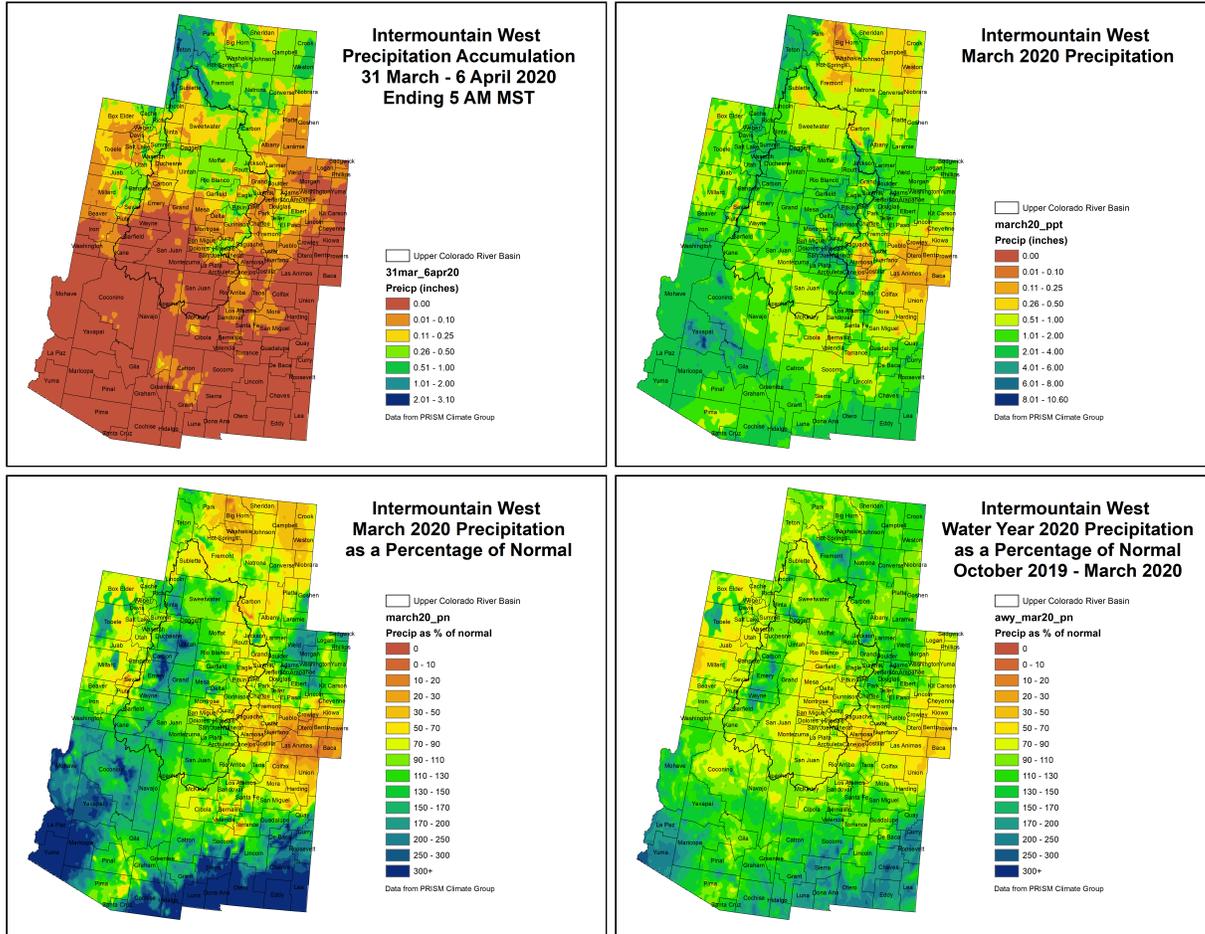


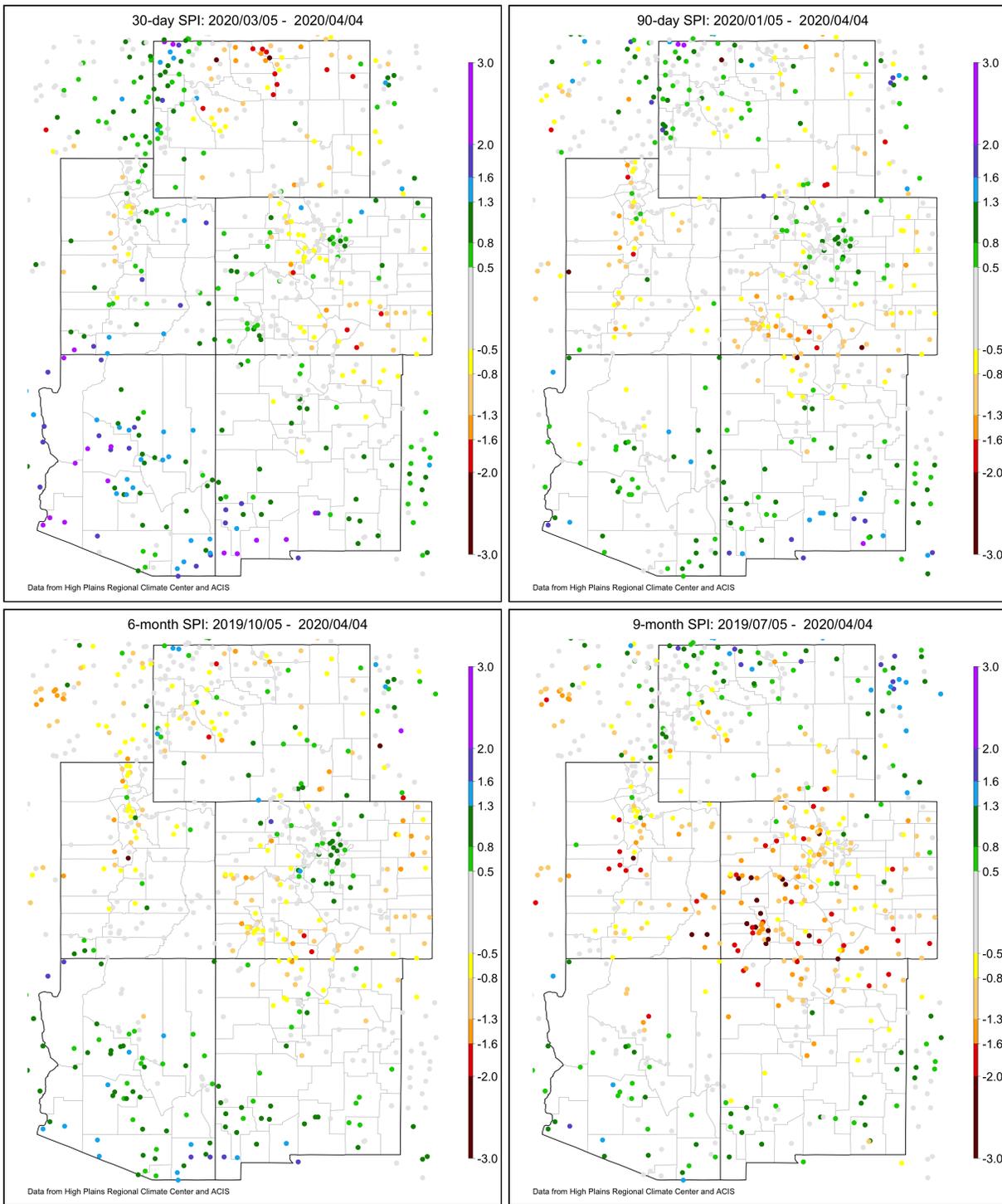
NIDIS Intermountain West Drought Early Warning System April 7, 2020

Precipitation



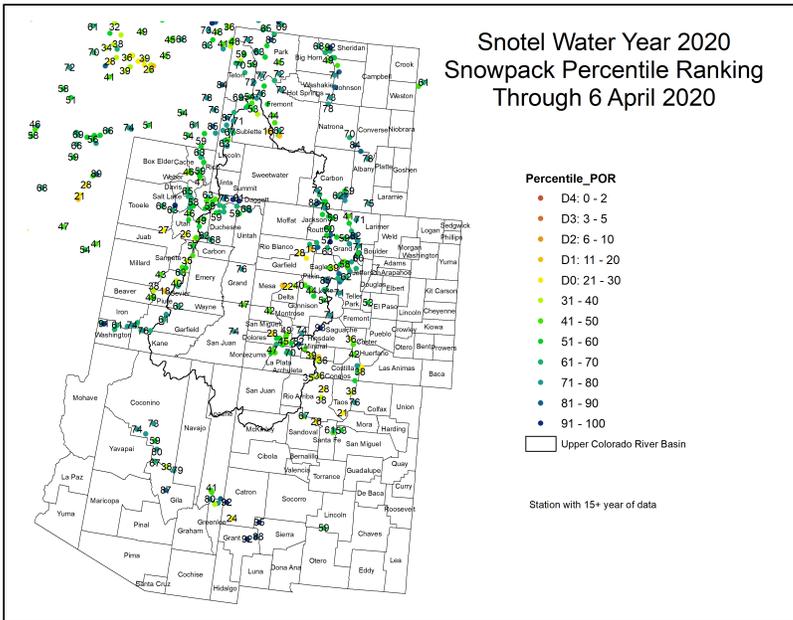
The images above use daily precipitation statistics from NWS COOP, CoCoRaHS, and CoAgMet stations. From top to bottom, and left to right: most recent 7-days of accumulated precipitation in inches; current month-to-date accumulated precipitation in inches; last month's precipitation as a percent of average;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

Standardized Precipitation Index

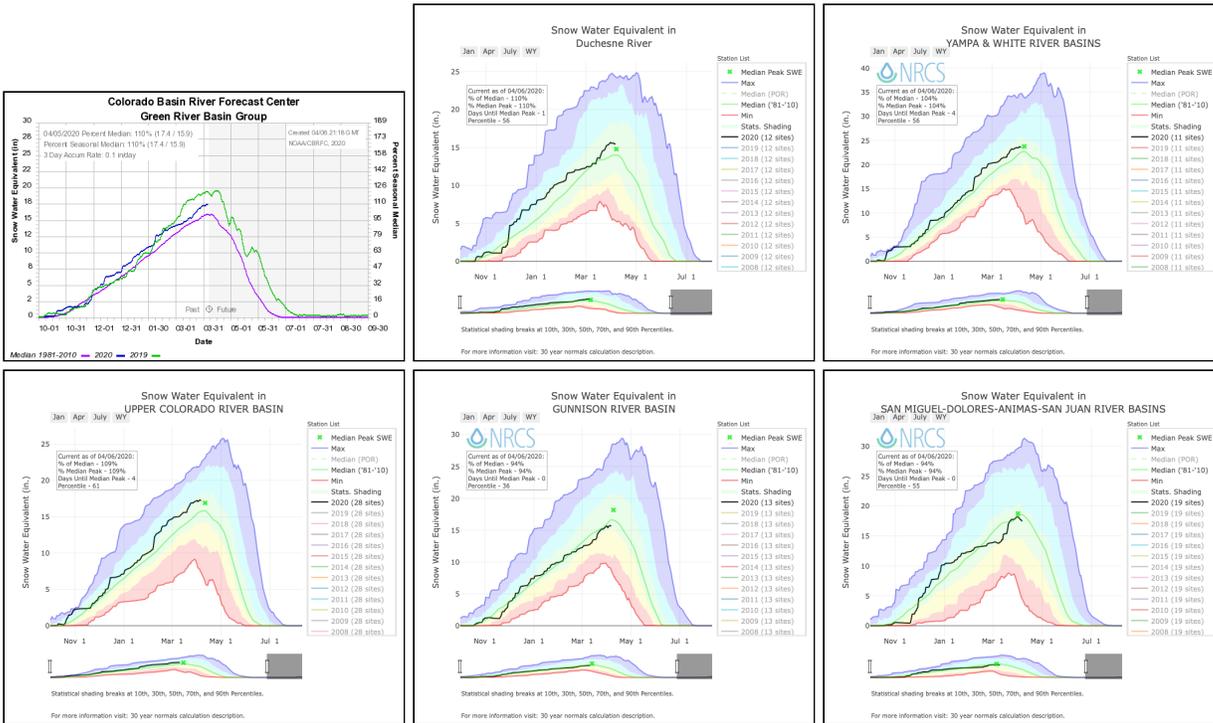


Standardized Precipitation Index standardizes precipitation accumulations for a specified time period into percentile rankings. Colors match the different drought categories with the U.S. Drought Monitor. 30- and 60-day SPIs focus on short-term conditions while 6- and 9-month SPIs focus on long-term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

Snotel and Snowpack

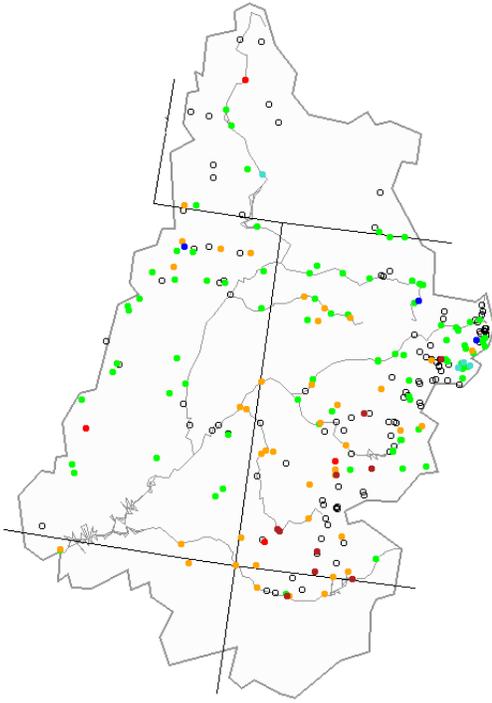


The above image shows SNOTEL snowpack percentiles for each SNOTEL site in the Intermountain West. The images below show accumulated snow water equivalent in inches (green) compared to average (blue) and last year (red) for several different sub-basins across the UCRB (and were created by the Colorado Basin River Forecast Center).



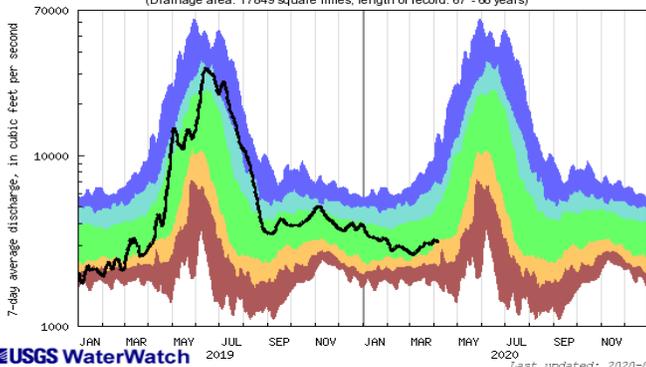
Streamflow

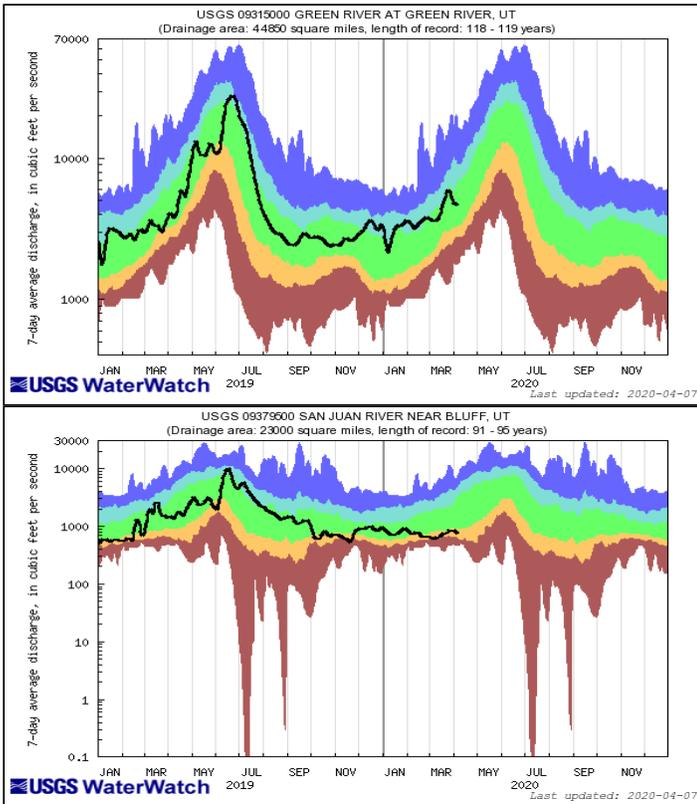
Monday, April 06, 2020



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		

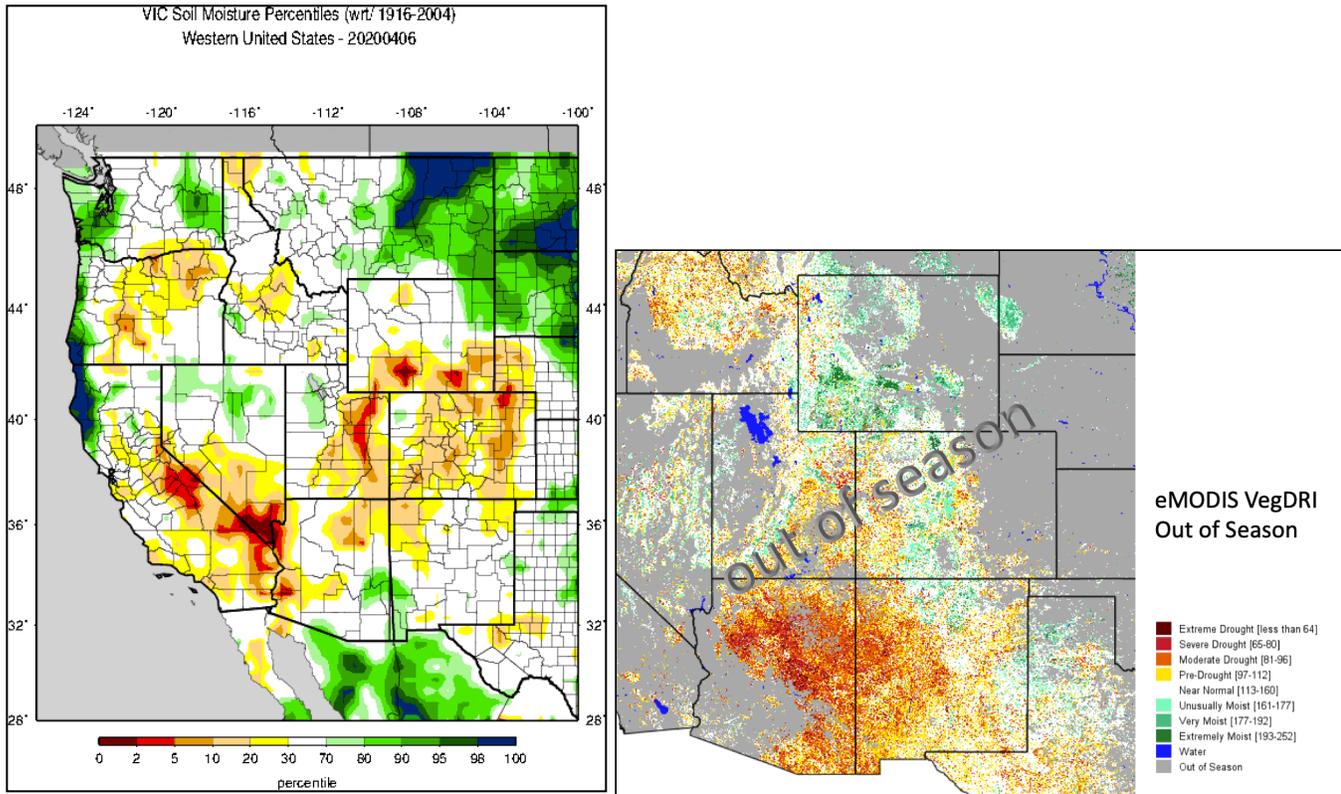
USGS 09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE
(Drainage area: 17849 square miles, length of record: 67 - 68 years)





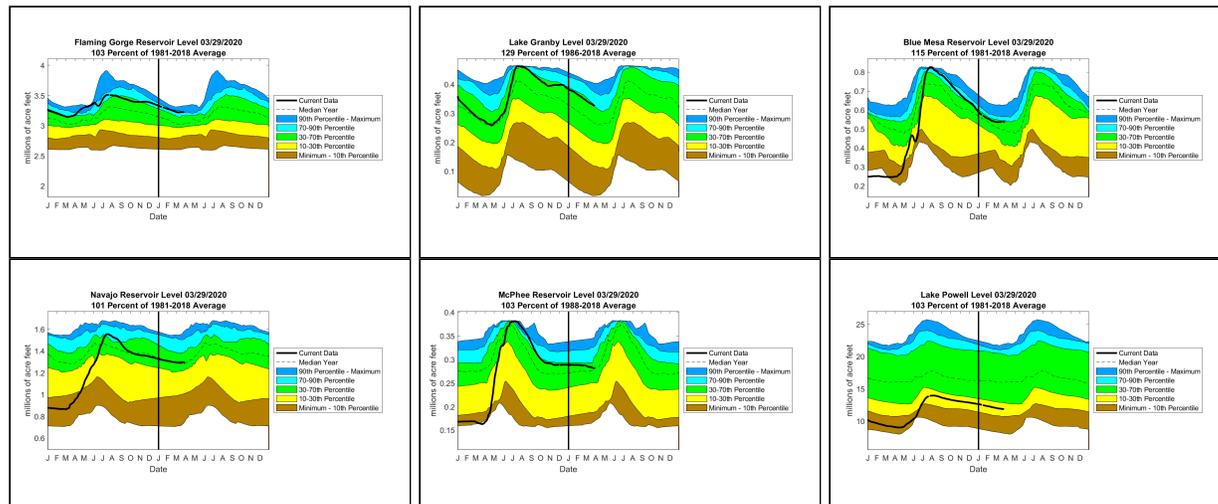
The top left image shows 7-day averaged streamflows as a percentile ranking across the UCRB. The top right image shows 7-day averaged discharge over time at three key sites around the UCRB: The Colorado River at the CO-UT state line; the Green River at Green River, UT; and the San Juan River near Bluff,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

Surface Water

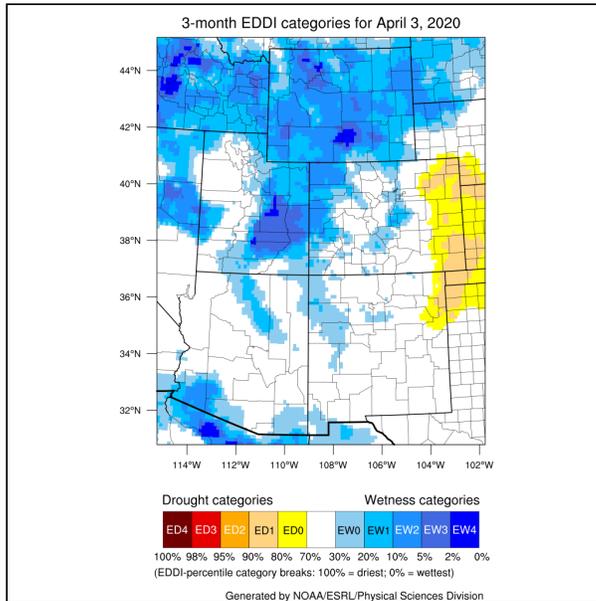
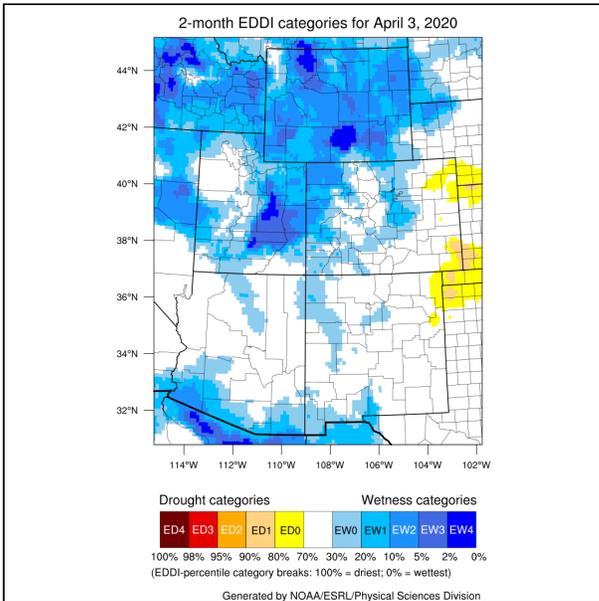
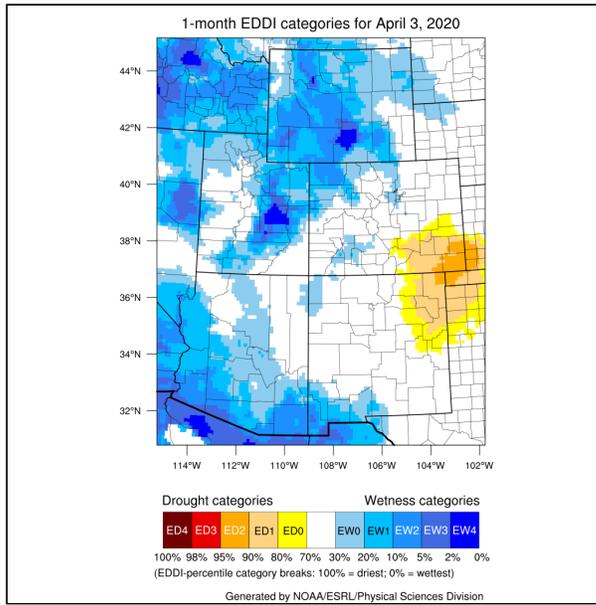
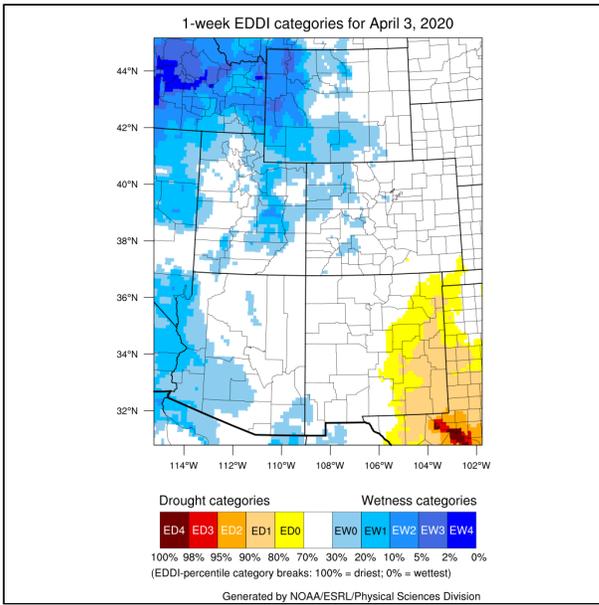


The top left image shows VIC modeled soil moisture as a percentile ranking. The top right image shows satellite-derived vegetation from the VegDRI product (which updates on Mondays).

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.

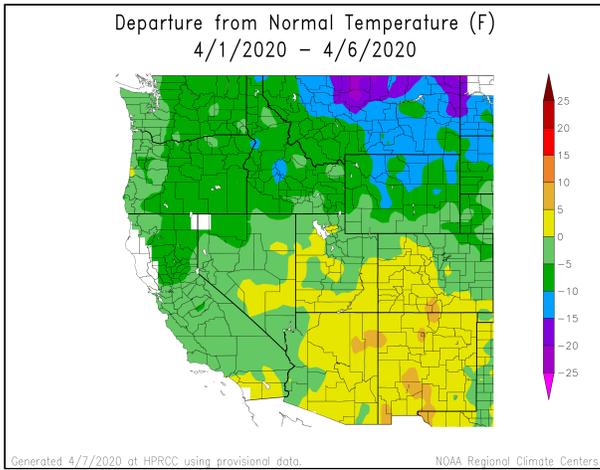
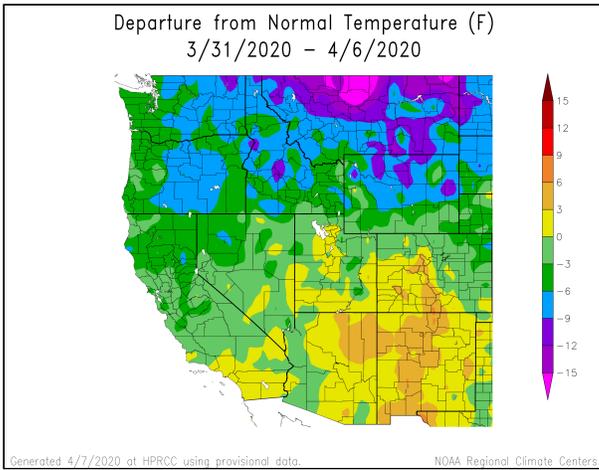


Evaporative Demand

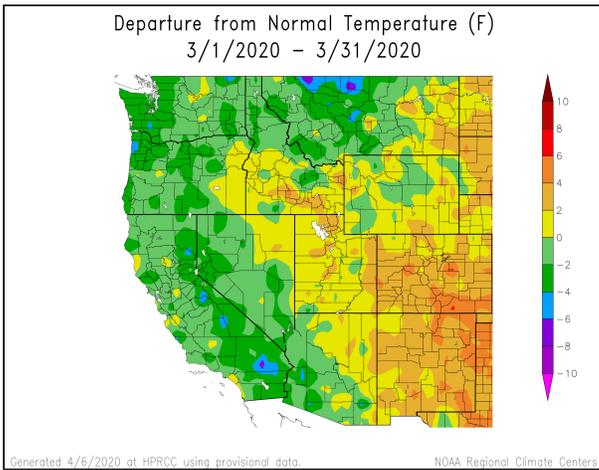


The above images are available courtesy of NOAA's Evaporative Demand Drought Index (EDDI). Drought classification listed is a function of the depth of reference evapotranspiration accumulated over a given period of record with respect to a climatology of 1981-2010. The drought categories displayed are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

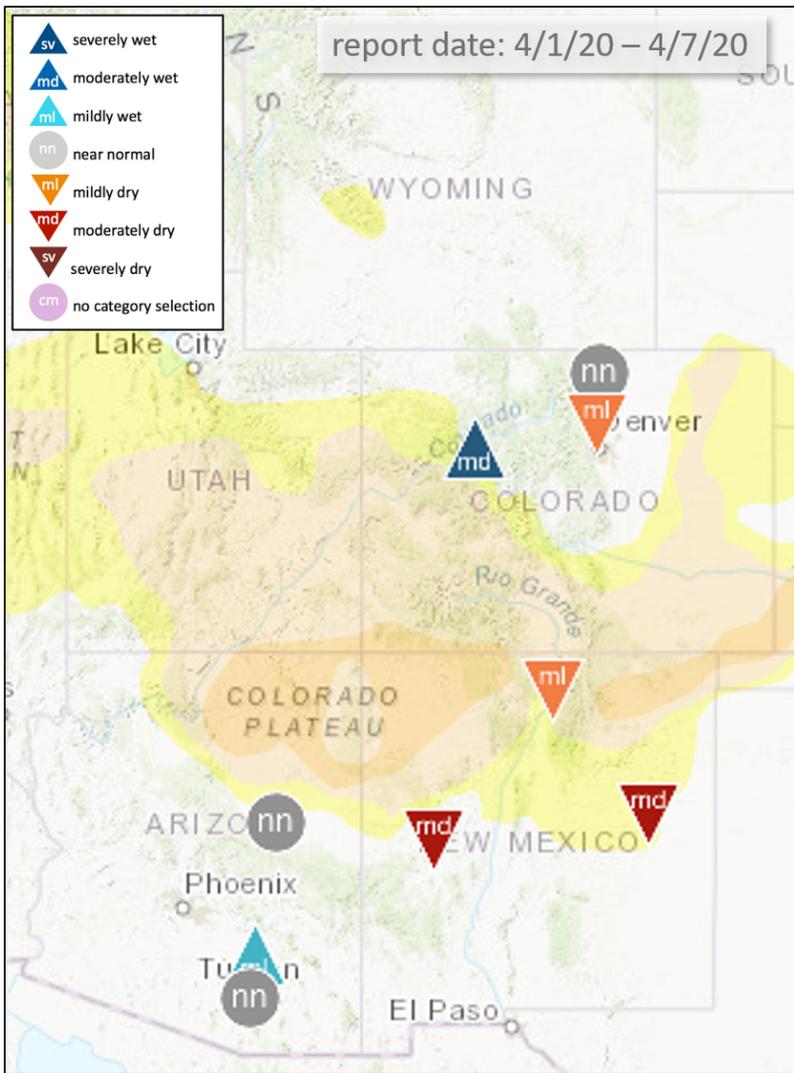
Temperature



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.



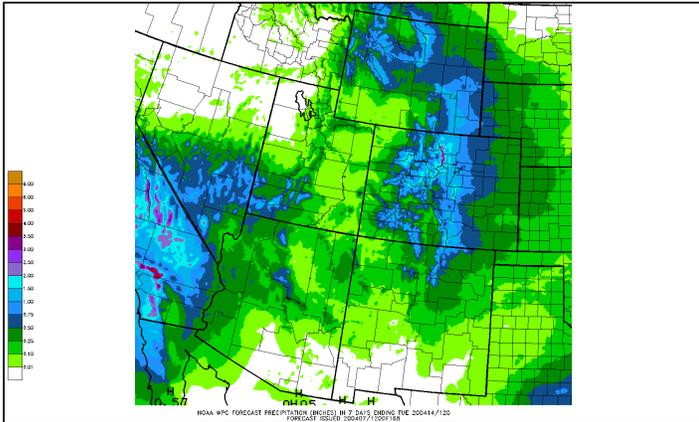
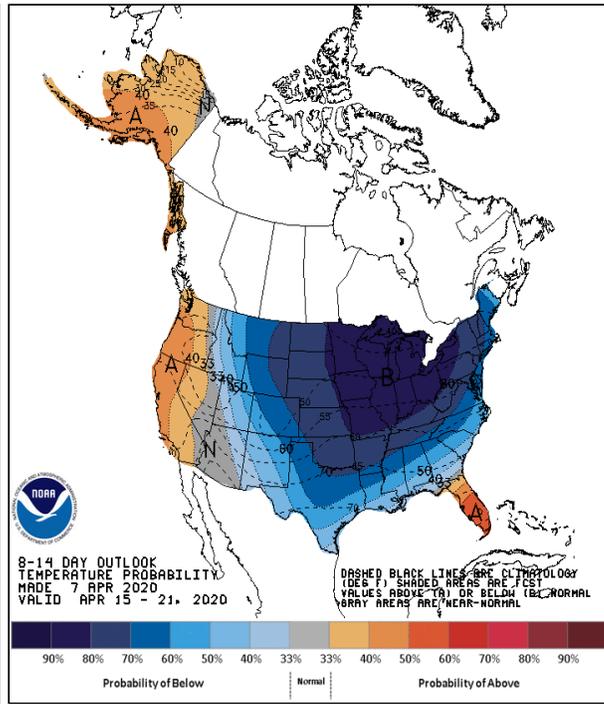
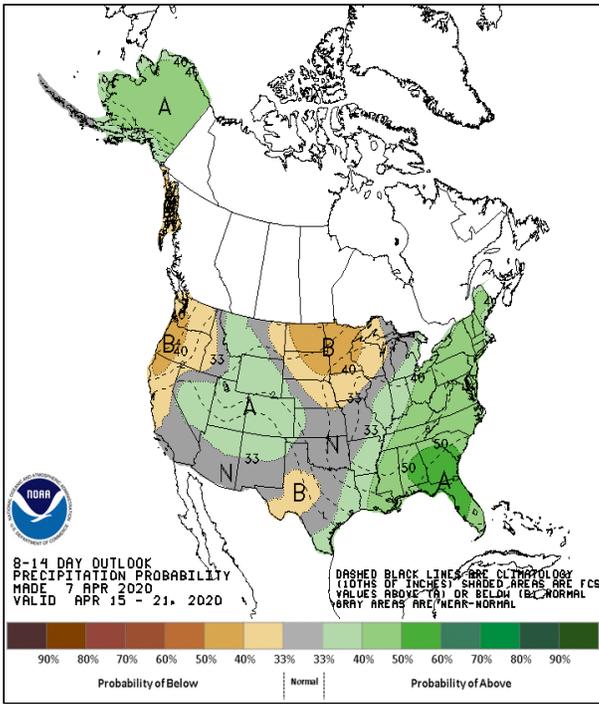
Condition Monitoring and Impacts



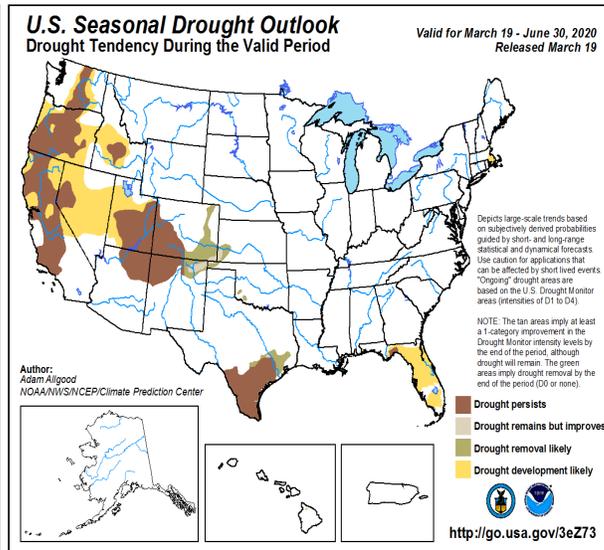
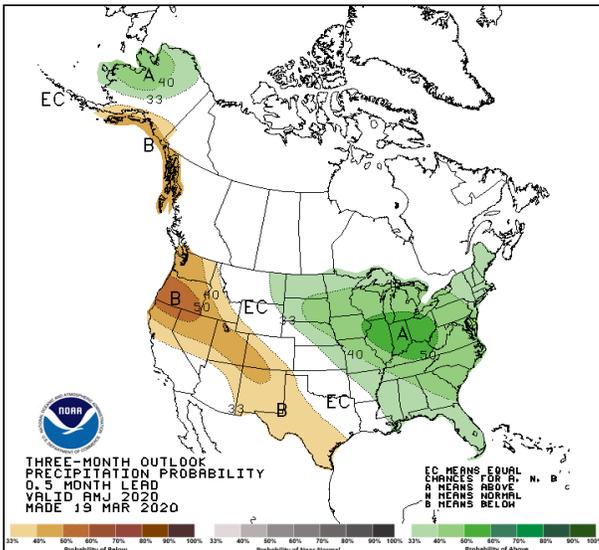
Map of current condition monitoring reports submitted to CoCoRaHS in the last week overlaid on the current U.S. Drought Monitor depiction. Specific impacts reports from local experts listed below.

Juab/Millard County, Utah: Reports of producers needing to haul water due to dry conditions. Normally this time of year they can just use water from ponds to feed livestock.

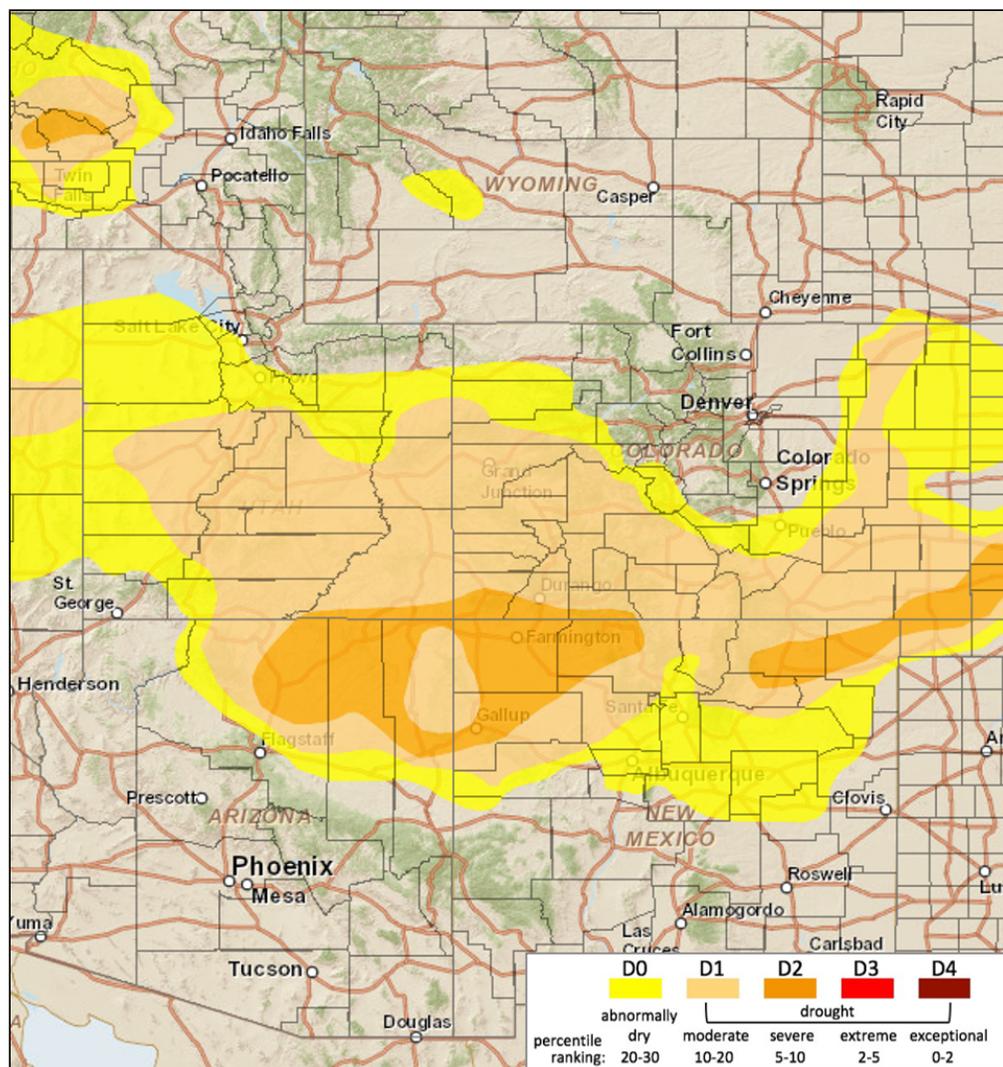
Outlook



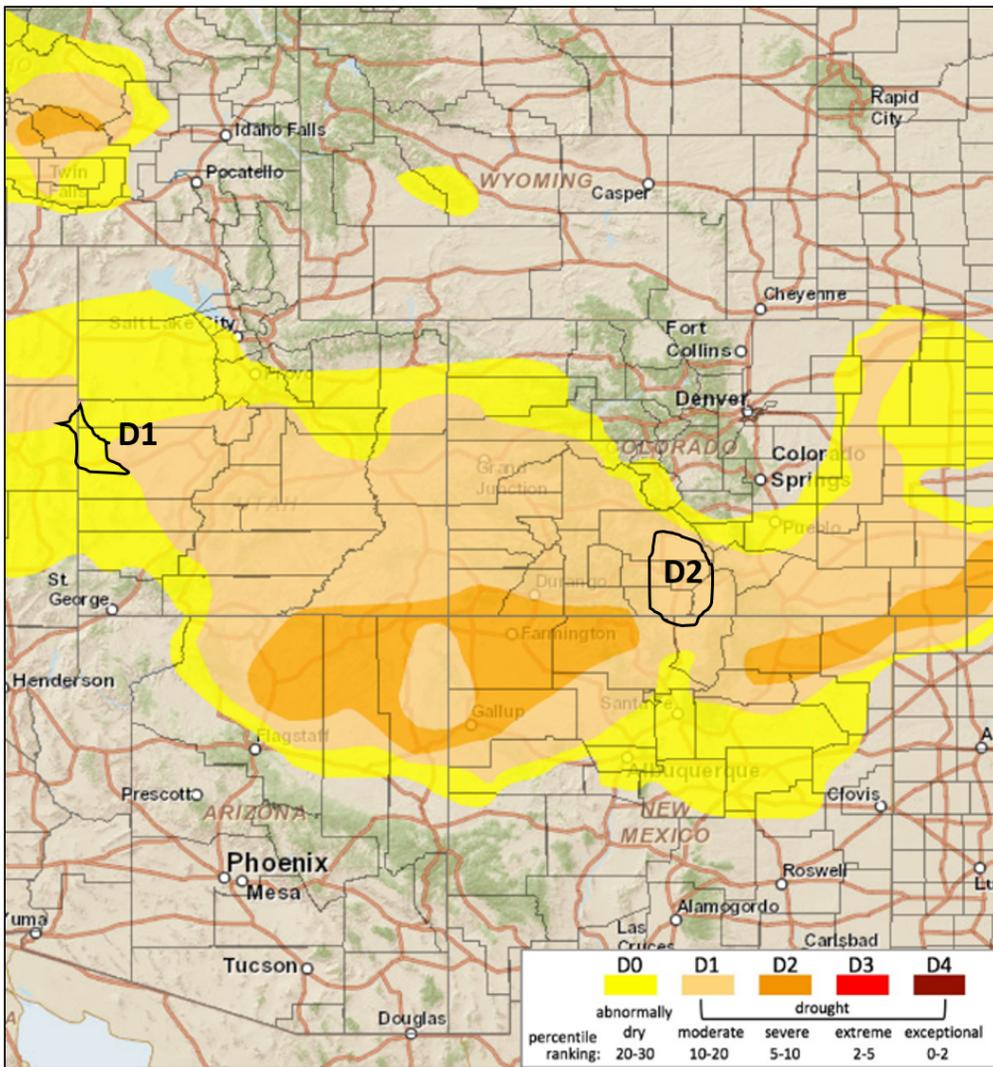
The top two images show Climate Prediction Center's Precipitation and Temperature outlooks for 8 - 14 days. The middle image shows the Weather Prediction Center's Quantitative Precipitation Forecast accumulation for seven days. The bottom left image shows the 3-month precipitation outlook from Climate 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: April 7, 2020

The first week of April in the Intermountain West saw mainly less than 0.50 inches of new liquid precipitation, with the majority of the southern IMW seeing less than 0.10 inches or no precipitation. The main outlier in the dryness was northwestern Wyoming, where Teton and Park counties saw widespread amounts of up to 2 inches.

March precipitation across the IMW was a bit of a mix, with below-normal precipitation through much of Wyoming, Western Utah, central and southeastern Colorado, and northeastern New Mexico. Southern New Mexico and Arizona were the winners with much higher than normal precipitation. Parts of eastern Utah and northeastern Colorado also saw much above normal precipitation for the month of March.

Looking at the longer-term time scales (90-days and greater) of the Standardized Precipitation Index, the pattern of dryness for much of Utah and much of Colorado is persisting and worsening in southern Colorado and western Utah. Northern New Mexico is continuing to see sustained dryness as well. SPIs for the rest of the IMW, Arizona, the rest of New Mexico and much of Wyoming are near or above the normal.

Now that April is here, the focus from snowpack starts to shift gears to see what that snowpack will do with runoff. Currently, the majority of basins in the Upper Colorado River Basin have near and above normal snow to melt off.

Most basins in the UCRB normally see peak snowpack this week. The northern basins are at or above the normal peak snowpack while the southern basins are showing up below normal snowpack. Eyes will soon be on the rivers to see what this snowpack does.

Not helping the dryness that was seen in March was the above normal temperatures seen last month with the majority of the IMW region seeing 2 - 6 degrees above normal temperatures, the warmest areas in southeast Colorado and northeast New Mexico. The western portion of the IMW region was near normal.

The outlook for the next week ending Tuesday, April 14 shows a few systems coming through, mainly benefiting Wyoming and Colorado, however, the majority of the region should see some moisture. The 8-14 day outlook is showing favorable chances of above normal precipitation for the entire IMW region.

Recommendations:

UCRB: Status quo for the Upper Colorado River Basin.

Eastern Colorado: Status quo is being recommended for eastern Colorado. We are watching southeastern Colorado for degradations, especially Las Animas County. Conditions continue to be dry and are on the edge of being degraded.

San Luis Valley: We are recommending the introduction of D2 in the San Luis Valley. 2 and 3 month indicators, SPI and SPEI, are showing D2 conditions in the valley dipping into northern New Mexico.

Western Utah: Although outside of our main area of focus, we are recommending expansion of D1 in Millard and Juab counties. This recommendation comes from the Utah Drought Team. There are reports producers in the area are needing to haul water to feed cattle when they are usually able to use water from ponds.