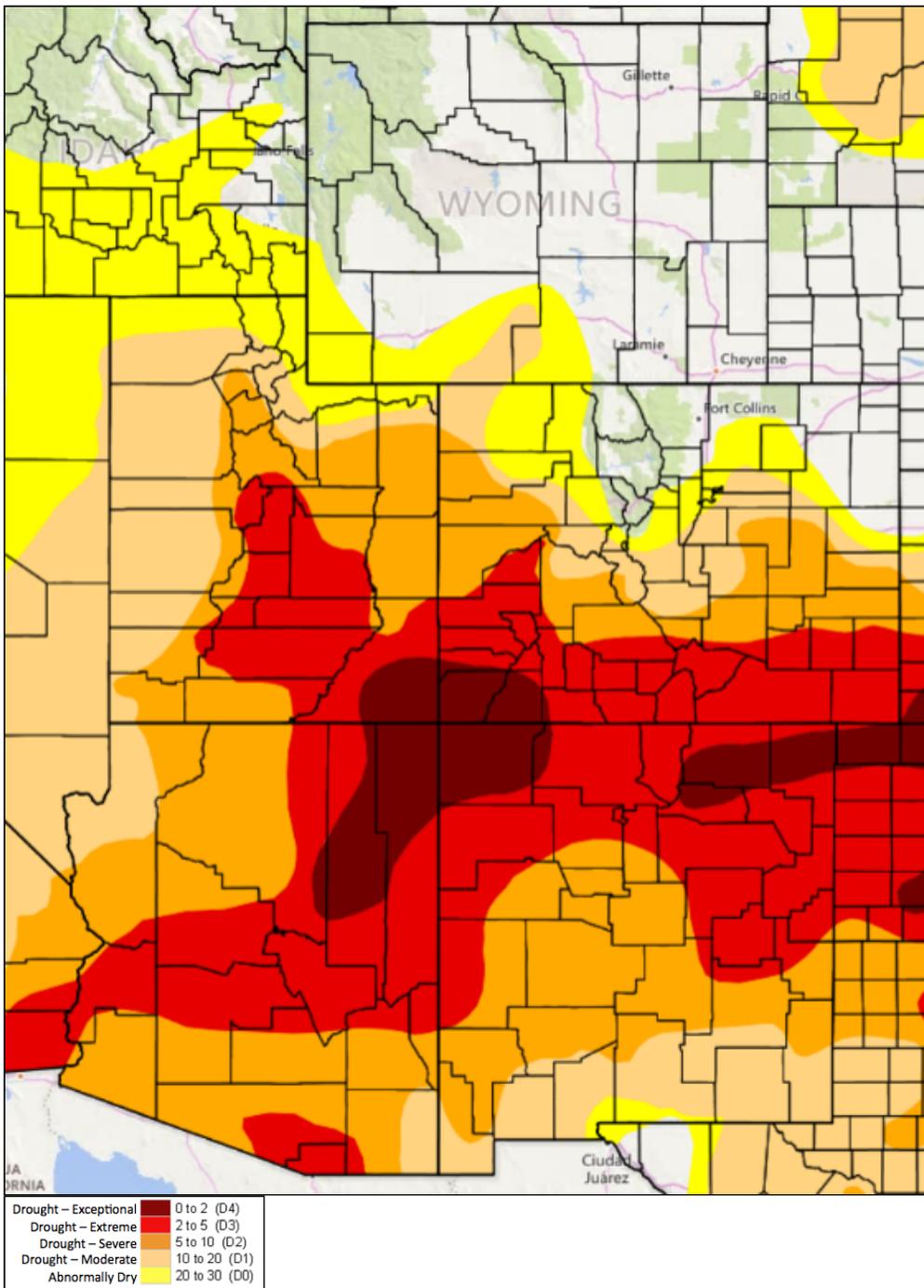
Outlook



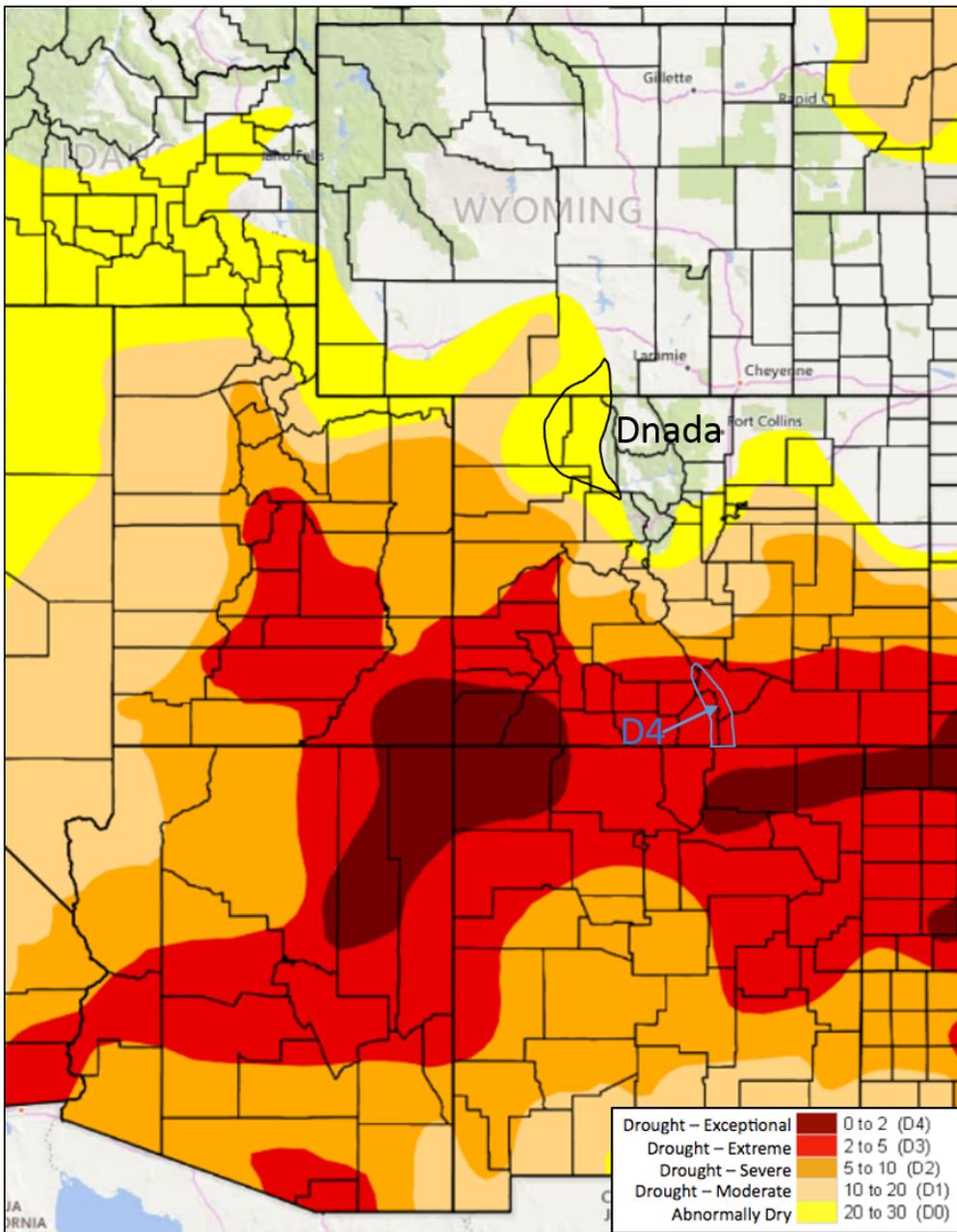
The top two images show Climate Prediction Center's Precipitation and Temperature outlooks for 8 - 14 days. The middle image shows the Weather Prediction Center's Quantitative Precipitation Forecast accumulation for seven days. The bottom left image shows the 3-month precipitation outlook from Climate 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 1, 2018

Last week, the Intermountain West region saw a mostly dry week with the bulk of precipitation falling in areas that aren't seeing any category of drought or abnormally dry. Most of the Upper Colorado River Basin received less than 0.10" of precipitation. Beneficial precipitation fell in Eastern Colorado from Logan to Kit Carson counties with between 0.25 to 1.00 inches, southern Yuma and much of Kit Carson counties saw the best totals. Larimer to Douglass County saw up to 0.50" with higher elevations in Boulder County seeing up to 1.00". Much of southeastern Utah and all of Arizona were completely dry last week with no precipitation. New Mexico only saw a few hundredths of an inch across most of the state.

The region is now in the snowmelt season. Higher temperatures for the last month mixed with the low snowpack in many of the basins means the snow will most likely melt out much earlier than normal. Now that the snow is melting, streamflows are starting to come up, however the increase in flow is a not what we would see in normal years.

Snotel Precipitation Percentiles for the Water Year in the San Juan Mountains in southwest CO and Sangre de Cristo mountains in south-central Colorado remain as some of the lowest on record. Most Snotel sites saw near record low snowpack years and are on track for near record early melt out.

The precipitation outlook is favorable for most of the IMW region to receive some precipitation, with the best amounts in northeastern and north-central Colorado. The UCRB will hopefully see some beneficial precipitation as well, even in the San Juan Mountains. The 8-14 day outlook is showing chances for above average precipitation for eastern Colorado including the very dry southeastern portion of the state.

Recommendations

Degradations: D4 is recommended in the Sangre de Cristo Mountains. This area has seen record low precipitation and snowpack accumulations this water year. Snowmelt will be much lower than normal, impacting water supplies.

There is discussion of bringing D4 into the San Luis Valley. We feel the valley is not as bad as the mountains given this is the driest time of year and should remain D3. It has been a very dry dry season, but soil moisture, vegetative health and reservoirs data aren't showing D4 dryness.

The San Juans are showing similarly low Snotel percentiles however this area seemed to see better precipitation in April and should see beneficial precipitation this week, so we will hold off on D4 expansion.

Improvements: We are still recommending D0 in Routt and eastern Moffat counties be removed. Two of our staff drove through this area in recent weeks and we feel this area is not D0. The data also seems to support this, with 30 and 90-day SPIs in the above normal or near normal ranges. This improvement was recommended last week, but was left off the Drought Monitor.